

CHAPTER 4

PENSION SYSTEMS AND REFORMS IN THE TRANSITION ECONOMIES

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4.1 Introduction and overview

Populations are younger and are ageing less rapidly in the transition countries than in the European market economies. Nevertheless, the system dependency ratio of these pension systems, that is the ratio of pensioners to contributors, reached unprecedented levels in the 1990s. This is the result of a dramatic contraction of output and employment, accompanied by a massive wave of early retirement. The inherent problems of the existing public PAYG pension schemes had previously not been substantially different from those of similar schemes in other parts of Europe. However, the economic crisis has seriously aggravated earlier shortcomings, endangering financial viability, increasing the degree of opaque redistribution and further loosening the link between contributions and benefits, decreasing confidence in future pension benefits and stimulating the evasion of payroll contributions. Thus the need for radical pension reform has become evident. Influenced by neoliberal, mainstream economics, and with considerable support from the World Bank, policymakers in a number of transition countries opted for the recipe of a mixed pension system: while retaining a downsized public PAYG scheme, privately managed pension funds were introduced as a second, mandatory, tier. The scope and financing of the transformation costs, however, remained unclear. The recently legislated pension reforms will, therefore, probably lack viability and stability.

The paper proceeds in this way: a summary of the demographic initial conditions for pensions is followed by a presentation of the more unfavourable economic trends. The specific issues of pension schemes and pension reform are then analysed in detail.

4.2 Demographic background

Historically, northern Europe had always been the leader in the demographic transition, with western Europe following rather closely, and southern and eastern Europe lagging behind. The catching-up process in the twentieth century, however, was relatively rapid in the south and, in the first three quarters of the century, in the east also. Chart 4.2.1 shows the secular trends for Hungary.

Within less than a century, life expectancy at birth (for both sexes) rose in Hungary from 37 to 70 years. The curve, however, does flatten out markedly after the mid-1960s. The crude death rate fell from 27 to 14 per 1,000 and this was followed – although with considerable delay – by a fall in the crude birth rate from 40 to 11 per 1,000. The imprint of two World Wars, the postwar baby boom and its echo are clearly observable. We see in the Hungarian experience the more or less standard pattern of the demographic revolution, with falls in both mortality and fertility, but the present situation still reflects historical developments, as table 4.2.1 demonstrates.

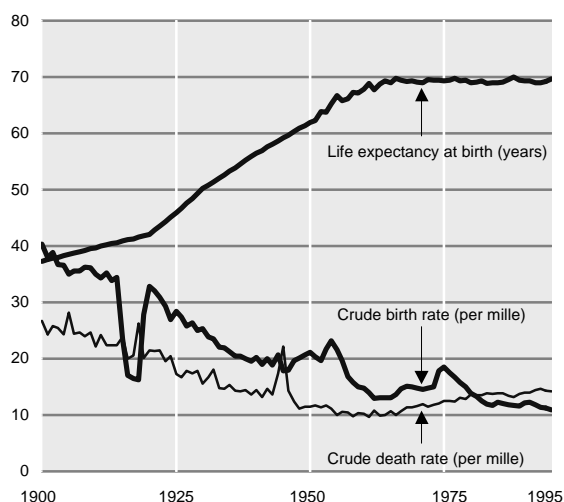
Southern Europe has nearly attained the northern and western European levels of life expectancy at birth, yet southern populations are still markedly younger, as demonstrated by their old age demographic dependency ratios. In the east, the mean age of the population is even lower, while life expectancy at birth lags behind by five to ten years (for females and males, respectively), and the crude death rate is conspicuously higher.

A purely geographic grouping of countries, is, however, not entirely satisfactory for the purposes of discussing pensions. The cases of east and west are clear: eastern Europe consists exclusively of transition economies and western Europe of market economies. North and south, on the other hand, are mixed groups in this regard. Moreover, a simple snapshot does not allow insight into the dynamics of what has really happened in the transition countries. Therefore, a longer-term look at a number of selected countries is provided in table 4.2.2.

In the market economies, without exception, mortality continued to decline in the 1970s and 1980s, resulting in a further marked increase of life expectancy. In striking contrast, with the exception of the Czech Republic, male mortality in the transition countries stopped decreasing, and even increased in this period. The case of the Russian Federation stands out: male life expectancy is now lower than in the early 1950s. In most countries a further, although very slight, improvement in female life expectancy is discernible. Despite a significant amount of research, the causes of this adverse trend are still unclear.

CHART 4.2.1

The demographic transition in Hungary, 1900-1995



Source: E. Pallos, *Life-tables of Hungary from 1900/01 to 1967/68*, No. 2; Demographic Research Institute of the Hungarian Central Statistical Office, 1971; P. Jozan et al., *Life-tables of Hungary, 1949-1978*, 1980 and *Annual Demographic Yearbooks* (various issues), Hungarian Central Statistical Office (Budapest).

It needs to be stressed that the population ageing process has two sources rather than one: the decline of mortality on one hand, and the fluctuations in twentieth century fertility on the other. While there has been little improvement, or deterioration, in mortality in the transition countries, fluctuation in the crude birth rate has been as strong as that in western market economies.

The results of these trends may be seen by comparing the present age profile of the population in Hungary and Poland to those which would prevail in a stationary population (chart 4.2.2). The youngest cohorts are below a standardized 100, because crude birth rates are presently below the reciprocal of life expectancy – which would represent the birth rate in case of a stationary population whose age profile would remain constant over time. The sizeable postwar “baby-boom” cohorts are now around 40-50 years of age, and their “echo”, born in the 1970s, have just entered the labour market. The present pensioners belong to much smaller cohorts and proceeded through the early periods of their life with lower survival probabilities. Overall, the Hungarian and Polish populations are thus, on average, younger than might be indicated by their present age-specific mortality rates. Therefore, the old age demographic dependency ratio, although it has increased considerably over the course of the twentieth century, is still relatively low.

The demographic situation today is thus quite benign with respect to pension issues and will remain

TABLE 4.2.1

Major demographic indicators in Europe, 1990-1995

	Eastern	Northern	Southern	Western
Crude birth rate (per thousand).....	11.5	13.5	10.8	11.5
Crude death rate (per thousand).....	12.2	11.3	9.5	10.6
Life expectancy at birth (years)				
Male	63.8	72.7	73.0	73.0
Female	74.1	78.7	79.3	79.7
Both sexes	68.9	75.7	76.2	76.5
Population by age group (per cent)				
0-14	21.0	19.7	17.3	17.6
15-64	66.7	65.2	68.2	67.1
65+	12.3	15.2	14.5	14.9
Dependency ratios				
Total	49.9	53.5	46.6	48.3
Young	31.4	30.2	25.3	26.2
Elderly	18.5	23.3	21.3	22.1

Source: United Nations, *World Population Monitoring 1996* (New York), 1998.

TABLE 4.2.2

European male life expectancy at birth, 1950-1995
(Per cent)

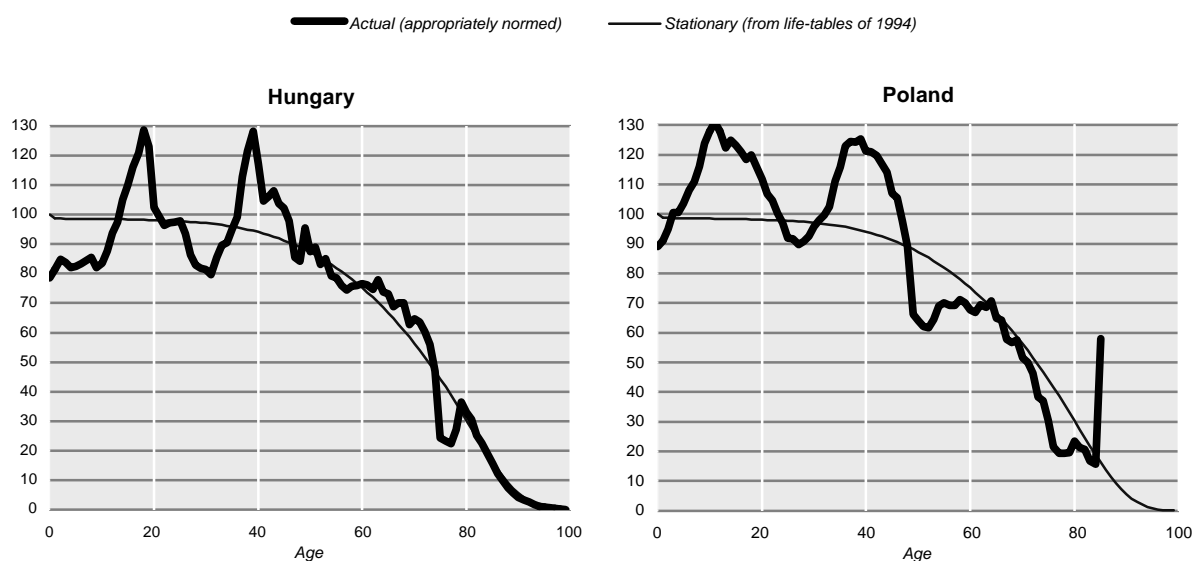
	1950-1955	1970-1975	1990-1995
Eastern			
Bulgaria	62.2	68.7	67.8
Czech Republic	64.5	66.8	68.8
Hungary	61.5	66.5	64.5
Poland	58.6	67.0	66.7
Slovakia	62.4	66.8	66.5
Russian Federation	62.5	63.1	60.4
Northern			
Norway	70.9	71.4	74.2
Sweden	70.4	72.1	75.4
Estonia	61.7	65.7	63.9
Latvia	62.5	65.3	62.5
Southern			
Italy	64.3	69.2	74.2
Spain	61.6	70.2	73.7
Croatia	59.0	66.2	67.1
Yugoslavia	57.1	66.8	69.0
Western			
Austria	69.2	67.0	72.8
France	63.7	68.6	73.8
Germany	65.3	67.9	72.6
United Kingdom	66.7	69.0	73.7

Source: United Nations, *World Population Prospects: The 1996 Revision* (United Nations publication, Sales No. E.98.XIII.5), Annex I: Demographic Indicators.

more “favourable” in the transition countries than in other parts of Europe: the populations are younger and ageing less rapidly because of the unusual mortality pattern of the last few decades. The retirement of the baby-boomers around 2020 and their children around 2045-2050 will, however, induce upheavals in the old age demographic dependency ratio, quite similar to those in other parts of the world.

CHART 4.2.2

Actual versus stationary age profiles in Hungary and Poland, 1994



Source: Hungarian Central Statistical Office, *Demographic Yearbook 1994* (Budapest); Central Statistical Office of Poland.

4.3 Economic background

In the transition economies, the dominant fact of the 1990s has been the catastrophic contraction of production and employment, a decline of a magnitude that has not been experienced since the Great Depression (table 4.3.1).

Poland and Slovenia are the only transition countries where output has already reached and surpassed its 1989 level. Estimating broadly the gap between the two groups of countries, if we assume that in 1989 the GDP per capita (in purchasing power parity terms) ratio was one to four (transition countries compared to western European ones), then by 1997 the same ratio was much closer to one to seven.

Some recovery of output seems to have already started in eastern Europe and the Baltic states but the tide has not yet turned with respect to employment, as shown in table 4.3.2.

Many transition countries have had two to six years of output recovery, but in virtually all of them employment has continued to shrink or, at best, stagnate. The level to which employment fell initially was substantially below the starting point of 1989: in four east European countries alone – the Czech Republic, Hungary, Poland and Slovakia – 5 million jobs were lost between 1989 and 1996.¹⁸⁵ Economic growth relies

increasingly on labour-saving technologies and employment (labour market) techniques in this globalized world. This is conspicuous even in western Europe where eight years (from 1989 to 1997) brought about 16 per cent GDP growth with a less than 1 per cent increase in employment. In western Europe, however, stagnating employment was, at least, accompanied by rising real wages for those in employment. In the transition countries, on the other hand, the decline of real wages has even been more pronounced than the decrease in employment and the two effects, combined, have resulted in a veritable social landslide, as shown in table 4.3.3.

For the transition countries on average, the total real wage bill was down to half its 1989 level in the mid-1990s. It is clear from the individual country data in table 4.3.1 that real GDP has not been halved. The share of the total wage fund in GDP has thus declined considerably. It is interesting to note that the decline in this share is sharpest in Hungary and Poland, two countries which are generally regarded as the true success stories of transformation reforms. The absolute and relative decline of the total wage bill is central to the subject of this paper, because official pension systems are overwhelmingly financed from payroll taxes.

Foreign direct investment is flowing into and transnationals are expanding within the more successful transition countries because labour is – apart from being well-educated – cheap in this part of the world. Employers (transnational and domestic alike)

¹⁸⁵ G. Wagner, T. Smeeding and M. Schrooten, "Distributional consequences of social security reforms in central-eastern Europe", in K. Müller, A. Ryll and H. Wagener (eds.), *Transformation of Social*

Security: Pensions in Central Eastern Europe (Heidelberg, Physica, 1999), forthcoming.

nevertheless complain about the high cost of labour, particularly the “excessive” social security contribution rates that they claim hamper competitiveness and encourage tax and contribution evasion.

TABLE 4.3.1
Real GDP/NMP
(1989=100)

	Lowest year	1997
<i>Western Europe</i>	115.8
<i>Eastern Europe</i> (1992)	78.4	92.1
Bulgaria (1997)	66.6	66.6
Hungary (1993)	81.9	90.4
Poland (1991)	82.2	111.8
<i>Baltic states</i> (1994)	55.5	63.6
Latvia (1993)	51.1	56.2
<i>CIS</i> (1996)	55.1	56.1
Russian Federation (1996)	58.1	58.6
Ukraine (1997)	40.1	40.1
Total transition economies	66.8

Source: UN/ECE, *Economic Survey of Europe, 1998 No. 3*.

Note: Lowest years are shown in parentheses.

TABLE 4.3.2
Employment
(1989=100)

	Year of lowest GDP/NMP	1997
<i>Western Europe</i>	100.7
<i>Eastern Europe</i> (1992)	85.6	82.5
Bulgaria (1997)	73.3	73.3
Hungary (1993)	75.6	72.8
Poland (1991)	90.1	90.0
<i>Baltic states</i> (1994)	83.2	82.5
Latvia (1993)	85.6	73.7

Source: UN/ECE, *Economic Survey of Europe, 1998 No. 3*.

Note: Years of lowest GDP/NMP are shown in parentheses.

TABLE 4.3.3
Labour's share of GDP/NMP, 1995
(1989=100)

	Employ- ment 1	Real wages 2	Wage fund 3=(1)(2)	GDP/ NMP 4	Labour's share 3/4
Belarus	80.1	61.0	48.9	65.1	75.1
Bulgaria	84.7	59.4	50.3	71.6	70.2
Czech Republic	92.8	92.4	85.7	96.5	85.8
Hungary	72.6	78.4	56.9	86.6	65.7
Latvia	84.5	58.6	49.5	52.7	93.9
Poland	86.7	75.4	65.4	104.6	62.5
Romania	91.5	69.1	63.2	88.2	71.6
Russian Federation	88.8	45.1	40.0	58.1	68.8
Slovakia	85.4	78.3	66.9	89.7	74.6
Slovenia	79.3	76.9	61.0	92.0	66.3
Ukraine	93.3	38.6	36.0	40.1	90.0
Average	88.0	57.7	50.8

Source: M. Cichon, K. Hagemeyer and M. Ruck, *Social Protection and Pension Systems in Central and Eastern Europe*, International Labour Office – Central and Eastern European Team (ILO-CEET), Working Paper, No. 21 (Budapest) 1997; UN/ECE, *Economic Survey of Europe, 1998 No. 3*.

The much reduced level of employment, at much

lower than previously prevailing real wages, has resulted in new social pressures. The transition countries, which had been characterized by relative equity, are now facing a split in society. A new, wealthy and powerful – often arrogant – economic elite is emerging, while the former middle classes are sinking into poverty. Income differentiation and the incidence of poverty have been sharply increasing, independently of whatever methods and concepts are used for measurement:

“Particularly important are changes in poverty incidence among particular groups. In the past, poverty incidence among the elderly in most countries in the region was higher than the average for the total population ... this pattern is changing at least in some countries ... a new type of poverty is emerging in transition countries: poverty among the younger, working-age population – including the unemployed, those affected by the non-payment of wages, and low earners. ... There is still reluctance to support those who can work – even if they are not able to find a job or have to work for wages well below the subsistence minimum. ... The performance of newly introduced or reactivated benefit systems is generally less than satisfactory – unemployment and social assistance benefits only reach a small proportion of their target populations”.¹⁸⁶

4.4 Pension economics

Pension reforms are passionately disputed in many countries, whether they possess market or transition economies. Neoclassical economic theory is often cited for guidance: life-cycle type¹⁸⁷ and overlapping generations¹⁸⁸ models are often referred to. The trouble is, however, that economic theory is heavily loaded with stationary assumptions¹⁸⁹ that are, naturally, never satisfied in reality. It is particularly irritating when theoretically important theorems, for example Aaron's famous social security paradox,¹⁹⁰ are quoted as revelations in practical issues of pension reforms, without mentioning the underlying stationary assumptions that were so meticulously listed by Aaron himself.

¹⁸⁶ M. Cichon, K. Hagemeyer and M. Ruck, *Social Protection and Pension Systems in Central and Eastern Europe*, International Labour Office – Central and Eastern European Team (ILO-CEET), Working Paper, No. 21 (Budapest), 1997, pp. 9-10.

¹⁸⁷ F. Modigliani and R. Brumberg, “Utility analysis and the consumption function: an interpretation of cross-section data,” in K. Kurihara (ed.), *Post-Keynesian Economics* (New Brunswick, NJ, Rutgers University Press, 1954).

¹⁸⁸ P. Samuelson, “An exact consumption-loan model of interest with or without the social contrivance of money”, *Journal of Political Economy*, Vol. LXVI, No. 12, 1958 and D. Gale, “Pure exchange equilibrium of dynamic economic models”, *Journal of Economic Theory*, No. 6, 1973.

¹⁸⁹ For example, identical life spans and preferences of successive generations.

¹⁹⁰ H. Aaron, “The social insurance paradox”, *Canadian Journal of Economics and Political Science*, Vol. 32, No. 3, 1966.

BOX 4.4.1

The basic arithmetic of a pension system

(a) The notional contribution base

$$\hat{\alpha} = \frac{\bar{E}}{\bar{A}} \frac{\bar{W}}{\bar{E}}$$

\bar{A}	Population of active age
\bar{E}	Number of employed
$E = \bar{E} / \bar{A}$	Employment intensity
\bar{W}	Aggregate wage
$W = \bar{W} / \bar{E}$	Average wage

(b) The notional pension expenditure

$$\hat{\beta} = \frac{\bar{P}}{\bar{B}} \frac{\hat{\alpha}}{\bar{P}}$$

\bar{B}	Population of pensionable age
\bar{P}	Number of old age pensioners
$P = \bar{P} / \bar{B}$	Retirement intensity
$N = \hat{\alpha} / \bar{P}$	Average pension

(c) The notional contribution rate

$$\mu = \frac{\hat{\alpha}}{\hat{\beta}} = \left(\frac{\bar{B}}{\bar{A}} \frac{P}{E} = \frac{\bar{P}}{\bar{E}} \right) \frac{N}{W}$$

$D = \bar{B} / \bar{A}$	Demographic dependency ratio
$I = P / E$	Intensity ratio
$S = D \cdot I = \bar{P} / \bar{E}$	System dependency ratio
$R = N / W$	Replacement rate

Another unfortunate tendency is that the pension reform debate seems to focus solely on problems of the mode of financing (pay-as-you-go or funded) and management (public or private). At the same time, general, basic demographic and economic facts are either neglected or, worse, used fallaciously in argumentation.

The facts, concepts and quantities referred to in this section are, in fact, largely independent of the modes of financing and management, and affect all pension systems. In box 4.4.1 we introduce a simplified accounting scheme, capable of characterizing the cross-section financial situation of a pension system, tracing back pension-oriented concepts to their demographic and economic foundations. There is nothing particularly new in this accounting scheme, with perhaps the exception of the "intensity" ratios that emerge from the arithmetic; formal notation serves only for conceptual clarity, with more elaborate mathematics eschewed.

All concepts and identities refer to a given period of time, usually a calendar year, and are thus time-variant. (Explicit notation of time indices is avoided for simplicity.) It would be highly desirable to apply similar accounting longitudinally, with respect to the life path of

birth cohorts or subsets of them, but even the cross-section approach is difficult to implement empirically.

The accounting is based on three variables: the contribution base α , the pension expenditure β and their ratio μ . All three are called throughout this section "notional" in order to underscore the simplified nature of the scheme. (To mention just one example: contribution revenues are nowhere in the world strictly proportional to the contribution base because of non-compliance – a fact deliberately ignored here.)

If a notional contribution rate of μ is applied to the contribution base α , then contributions in the given period (year) would exactly cover pension expenditure β , thus precisely balancing the current account of the pension scheme. Such a meticulous balance is not practicable in reality. Indeed, it is usually not even a goal which is aimed at, since some stability of the contribution rate enjoys priority as a target (with Germany as a notable exception). Nevertheless, the notional contribution rate is a somewhat stylized, but excellent, indicator of the financial requirements of a pension system. (Actual deviation from it results in either a surplus or deficit.)

The pension arithmetic begins with \bar{A} and \bar{B} , the absolute number of people of active and pensionable age, respectively. Obviously these numbers, as well as their ratio D , depend crucially on the cut-off age between the active age and pensionable groups, usually called the “retirement age”. This calls attention to two facts: (1) all so-called demographic dependency ratios depend on the cut-off retirement age applied and (2) in pension issues “demographic” dependency is not purely demographic, but depends additionally on the statutory retirement age.

The employment intensity E and retirement intensity P are not true rates, as each of them relates two groups that are overlapping but not entirely of identical age: employed workers may be younger or older than the active age span, and many pensioners are younger than the statutory age, as early retirement is quite common everywhere. Nevertheless, these intensities are sensitive to demographic as well as economic factors and their ratio I is the factor that links the demographic dependency D to the crucial *system dependency* S , that is the ratio of the number of beneficiaries to the number of contributors.

Complying with general custom, we call the average pension to average wage ratio R , the “replacement rate”, although there is some conceptual obscurity in using this term. (The benefits of present pensioners will not *replace* the wages of present workers. Replacement is a concept that should properly be interpreted longitudinally.)

We thus obtain the notional contribution rate μ , and observe that it is the system dependency ratio multiplied by the replacement rate. Such an elaborate explanation of simple arithmetic might be unnecessary for pension experts. It is not unnecessary, however, to call attention to the complexity of the issue – even in its simplified form. Hasty conclusions concerning the future financial situation of pension systems, based solely on demographic trends, are often fallacious.

Thanks to a number of excellent publications, it has been possible to implement this accounting scheme numerically for the four Visegrad countries, namely, the Czech Republic, Hungary, Poland and Slovakia or, at least, to calculate changes from 1989 to 1996, although absolute levels are not available. As demonstrated in table 4.4.1, the situation in the Czech Republic is somewhat exceptional – probably not only within the Visegrad group but among transition economies in general. For brevity, I shall refer to the other three, Hungary, Poland and Slovakia as the HPS group.

In all four countries, both employment intensity E , and the notional contribution base α , contracted considerably from 1989 to 1996 for the macroeconomic reasons discussed in the previous section. The decrease was much more marked in the HPS group where employment intensity dropped heavily and real wages also declined (as seen in table 4.4.1).

TABLE 4.4.1

(1989=100)

	Czech Republic	Hungary	Poland	Slovakia
\bar{A} –population aged 20-59	106.3	98.5		106.8
E –employment intensity	89.3	76.1		80.6
W –average real wage	100.5	74.5		83.9
α –notional contribution base	95.4	55.8	67.2	72.2
\bar{B} –population aged 60+	101.6	100.2	110.7	104.5
P –retirement intensity	103.6	118.8	131.7	109.8
N –average real pension	88.2	66.8	108.8	77.6
β –notional pension expenditure ...	92.9	79.5	158.6	89.0
$D = \bar{B}/\bar{A}$ –demographic				
dependency ratio	95.6	101.7	106.8	97.8
$I = P/E$ –intensity ratio	116.0	156.3	162.5	136.2
$S = D \cdot I$ –system dependency ratio ...	111.0	159.2	173.6	133.3
$R = N/W$ –replacement rate	87.8	89.6	136.0	92.5
$\mu = \beta/\alpha$ –notional contribution rate ..	97.4	142.6	236.1	123.3

Source: M. Cichon, K. Hagemeyer and M. Ruck, *Social Protection and Pension Systems in Central and Eastern Europe*, International Labour Office – Central and Eastern European Team (ILO-CEET), Working Paper, No. 21 (Budapest), 1997; G. Wagner, T. Smeedling and M. Schrooten, “Distributional consequences of social security reforms in central-eastern Europe”, in K. Müller, A. Ryll and H. Wagener (eds.), *Transformation of Social Security: Pensions in Central Eastern Europe* (Heidelberg, Physica, 1999), forthcoming; CESTAT, *Statistical Bulletin 1998*, No. 3 (Budapest), 1999; author’s own calculations.

Decreasing employment had an adverse effect on retirement intensity P , as people near to retirement age fled from unemployment – or were often forced – into early retirement. In Poland and Hungary, a sharp increase of 19 and 32 per cent, respectively, in retirement intensity in seven years is the result of a massive wave of early retirement in the 1990s.

Three of the four Visegrad countries counterbalanced the increasing pension intensity by decreasing the real value of the average pension N , primarily through below inflation indexation. Notional real pension expenditure β thus actually shrank, although to a lesser extent than the notional contribution base. In these countries real pensions fell more sharply than real wages, hence what is usually termed the “replacement rate” R also declined by 7-12 per cent.

The case of Poland may seem somewhat unusual: the average real pension in 1996 was 8.8 per cent higher than in 1989. Thus the “replacement rate” increased by 36 per cent during the years of economic downturn and increasing poverty for the active age population. At first sight one would be inclined to suspect faulty data or computational error, but the trend is verified and well documented elsewhere.¹⁹¹

¹⁹¹ S. Golinowska, Z. Czepulis-Rutkowska and M. Szczur, “The case of Poland”, *Pension Systems and Reforms – Britain, Hungary, Italy, Final Report*, Programme 1995, Research Project No. P95-2139-R (Brussels), 1997.

Considering the direct factors influencing μ , the striking phenomenon is the rapid growth of the system dependency ratio S , despite the slight decrease or insignificant increase of the demographic dependency ratio D . The falling “replacement rate” R did not offset this effect on the pension systems concerned: all in all, the notional contribution rate μ necessary for pension system financial balance grew significantly in the HPS group, to a significant degree in Hungary, and naturally even more so in Poland, where the replacement rate did not decline.

The experience of the Czech Republic is in contrast to Hungary and Poland. The notional contribution rate μ decreased slightly in the Czech Republic, although more moderately than the demographic ratio. This was a remarkable accomplishment for a transition economy, and was due to a milder than average contraction of employment to date, and consequently a weaker tendency for workers to be driven into retirement, and also a recovery of the real wage.

Our accounting scheme is too stylized for the purpose of drawing direct, detailed conclusions with respect to actual pension finance. Several other country-specific facts would have to be considered for that. In general, however, it can be said that given the developments outlined, the deficits in the pension systems are anything but surprising. It can also be seen why they occurred much earlier in the transition countries than the crises projected internationally when the “baby-boomers” retire.

There does, however, appear to exist, in transition countries a “reserve” opportunity to correct *both* old age demographic ratios and pension intensity. That would lie in raising the presently low retirement age (see table 4.4.2). The decreasing trend in this is clear everywhere, for both sexes. It is not necessarily a negative indicator. It may be argued that in the postwar reconstruction period there was a labour shortage and a greater need to work because of less developed pension benefits, and that some of the decreasing trend is due to economic progress, although it has occurred despite an increase in life expectancy for both sexes.

Examining the actual retirement age, the difference between OECD countries and east-central Europe is not striking for men but significant in the case of women. Female life expectancy is also lower in the latter group of countries, and thus the duration of retirement is not necessarily longer. Nonetheless, it can be argued that retiring at an average age of 57.6 is rather too early in modern societies with greater amounts of investment in human capital calling for a return.

On the other hand, as argued persuasively in Hungary a few years ago, increasing the retirement age in times of severe unemployment does nothing but push a problem from one social security scheme to another: those who cannot retire will become unemployed or, if

TABLE 4.4.2

Average retirement age, 1950 and 1990

	1950	1990
OECD countries		
Male	68.5	62.2
Female	66.0	60.0
Eastern and central European countries		
Male	67.6	60.9
Female	62.5	57.6

Source: D. Latulippe, *Effective Retirement Age and Duration of Retirement in the Industrial Countries Between 1950 and 1990. Issues in Social Protection*, International Labour Office, Discussion Paper, No. 2 (Geneva), 1996.

not, they will occupy jobs rather than passing them over to the young who will then remain unemployed. Additionally, increasing the statutory retirement age has little effect, unless it is strictly enforced or unless strong, actuarially fair disincentives are introduced against early (below statutory age) retirement.

In any event retirement age – as well as demographic ageing in general – can affect, at best, the labour market supply and not demand. No matter what age individuals retire, the number of available jobs is determined by the overall state of the economy.

Labour demand is a function of the rate and structural pattern of economic growth and globalization with little, if any, feedback from labour supply. The quality of the labour force matters; the quantity – in the event of shortage – can be increased by migration or even, to some degree, as in knowledge-intensive industries, by communication, as in software production. This, it may be noted, is one inherent weakness of considering pension finance as if it were determined only by demographic factors which are given at the outset.

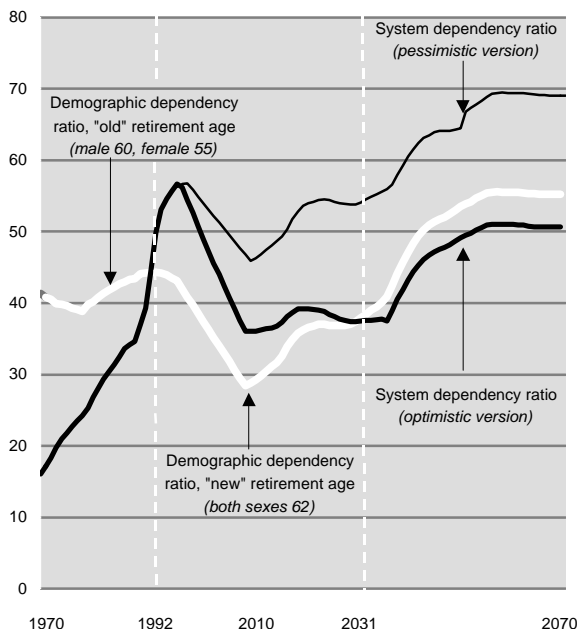
In Hungary, the statutory retirement age was increased in 1995 (that is, preceding the pension reform of 1997) to 62 years for both sexes, from the previous 60 for men and 55 for women. The increase began in a phased way from 1997, and is to be continued gradually until 2008. The long-term results and the overwhelming role of employment patterns are demonstrated in chart 4.4.1.

In Hungary, the pension-specific demographic ratio will decline by 16 percentage points until 2010 and will not reach its 1995 level again until 2040. Thus, with respect to this one variable, the first baby-boom crisis has been dealt with. The second crisis, the retirement of the baby-boom echo, could increase the ratio to around 50 per cent after 2040, assuming an unchanged retirement age during the first half of the twenty-first century.

The system dependency ratio would also decrease until 2010, as the statutory age here is assumed to be effective in influencing forthcoming retirement. (In 1998 the number of old age pensioners has actually, but slightly, decreased for the first time in many decades.) The extent

CHART 4.4.1

Demographic and system dependency in Hungary, 1970-2070
(Per hundred)



Source: Hungarian Central Statistical Office, *Demographic Yearbooks and Statistical Yearbooks* (various issues) (Budapest); L. Hablicsek, *Demographic Scenarios 1997-2050*, Demographic Commission of the Hungarian Academy of Sciences (Budapest), 1998; author's own projections.

of the decrease, however, as well as the further behaviour of the ratio depends on assumptions concerning employment. It is presently impossible to credibly project employment trends, and therefore the figure we utilize (chart 4.4.1) portrays two rather extreme cases.

In the optimistic scenario the number of active earners would increase by 1 per cent annually until 2015 and by 1.5 per cent thereafter, until it hits the demographic barrier. (This scenario is, of course, not really a believable one.) In the pessimistic scenario the number of active earners would not increase at all, but would stay at its unprecedentedly low, current level. (Considering present global labour market trends, one cannot confidently call this the worst case.)

The main moral of this story on pension economics is that, in a changing economic environment, system dependency can be much more strongly affected by employment opportunities than by pure demographic trends. For the employment environment to change there does not necessarily have to be a severe contraction of output on the scale which occurred in the transition countries, nor even a dramatic slowdown in the growth rate. The crucial factor may well be a change in more general patterns of employment – an expansion of “non-standard” employment arrangements and part-time work for example – which may result in the attrition of regular,

traditional contributors. The future of pension systems thus seems to be in the hands of developments in the labour market. The present situation in the transition economies may become the testing ground for an unprecedented and harmful divergence between system and demographic dependency.

The second moral of the story concerns the relation between replacement and contribution rates. Remembering our simple identity $\mu = S \cdot R$, it follows that $R = \mu / S$, as the relationship is obviously reversible. While increasing system dependency would obviously call for higher contribution rates, there is a strong tendency working in favour of the reverse formula: to decrease the contribution rate in order to reduce labour costs and to accept the resulting lower replacement rate. That, however, may result in mass poverty in old age. The relationship between the two rates should, therefore, be determined by broad social consensus, while it is generally neglected in pension reform debates.

4.5 Pension schemes

The typology of pension schemes is becoming increasingly simplistic. The general public has been led to believe that there are two types of pension schemes which form internally consistent clusters, as a result of a choice between a number of dichotomies:

Dichotomies:	Cluster 1	Cluster 2
1. Management:	public	private
2. Finance:	pay-as-you-go	funded
3. Participation:	mandatory	voluntary
4. Entitlement:	defined benefit	defined contribution
5. Source of funding:	payroll tax	individual saving
6. Nature:	redistributive (solidarity)	actuarially fair (insurance)
7. Reaction to demography:	collapsing	resistant
8. Macroeconomic effect:	deficit	healthy growth
9. Risk:	political	market
10. Who takes care:	paternalistic state	self-reliant individual
11. In general:	bad	good

Life, however, is not that simple. These pairs of concepts are actually not dichotomies, that is, yes-or-no alternatives. They are rather two extreme values on a continuous scale, with several intermediate cases. Moreover, even if they were considered as either/or choices, it is still possible for a pension system to be made up differently from either of the two columns in the typology above. Certainly, they cannot be unambiguously grouped in two clusters, one bad, the other good.

With respect to “dichotomies” 1-3, it is well known that there exist *public funded* schemes (for example, the Provident Fund in Singapore) and *private PAYG* schemes (e.g. occupational schemes in Britain). There are PAYG systems with substantial accumulated reserve funds (e.g. Sweden and United States Social Security). Funded schemes also “pay-as-they-go”, i.e. they naturally spend current revenues first on current annuities and invested assets are affected only by the current balance. The dominant trend in pension reform design is presently the

argument for *mandatory* private, funded schemes (the Chilean initiative).

How might we characterize pension schemes, if we eschew this simplistic logic? A pension is interpreted as a *life-long* income in old age that lasts until death. The crucial issue concerning a pension scheme is the relation between contribution and benefit and the nature and extent of the consequent redistribution. These considerations lead to a proposal for different typology, dividing pension schemes into the following categories:

- (1) *Non-contributory basic pension* (transparent redistribution). Here benefits are flat rate and universal for citizens or residents, without consideration of income, employment or means, and financed from general budget revenues. This is the only pure case of the “defined benefit” formula. The advantage is that extreme poverty in old age is avoided while other, contributory schemes are freed from the task of social protection.
- (2) *Social protection* (obscured redistribution). Benefits are related to old age but *means-tested*, thus are discretionary rather than “defined”. Such schemes may appear as symbols of “solidarity” but they disrupt the contribution-benefit link in simultaneously existing contributory schemes. As part of the benefits resulting from contributory schemes corresponds to the means-tested benefit (what other people receive without contribution), a number of years of contribution brings practically nothing in terms of income in old age.
- (3) *Pseudo-pension insurance* (no redistribution). There are pseudo-pension funds, whether voluntary or mandatory, that permit cumulated personal contributions to be taken out in a lump sum on retiring, or transformed into a fixed-length annuity, or which may be inherited at any point of time in case of death of the insured person. Such schemes are actually just savings devices, without co-insurance or risk-sharing, and in substance do not much differ from banks or investment funds.
- (4) *Pension insurance* (complex redistribution). Here neither benefits nor contributions are exactly “defined”. Benefits depend on contributions in one way or another, even if a flat rate component is included. As the contribution rate in mandatory schemes is defined but the contribution base is not (it reflects individual working careers), the proper term would thus be *contribution-related benefit* schemes. Earnings-related public PAYG schemes – contrary to popular belief – belong to this category, insofar as contributions yield future, life-long pension rights.¹⁹² It is impossible for pension insurance to be free of all

elements of redistribution. This includes – contrary to marketing slogans – private, funded schemes insofar as they provide life-long annuities. The accounting framework, introduced in the previous section, is relevant obviously only for this category.

The difference between “public PAYG” and “private, funded” pension insurance schemes is thus not in what is defined and what is not; the difference is in the *mode* of deriving the benefit from the contribution. The defined benefit *versus* defined contribution dichotomy is thus misleading, because it obscures the mutual, two-way interdependence between contribution and benefit, for the individual as well as for society as a whole.

The majority of existing pension schemes, and all schemes under consideration in this paper, belong to this fourth category. Therefore, the following discussion will be limited to them.

Pension insurance schemes, whether funded or PAYG, whether privately or publicly managed, are risk insurance pools against mortality risk. In this sense there is no actuarial fairness for the individual. Redistribution from those who die early to those who live longer constitutes the fundamental nature of any pension scheme.

Longevity, however, is not indifferent to gender and social status. Women live longer than men and higher-income, better educated people live longer than low-income, less skilled individuals. Hence, as it is often argued, redistribution according to longevity is directed from men to women and “perversely”, from the poor to the rich. Usually PAYG systems are blamed for such “perverse” redistribution, but it is important to see that the same is true for mandatory funded schemes if they are prohibited from handpicking their customers, for example if they are barred from discriminating against women. (In the Hungarian pension reform debate, for example, the original proposal was to differentiate between men and women according to life expectancy. Parliament, however, refused the proposal on constitutional grounds, so it ended up, paradoxically, with “unisex” rules and rates in the legislated, mandatory private, funded scheme.)

Even if the contribution rate is modified from time to time, or varies from pension scheme to scheme, it is generally uniform for all cohorts. Mortality, on the other hand, is changing continuously, hence life expectancy is cohort-specific. Those who are 20 today, we can project, will survive in larger numbers for longer than those who are now 60. The implication is that either the replacement rates or the contribution rates, or both, should be cohort-specific in order to obtain actuarial fairness at least with respect to birth cohorts. Discrimination by age, however, is also unconstitutional in most countries. There is, therefore, redistribution among cohorts and, contrary to popular belief, it is channeled from older cohorts to younger ones.

¹⁹² For more on this see N. Barr, “Economic theory and the welfare state: a survey and interpretation”, *Journal of Economic Literature*, Vol. XXX, June 1992.

Redistribution by individual longevity – which is gender-, status- and cohort-specific – is thus inherent, in the notion of a risk-sharing, pension insurance scheme, irrespective of management and the mode of finance, and we may call it *endogenous* redistribution.

There exists, however, another type of redistribution in most public schemes, which should not necessarily be a task of the pension system, which we shall refer to as *exogenous* redistribution. Public systems, although their objectives have seldom been explicitly stated, are typically called upon to perform – in addition to the role of social insurance – the additional role of social assistance, identified as solidarity. In other words, public pension insurance is often called upon to fulfil the function of the basic or subsistence pension if the latter does not exist.

“The charity aspect of assistance is often further amplified by institutional arrangements. In many cases the old age pension risk pool is mingled with disability and unemployment risks, maternity allowances, sick pay and other cash benefits, all considered to be chores of the welfare state, administered by the same government agency, merged into a single, common budget, financed from sources that are not earmarked. ... Mixing assistance with insurance results in a general lack of transparency. ... pension formulae, the rules that assess an individual’s entry pension, are frequently complex and sometimes impenetrable. If, additionally, indexation over the retirement period is haphazard ... then the factors affecting the individual benefit may well be beyond the comprehension of most retiring and retired people. The loose relationship between costs and benefits can create adverse labour market incentives, particularly by encouraging early retirement. ... disincentives to contribute ... this can lead to massive contribution evasion and the expansion of the informal economy”.¹⁹³

It is a mistake to believe, however, that “solidarity” is unique to public PAYG pension schemes. Terms may differ but the necessity of “social” redistribution exists among private pension funds and/or the government budget. This arises because of mutual reinsurance (contributions from individual funds to a common reserve, or emergency fund) and state guarantees naturally to be financed by the general taxpayer. What happens because of the lack of sufficient regulation and guarantees is clearly visible, for example, in the British case.¹⁹⁴ On the other hand, we have the example of Hungarian legislators, who, to be cautious, arranged for a number of emergency provisions in the 1997 law on private pension funds. One of the more remarkable ones is that the Ministry of Finance will periodically determine

upper and lower limits for “expected” rates of return, and money from funds which are “too successful” with returns above the stipulated range will be transferred to funds that perform below this range.

Readers will hardly find anything particularly “eastern” or “transition-specific” in the argument in this section up until this point. The substantial problems of pension schemes do not seem to be system- or country-specific although there are, naturally, significant differences among countries, within western as well as within eastern Europe.

Yet, the mandate of this paper is to report on transition countries. I have honestly tried to tabulate the major characteristics of the pension systems of 15 European transition countries, based on *Social Security Programs, 1997*,¹⁹⁵ the most comprehensive and – at least by intention – conceptually comparative document available. It has been a futile exercise. If the problem is simplified to the question of existence, for example “widows’ benefits?” then one gets 15 “yes” (or for other questions 15 “no”) in a row. The actual detailed rules, however, are impossible to systematize, let alone to tabulate. Instead, box 4.5.1 summarizes the findings of an excellent study.

For Hungary there are some interesting results from detailed studies on the mechanism of exogenous redistribution in the pension system. Martos¹⁹⁶ calculated the inequality of “new” pensions (assessed as the entry pension when retiring), “reference” wages (that is the base of assessment of new pensions), “old” pensions (assessed, on the average, some 12 years earlier) and “lifetime” wages (estimated as a function of the last wage before retiring and number of years served). For the measure of inequality he used the decile ratio, that is the ratio of the incomes of the highest decile to the those of the lowest decile. He found the decile ratio to be 3.1 for “new” pensions, 3.3 for “reference” wages, 1.9 for “old” pensions and 7-10 (depending on the methods estimation) for “lifetime” wages. The difference between the latter two ratios is particularly striking.

Reti et al.¹⁹⁷ examined a representative sample of 1.3 per cent of pensioners. For each person in the sample they calculated what they termed the “relevant” pension, that is a hypothetical pension that would be assessed according to the person’s employment history, using the

¹⁹⁵ United States Security Administration, United States Government Printing Office (Washington, D.C.), 1997.

¹⁹⁶ B. Martos, “A nyugdíjak egyenlőtlensége és dekompozíciója”, *Közgazdasági Szemle* (Inequality and decomposition of pensions, Economic Review), January 1994.

¹⁹⁷ J. Reti et al., *Értékvesztés és aránytorzulás a magyar nyugdíjrendszerben. Országos Nyugdíjbiztosítási Főigazgatóság Nyugdíjpolitikai Főosztálya* (Loss of real value and distortion in the Hungarian pension system), National Pension Administration, Department of Pension Policy, mimeo (Budapest), 1997.

¹⁹³ M. Augusztinovics and P. Johnson, “Concluding remarks: system and reform design”, *Pension Systems and Reforms – Britain, Hungary, Italy, Poland, Sweden. Final Report*, op. cit.

¹⁹⁴ P. Johnson and K. Rake, “The case of Britain”, *Pension Systems and Reforms – Britain, Hungary, Italy, Poland, Sweden. Final Report*, ibid.

BOX 4.5.1

Pre-reform characteristics of public PAYG pension schemes in transition economies

Retirement age: generally 60 for men and 55 for women (except Poland, where it is 65 and 60, respectively). High unemployment induced new regulations allowing earlier retirement. Hence actual average retirement ages are much lower than statutory ages.

Qualifying conditions: typically 25 years of service for men and 20 for women, although there are many exceptions, e.g. for unhealthy or hazardous working conditions, or for mothers, depending on the number of children.

Benefit formulas: usually use a fixed percentage of reference income for a minimum number of years, plus an increment – in some countries a descending increment – for additional years of service.

Reference income: usually an average over several years, in some countries with a ceiling and/or a descending series of increasing income bands.

Upper-lower limits: pensions are generally subject to minimum and maximum provisions. Minimum pensions were originally linked to the minimum wage, but the link has been severed (e.g. the minimum pension has overtaken the minimum wage in Russia but fallen behind in Hungary). Result: actual, individual replacement rates are a decreasing function of income and the number of years served, at the time of retiring.

Administration: old age, survivors' and disability pensions – often other cash benefits and social assistance schemes – are included in the same scheme, financed from the same sources and administered by the same authority. Relation with the government budget is unclear. Result: transparency is minimal or non-existent (except in Hungary from 1991 and the Czech Republic since 1993, where separate old age pension agencies were established).

Legacy: old age pension systems have existed for a long time but they were designed to work in a completely different economic and social environment than the present one. They were not prepared for 1) a severe contraction of national income and employment; 2) high inflation rates; and 3) dramatically increasing earnings differentiation.

Transition effect: to protect the lowest benefits from an extreme deterioration due to inflation, ad hoc, often flat rate, adjustments were made, distorting benefit structures and reducing the differential between the minimum and maximum pension, thereby further severing the originally weak link between contribution and benefit (e.g. in Latvia and Lithuania earnings-related pensions have in effect degenerated into flat-rate schemes).

Source: M. Cichon, K. Hagemeyer and M. Ruck, *Social Protection and Pension Systems in Central and Eastern Europe*, International Labour Office –Central and Eastern European Team (ILO-CEET), Working Paper, No. 21 (Budapest), 1997.

1996 pension formula (with proper adjustment of previous wages to the average 1996 wage level). The difference between the actual pension of the person and his/her relevant pension is a “gain” if the actual benefit is higher and a “loss” if the actual benefit is less than this

relevant pension. In the sample 64 per cent belonged to the category of “losers”. Individuals were then grouped by years served, the date of retirement and in deciles with

respect to their last wage. The cut-off between “gain” and “loss” proved to be at less than 25 years of service (gainers), more than 18 years spent in retirement and the lowest three wage deciles. Those who retired after 1991 suffered significantly more severe losses than those who retired in the 1980s, partly due to further restrictions in the pension formula but primarily because of high inflation rates, as wages in the last three years of employment are not indexed when assessing the “reference” contribution base.

The pension structure in Hungary thus strongly discriminates against longer service and higher income, even at the time of retiring. This tendency continues during the long years of retirement – because of the

haphazard, insufficient and egalitarian indexation of benefits prior to 1991 – and it has been particularly unfair to those who retired in the high inflation years of the

transition process in the 1990s.

Considering that the aggregate total of the entire sample investigated in the Reti study has shown a 3 per cent “loss” in actual benefits as compared with the “relevant” pension, it would be difficult to sustain the myth of redistribution from the active generation to the retired one. Redistribution in the name of solidarity has been enforced among pensioners: higher and average pensions have been effectively taxed to overcompensate the lowest pensions, in order to prevent the latter from shrinking in real value. (It is important to note that even

average-range pensions are below the officially calculated subsistence level and “high” pensions are higher only by a few per cent.)

It is clear from the summary in box 4.5.1 as well as from the Hungarian example that what we have termed the *exogenous* redistributive tendency has always been strong in the public pension systems of transition countries. This has not been unique to the rather egalitarian societies of these countries, the legacy of Bismarck and Beveridge having created similar situations in many European market economies.

What is unique, however, is the transition effect. To cut a cake that has decreased by 20–40 per cent in a few years is not an easy task in any event, and social protection systems were not prepared to undertake it. Pension insurance schemes have been used to cushion varied economic impacts, at the price of amplifying exogenous redistribution beyond the bounds of both economic rationale and social tolerance. The strongly and increasingly redistributive nature of the pension system, together with widening differences in earnings and income, stimulates high-income groups to try to escape from the system by avoiding contributions and/or by creating new schemes for their own benefit.

4.6 Pension reforms

The previous two sections have outlined the basic problems which pension reforms in transition countries must solve. We may summarize them here:

- (1) Retirement ages have to be gradually increased, although the real impact of this will only be felt later. This is because large numbers of those near to the pre-reform statutory age have already retired in the massive early retirement wave of the 1990s.
- (2) Contribution and replacement rates have to be reconciled with each other at a level acceptable to a broader social consensus and with a long-term view. The general public, including employers and employees, should be made aware of the mutual interdependence: reduced contribution rates and sustained (or even improved) replacement rates are incompatible. A society needs to know and to be able to decide on how much it is willing to pay for what it can get.
- (3) Given the strong dependence of pension finance on the employment situation, and the particularly high uncertainty of future labour market developments, it would be desirable to think of new mechanisms that would make pension finance more flexible, and more self-adjusting in the face of fluctuating economic situations without loss of stability and credibility. This is a difficult question with no ready answer in sight, but one that will have to be faced sooner or later.
- (4) The existing public schemes must be freed from the present opaque exogenous redistribution, not only for

the sake of justice and fairness, but also for economic efficiency: this major cause of contribution evasion must be removed. Social assistance and pension insurance have to be separated in order to achieve or restore transparency and incentives to contribute.

In the course of the 1990s the first problem, that of the retirement age, has been addressed in many transition countries. The fourth problem, the restructuring of existing pension schemes, has also been widely discussed and partially dealt with in a number of countries in various ways. Unfortunately, the deeper problems, the second and third listed above (establishing the level of sustainable pension insurance in general, and the impact of structural changes in the labour market) require a longer-term approach to the fundamentals of pension systems, but have received much less attention. Instead, fierce debates on pension reforms have become increasingly focused on another issue, advertised as a panacea: the transformation to – or at least the implementation as a second, mandatory “tier” of – a private, funded savings scheme.

As is well known, the idea that privatization of the pension system will, in the long run, solve all pension problems, did not originate in the transition countries. Systemic pension reform was not originally a subject included within the so-called “Washington Consensus” but it has now become part of the widely accepted neoliberal reform package. A research report of the World Bank, *Averting the Old Age Crisis*,¹⁹⁸ launched a worldwide campaign for downsizing public PAYG schemes and arguing for the allegedly spectacular achievements of the Chilean type pension reforms. Critical voices¹⁹⁹ are seldom listened to.

In many transition countries the idea has naturally been supported by neoliberal economists, usually controlling the Ministry of Finance, and strongly backed by the International Monetary Fund and the World Bank, wherever these institutions have leverage. Opponents, usually including Ministries of Labour and/or Social Policy, have been declared defenders of the obsolete, paternalistic, “overly-generous” and unsustainable welfare state. The controversy has thus been penetrated with politics, ideology and interdepartmental rivalry. Policymakers have spent little time insisting on sound economic, social and financial planning, or inquiring into professional arguments on important technical issues which they considered petty details.

No wonder that the political economy of pension reform has evolved as a legitimate and popular research field. An excellent product of this new field describes

¹⁹⁸ World Bank, *Averting the Old Age Crisis, Policies to Protect the Old and Promote Growth* (Oxford, Oxford University Press, 1994).

¹⁹⁹ For example, R. Beattie and W. McGillivray, “A risky strategy: reflections on the World Bank report ‘Averting the Old Age Crisis’”, *International Social Security Review*, Vol. 48. Nos. 3–4, 1995. See also the remarks of A. Uthoff in the previous chapter.

and explains reforms in the Czech Republic, Hungary and Poland. These three countries "... share a common legacy in old age security ... this might have been expected to lock in Polish, Hungarian and Czech policymakers in a similar way ... However, central-eastern policymakers opted for markedly different pension paradigms in the mid-1990s: whereas the Czech reform measures remained well within the boundaries of the Bismarckian-Beveridgean pension paradigm, partial privatization of old age security has been enacted in Poland and Hungary. ... particularly puzzling, considering, on the one hand, the neoliberal discourse of the long-standing Klaus government, and, on the other, the fact that Poland and Hungary were governed by post-communist parties when radical pension reform was initiated".²⁰⁰

As demonstrated in section 4.3, the Czech pension system has survived the economic transition crisis in much better financial health than the Hungarian and Polish systems. Has this been the cause of the bifurcation of pension reform paths? On the one hand, it is true that in the Czech case the convenient surplus generated by the pension fund helped to keep the Ministry of Finance neutral, disinterested in meddling with pension issues, and as Katharina Müller remarks, the World Bank was "a notable absentee" in the reform process. On the other hand, for the other countries in this group the "unsustainability" of the public, PAYG scheme was more a pretext, an advertising slogan rather than a real danger. This was certainly true in the Hungarian case, where several independent simulations demonstrated that the existing scheme, if decently reformed and with the already adopted increase in retirement ages, could remain financially viable for decades to come.²⁰¹

Both in Hungary and Poland, "mixed" systems have been legislated. There remains a public, PAYG tier to be financed from employers' contributions and new, private pension funds are being implemented to absorb more than half (more than 85 per cent in Hungary) of employees' contributions. The mixed system is mandatory for the youngest cohorts (all under 30 years of age in Poland and new entrants to the labour market in Hungary). Those older than 47 (Hungary) or 50 (Poland) are supposed to remain in the "old" scheme, while the middle generation is free to decide personally between joining the new, mixed system or staying within the old one.

In Poland the public tier is undergoing fundamental restructuring. A minimum pension guarantee, amounting to 28 per cent of average wage, will be financed from general taxation for those 65 or more years of age with 25 insured years of contributions. (Apart from the latter eligibility criterion, this can for all practical purposes be

regarded as a basic pension scheme, as defined in the typology above.) The earnings-related scheme will be based on "notional defined contributions" i.e. accumulated lifetime contributions, indexed by the change in wages in the whole economy. Benefits will depend on the average life expectancy at the time of retirement. To facilitate the creation of individual accounts, a hypothetical retirement value will be calculated for every insured person, dependent on pre-reform contributions. The administrative agency will be made a juridical entity and old age insurance will be separated from other risk-insurance programs, such as disability insurance. A "Demographic Reserve Fund" will be set up. These measures outline a drastic house-cleaning operation in the public PAYG scheme, in parallel with the implementation of the private, funded scheme.

In contrast, very little has been done in Hungary to correct the failures of the existing public PAYG scheme.²⁰² The retrogressive – exogenously redistributive – elements of the pension formula, as well as the lack of proper indexation of the reference income (prior to retirement), will be sustained until 2013. Individual record keeping is not provided for in the legislation. A reduced degree of indexation – linking pensions to wages and prices rather than simply to the growth in wages – is, on the other hand, to be effective almost immediately, from 2000. (This is obviously disadvantageous for pensioners as real wages are expected to increase.) It is not surprising that the number of people who have chosen to switch voluntarily to the new system has exceeded by far all previous estimates – despite the fact that there are no recognition bonds (as in Chile) and no "hypothetical retirement values" (as in Poland): those who "switch" are plainly losing 25 per cent of their previously accrued pension rights. (Naturally, the latter fact has not been loudly advertised in the recruiting campaign for the new system.)

Both in Hungary and Poland, in pre-reform debates and in the recruiting campaign, the pros and cons of the "public PAYG versus private funded" were depicted very much in the way outlined at the beginning of the previous section: two dichotomously opposite clusters, one bad, one good. It would be superfluous to repeat here all the arguments about political and market risks, individual sovereignty, rates of return, the effect on economic growth, and "keep your eggs in two baskets", which are amply elaborated in an abundant international literature.

What is important to note, however, is that the pros and cons of two different pension systems can be fairly compared only if both systems are fully mature or, on the contrary, no pension system exists in a given country where the introduction of a system is contemplated. Neither situation was the case in central European transition countries: rather the gradual transformation of

²⁰⁰ K. Müller, *The Political Economy of Pension Reforms in Central-Eastern Europe*, Inauguraldissertation eingerichtet an der Wirtschaftswissenschaftlichen Fakultät der Europa-Universität Viadrina (Frankfurt (Oder)), 1999, forthcoming, p. 200.

²⁰¹ M. Augusztinovic and B. Martos, "Pension reform: calculations and conclusions", *Acta Oeconomica*, Vol. 48, Nos. 1-2 (Budapest), 1997.

²⁰² A. Simonovits, "The new Hungarian pension system and its problems", in K. Müller, A. Ryll and H. Wagener (eds.), *Transformation of Social Security: Pensions in Central Eastern Europe* (Heidelberg, Physica, 1999), forthcoming.

an existing system was at stake. The crucial issue, the scope and financing of the costs of transition (from public PAYG to mixed) "... were successfully shielded from public debate in both Poland and Hungary. Consequently, there was an asymmetric perception of the strengths and weaknesses of the mixed reform path by the public in both countries, biased towards its advantages and based, in part, on fiscal illusion".²⁰³

There "fiscal illusion" appears in the shape of two popular statements. One is that transformation from PAYG to funded pension schemes is imposing a double burden on the working generation: they have to continue to support the elderly and at the same time save for their own old age – that is why the transformation must be gradual, phased in over a long period. The other is that, consequently, such transformation generates additional saving at the macro level, thereby fostering economic growth. Both statements are fallacious. Neither the contribution base nor the aggregate pension expenditure would change as the result of the implementation of a new, private, funded tier per se. (If parametric changes are combined with the paradigmatic shift, that is a different matter.)

The reality of the "double burden" is this: what is really happening is that part of the *same* (not a doubled) contribution revenue is now immediately rechanneled from the PAYG pension fund to financial markets, while in the maturation period of the new scheme pension expenditure remains completely or largely with the old scheme. (Members of private funds will not retire before the early 2010s and the youngest cohorts joining now will retire around 2040.) The result is a wide gap in the financing of the public scheme. The "unsustainability" thus may prove a self-fulfilling prophecy.

There are only two ways to bridge the gap. Part of the rechanneled money will find its way back to the general budget via government bonds. This is a rather costly roundabout process, as financial intermediaries will deduct their commission, and interest at market rates (the much praised higher returns of the pension funds) will have to be paid, perhaps in perpetuity, by the general taxpayer, with no additional saving at the macroeconomic level. The remaining part of the public deficit will have to be financed either by restructuring the budget, for example by reducing public investment (again this means no additional saving) or, most likely, by reducing pension benefits to a significantly larger extent than that proposed (or admitted) in the initial reform package.

The new Hungarian government, elected in 1998, has already adopted this latter course. The resulting public deficit for 1999 is projected at a much higher level than previously expected, because of the overkill "success" of the recruiting campaign for private pensions.

The consequence is that indexation of pension benefits in 1999 will be lower than was promised in the 1997 reform package. In order to cushion the effects on the neediest, the new government has returned to the worst tradition of putting both lower and upper limits on pension compensation, thereby again amplifying redistribution among pensioners. Members of the new government have declared that they are not "satisfied" with the 1997 reform but their further intentions are presently unknown.

It would be a mistake, therefore, to overestimate the viability and stability of pension reforms implemented in transition countries during the 1990s. Some of them did not solve anything, and although some solved a few problems they also created new ones. None of them faced the real challenge of the twenty-first century, the worldwide trend of increasingly less stable labour market arrangements and the resulting erosion of the traditional pension contribution base. Haphazard responses to short-term problems will probably continue and it will take a long time for these countries to build up stable and credible pension systems.

²⁰³ K. Müller, *The Political Economy of Pension Reforms in Central-Eastern Europe*, op. cit., page 196.

Discussion of chapter 4

4.A The merits of fully-funded versus pay-as-you-go in transition economies

Jerzy Hausner

I agree with many of the opinions and observations presented in the paper by Professor Augusztinovics. Nevertheless, the role of any discussant is, above all, to cast doubt on a particular viewpoint or forward a different perspective so as to trigger debate. Wishing to perform such a role, I would like to mention a number of areas where I disagree with the author, although this does not mean that I intend in any way to discredit her excellent and important paper.

As far as I understand, Augusztinovics does not support the multi-pillar pension reforms which have been introduced on a legislative and logistical level in Hungary and Poland, and which have also been prepared and partially implemented in a number of other post-socialist countries. In her opinion, these reforms were launched without appropriate professional deliberation and broad public debate. At the same time, Augusztinovics clearly calls for a gradual transformation of the pension systems currently in force as an alternative to radical reform. She proves – for the most part convincingly and fairly – that demographic phenomena which compelled the need for reform in highly developed countries (ageing of society, demographic booms and troughs), have not yet appeared on a large scale in post-socialist countries. As a consequence, Augusztinovics – just like John Eatwell in his presentation to this seminar – believes that in transition economies, the shift from a pay-as-you-go system to a fully-funded one is not necessary. On the contrary, the issue at stake is one of doctrine. Decisions based on doctrine are being made rashly and without taking into account the social and economic consequences of reform. Moreover, she argues, a new multi-pillar pension system is not financially sustainable.

I do not agree with Augusztinovics's reasoning nor with the conclusions she draws. I would like to put forward my own arguments in order to demonstrate that radical, fast-track pension reform is needed in the majority of post-socialist countries; and that in those countries which are most advanced in the market transformation, replacing the traditional pay-as-you-go system with a mixed, multi-pillar arrangement is both possible and desirable.

The need for quick and decisive action in my opinion results from the fact that in the majority of these countries the pension system is, for many intents and purposes,

bankrupt in an actuarial sense – it no longer pays for itself and is becoming increasingly unsustainable.

That such a situation has come about has mainly been due to the fact that various pension privileges were assigned to many groups during both the communist and transformation periods. In the latter case, they were mainly designed to mitigate the problem of sharply rising unemployment by awarding the right to early retirement.

One example of such group privileges is illustrated in the relationship between the benefits awarded in the social insurance system to miners and benefits awarded to

TABLE 4.A.1

Comparison of disability and retirement pensions for miners and the population as a whole in 1996
(Years and indices)

	Total	Miners
Average retirement age	65.7	59.4
Average age of retirees who have received pensions ...	56.7	47.6
Average level of retirement pension	100.0	208.7
Average level of disability pension	100.0	247.6
Average level of survivor pension	100.0	183.2

Source: J. Hausner, *Security through Diversity: Conditions for Successful Reform of the Pension System in Poland*, Collegium Budapest, Institute for Advanced Study, Discussion Paper, No. 49, 1998, p. 10.

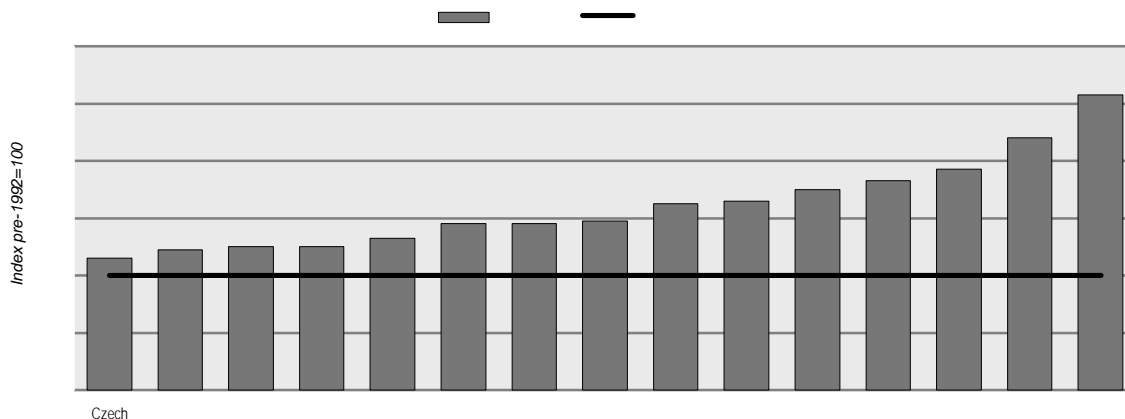
other employee groups in Poland (see table 4.A.1)

Such examples can be observed in every country. The practice of awarding privileges to various occupational (branch) groups – so characteristic of the command economy – led to the gradual erosion of the pension systems in these countries. A trend towards degeneration became evident in the 1990s. We can speak about specific causes that undermined the pension systems in each country, the most important of which were unemployment and early retirement. But other factors should also be noted, including: a strong tendency among young people to emigrate, the breakup or debilitation of the state and the failure of its financial organs to meet the state's financial obligations and collect revenues, tax evasion, the growth of the grey economy, etc.

As a consequence, in the 1990s, the number of people receiving pension payments in post-socialist countries increased, while the number of those paying social insurance contributions decreased, which will obviously lead to a dramatic increase in the system

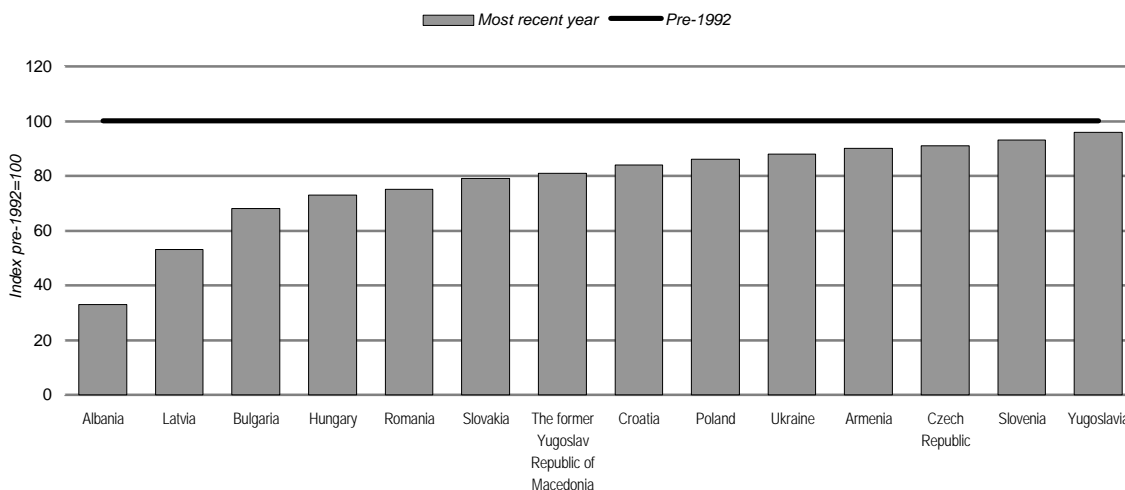
CHART 4.A.1

Growth in number of pensioners for selected transition economies



Source: Pension Reform in Transition Economies, World Bank (Washington, D.C.), June 1999.

Decline in number of contributors for selected transition economies
(Index pre-1992=100, number)



Source: R. Palacios, M. Rutkowski and X. Yu, , World Bank (Washington, D.C.), June 1999.

dependency ratio (SDR). Data illustrating these

The major problem confronting post-socialist countries is thus not a very high demographic dependency

pains to prove – but an unusually high system dependency ratio, which she does not sufficiently consider in her paper.

higher than the DDR, but this difference is not as great as in transition economies. In the mid-1990s, it rose to almost

and Poland, and 35 in Russia.

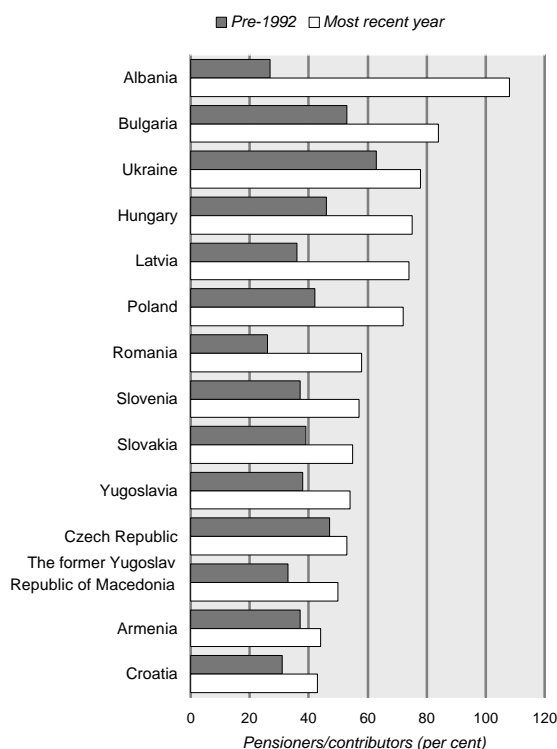
Thus, the radical pension reforms which certain

result of IMF or World Bank pressure, as Augusztinovics suggests. Rather they were forced upon those countries

doctrinal factors or a desire to be wholly controlled by market forces, but in the need to avoid a catastrophe

CHART 4.A.3

Change in the system dependency ratios for selected transition economies
(Per cent)



Source: R. Palacios, M. Rutkowski and X. Yu, *Pension Reform in Transition Economies*, World Bank (Washington, D.C.), June 1999.

of the twenty-first century, when the demographic situation in many of the countries under analysis will deteriorate. Moreover, in contrast to what Eatwell argues, these reforms are not designed to reduce the absolute level of pension payments, but to avoid such a reduction occurring, which in the opposite case would be inevitable.

It should be clearly stated that a clear motive for reform in the case of Poland and several other countries is a desire to reduce the very high replacement rate (over 60 per cent). However, such a move is not designed as a means of reducing pension purchasing power, nor should it. If reform restores solvency to the pension system and increases and consolidates economic growth both indirectly (instead of financing the deficit of the social insurance fund, budgetary resources would be used for structural policy and the creation of new jobs) and directly (through greater savings and better financial capital structure and thus a higher level of investment), then a lower replacement rate will in the future guarantee higher benefits than at present.

Since the main cause of crisis in the majority of post-socialist countries is not (for the time being) demography or a poorly managed pay-as-you-go system, it is important to ask whether this system can be repaired and radical reform avoided. Theoretically this is possible. Rationalizing and regulating the pay-as-you-go system would restore long-term financial balance to the system. The problem would thus be adequately solved by raising the retirement age, eliminating occupational privileges and abolishing early retirement.

This is how things look from a strictly financial point of view. From a political perspective, however, implementing such a programme does not seem possible for two reasons. First, it would challenge the vested interests of large social groups – in Poland proposals regarding the rationalization of the present system sparked serious social protest and became a highly sensitive issue in political terms. Second, the pay-as-you-go system is by nature susceptible to political manipulation – certain groups can be guaranteed privileges at the expense of others, because the relationship between contributions and benefits is unclear and ambiguous. The social insurance contribution is a collective tax and not a form of individual savings. Few people are aware of being insured, and thus the system lacks an institutionalized social force which would defend the interests of the younger generation inconvenienced by privileges which politicians find it more expedient to grant to older generations. In such a situation politicians will always be tempted by moral hazard and secure the votes of the large and active pensioner electorate by granting them undue privileges.

Individualizing social insurance is necessary in order to prevent the permanent decay of the pay-as-you-go system. Moreover, individualization is a socially desirable and understandable solution. Below I present a summary of the results of social research carried out in Poland in April 1997 – at the moment when the government decided to submit its first legislative package on pension system reform to parliament – and assessments of both previous solutions and the basic principles of the new system (tables 4.A.2-4.A.3).

The results clearly show that the Polish public expected a radical break with the previous system, which it perceived to be unjust and inefficient. In its place it wanted an individualized and fully-funded system. It should also be emphasized that public criticism of the old system clearly increased as the debate on pension reform progressed (see table 4.A.4). In mid-1995, the government presented its reform proposals to the public. The government's reform programme was basically aimed at rationalizing the pay-as-you-go system and did not provide for a mandatory fully-funded pillar. This project was received unfavourably. The older generation was opposed to it because the government's suggested solutions violated their interests, the middle generation did not support it as it was thought to be too conservative,

TABLE 4.A.2

Present system: result of public opinion polls, 1997
(Per cent)

	Per cent
Present system does not give a sense of security	78
Principles used are unclear	69
Pensions do not ensure adequate living conditions	85
Pensions are subject to political manipulation	62

Source: J. Hausner, *Security through Diversity: Conditions for Successful Reform of the Pension System in Poland*, Collegium Budapest, Institute for Advanced Study, Discussion Paper, No. 49, 1998, p. 29.

TABLE 4.A.3

The new system: result of public opinion polls, 1997
(Per cent)

	Per cent
Pensions should be closely related to high contributions and the length of time they were paid	73
Pensions should be derived from employee contributions, accumulated and capitalized over their working time	68

Source: J. Hausner, *Security through Diversity: Conditions for Successful Reform of the Pension System in Poland*, Collegium Budapest, Institute for Advanced Study, Discussion Paper, No. 49, 1998, p. 29.

TABLE 4.A.4

Assessment of the current pension system, 1995 and 1997
(Per cent)

	August 1995	April 1997
Very bad and fundamental change is needed	28.5	44.5
Rather bad	33.5	21.0
Rather good	8.0	8.5
Rather good and does not need to be changed	1.0	1.0
Not aware of the principles behind the present pensions system	21.0	21.0
Do not know	9.0	4.0

Source: J. Hausner, *Security through Diversity: Conditions for Successful Reform of the Pension System in Poland*, Collegium Budapest, Institute for Advanced Study, Discussion Paper, No. 49, 1998, p. 28.

and the younger generation for the most part showed no interest. However, the debate on reform at that time had some value in the sense that it mobilized the middle generation and radicalized negative attitudes towards the old system. Thus, the ground for a more radical reform project was prepared.

The argument forwarded by Augusztinovics, that there was no genuine social debate on pension reform, is not true at least in the case of Poland. In my country pension reform was the subject of public debate, which revealed clear support for the reform. What is most important is that this debate convinced policy makers that only radical reform would win the support of 30 to 40 year olds, who have become a key factor in Polish politics and constitute a counterweight to the pensioner

generation. It should be clearly stated that support for reform depended on the extent to which individual savings would replace a collective tax, and thus on the introduction of a fully-funded pillar.

A difficult problem that needs to be addressed is the size of the fully-funded pillar. As a result of members of younger age groups transferring part of their contributions to individual accounts in pension funds, the deficit in the pay-as-you-go system is increasing. From this point of view it would be sensible to limit the number of people obliged or entitled to participate in the second pillar and reduce the size of the contribution assigned to this pillar. On the other hand, the operations of the pension funds entail specific costs which are undoubtedly higher than in the case of the pay-as-you-go system. If there are only a small number of participants to cover the costs of these funds the size of accumulated capital and benefit payments will be considerably limited. From this point of view, it would be necessary to do the opposite – increase the number of participants in the second pillar and the level of contributions transferred to pension funds.

The choice must depend on the method adopted to finance the additional gap that will appear in the pay-as-you-go pillar when the fully-funded pillar is launched. In Poland, this fiscal gap – which should not be confused with the costs of reform – will be covered from current privatization revenue.²⁰⁴ This is still possible due to the large amount of state treasury assets suitable for privatization. At the same time, the capital market is sufficiently advanced – relatively large and efficiently regulated – to increase the scope of privatization and secure appropriately high revenues. Such a solution, however, is not available in a number of post-socialist countries – either because state assets were hastily privatized using the voucher method, or because capital markets have not been appropriately developed and regulated.

Another important factor is whether the economy in question is enjoying economic growth. For if it is not, it is difficult to imagine obtaining revenue from privatization, while the investments of pension funds might not be sufficiently effective to ensure an increase in the capital of the participants in investment funds.

It is evident from the above that multi-pillar pension reform cannot be treated as a binding blueprint or a universal remedy. It is thus only appropriate for those transition countries which enjoy economic growth, a

²⁰⁴ As a result of introducing the mandatory fully-funded pillar, an additional gap in the social insurance funds will appear for a certain transitional period (lasting at least several dozen years). In an economic sense, however, this is not an additional item of expenditure or a new liability, but the replacement of one form of public debt (implicit debt) with another (explicit debt). As a consequence, the problem of liquidity becomes temporarily more acute within the system, but additional costs do not appear if there is a possibility of financing this additional gap without increasing the current budget deficit.

well-regulated capital market, a relatively balanced economy and controlled budget deficits. Such countries should also have at their disposal a relatively efficient administration, be capable of developing a complex information system to deal with individual insurance records and ensure the swift and cheap transfer of contributions both between different kinds of insurance and to pension funds. It would be even better if they possessed a large amount of state assets suitable for privatization.

For only in such conditions can a fully-funded pillar function, and only in such conditions will its implementation stimulate economic growth. The opinions of economists vary on this matter as empirical research does not unequivocally confirm that capital (funded) insurance results in an increase in domestic savings. Even leaving aside arguments about the expected increase in domestic savings (which cannot be proved), it can be clearly shown that multi-pillar pension reform will accelerate economic growth as a result of changes in the capital structure. The establishment of pension funds is one of the relatively few fast-track methods of long-term capital development in transition economies. Their appearance on a large scale will undoubtedly help reduce interest rates and thus investment costs, and as a consequence will help accelerate economic growth.

I would thus like to reject the main objection forwarded by Augusztinovics regarding the long-run unsustainability of the reforms implemented in Hungary and Poland. Of course, only time will show her claim to be justified or not. But taking into account the facts available to us, these reforms were introduced precisely because the pay-as-you-go pension systems in Hungary and Poland had irretrievably lost sustainability and required large budget subsidies. Their deficits would have risen so steeply that financial catastrophe would have been inevitable. The reforms were thus undertaken in order to avoid such a situation arising and to ensure that the pension system was self-financing and solvent on a long-term basis. In particular, the elements listed below are designed to ensure this. For reasons of space I shall mention only the following:

- Individualization of records and savings;
- Diversification of risk through the establishment of two different mandatory pillars and development of a third voluntary funded pillar;
- Indexation mechanism in the first pillar based on wage funds covering an overall amount of incomes from which contributions were paid;
- Actuarial fairness of paid benefits;
- Several legal and economic safeguards in the second pillar;
- Demographic reserve fund, which helps to mitigate the effects of demographic booms and troughs in the first pillar.

Finally, I would like to make it clear that the reforms in Hungary and Poland, together with the slightly more gradual reform programme introduced in Latvia, differ from each other with regard to many details and parameters. Although they have taken similar directions, they are not based on the same model. Their strength lies in the fact that each reform programme includes a number of innovative elements which testify to the creativity of their authors and their ability to take into account national conditions. Thus, these reforms cannot constitute a model which can be copied by other post-socialist countries. Each of these countries has faced or will soon face the need for pension reform, but each must find its own solutions. Such measures should be sufficiently bold in character, but be implemented on a rational basis.

Those countries which do not possess the above-mentioned economic and institutional conditions will not be able – at least for the time being – to form a mandatory fully-funded pillar. They will be forced to find solutions based on their pay-as-you-go systems. In this case, the comments which Professor Augusztinovics presented in her paper are undoubtedly worth considering.

4.B To improve or privatize public pensions?

Romas Lazutka

Lithuania, in contrast to Hungary and Poland, has not implemented to date any reform which involves the partial privatization of social insurance pensions. At the moment, the Lithuanian parliament is discussing only a proposed “Law on Voluntary Private Pension Schemes”. This development, a focus on retaining the public pension as central to the system, may be explained by the rather successful pension reform in Lithuania in 1991-1994. It is also possible, however, that private financial institutions had a greater impact on developments in other countries, and that this aspect can be as significant as economic and demographic considerations. These issues are briefly reviewed below.

Challenges of economic transformation for the pension system

In fact the challenge presented to the pension system in Lithuania by dramatically changing economic circumstances was actually greater than in a number of countries of the region. Professor Augusztinovics has analysed well for us the unfavourable initial conditions in the existing PAYG systems. Three key negative factors were glaringly present in Lithuania.

Firstly, a low retirement age was inherited from socialism (55 years for women, 60 years for men). With

CHART 4.B.1

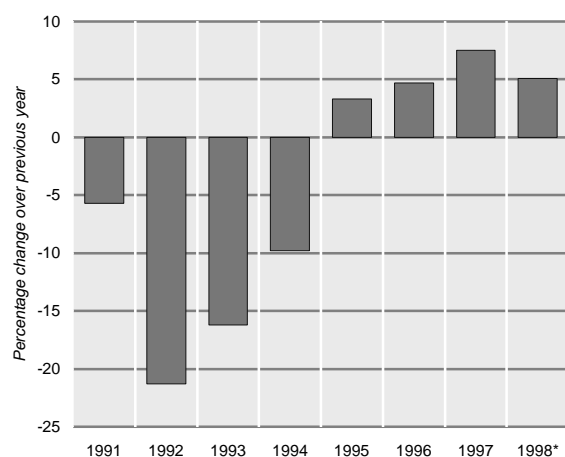
Forecast of numbers of retirement ages in Lithuania, 1995-2025
(Thousands)



Source: V. Bieliavskis and A. Pocius, *Lietuvos gyventojų struktūros ilgalaikės prognozės*, Statistikos Departamento darbai, No. 2 (Vilnius), 1995, p. 11.

CHART 4.B.2

Changes in real GDP in Lithuania, 1991-1998
(Constant 1993 prices)



Source: Statistics Lithuania, *Economic and Social Development in Lithuania*, No. 3, 1999 and Department of Statistics of the Government of the Republic of Lithuania, *Statistical Yearbook of Lithuania*, 1998 (Vilnius).

such a low retirement age, the consequences of population ageing is projected to result in an increase in the number of the retired population from 750,000 to 970,000 by 2025 (see chart 4.B.1).

Secondly, the economic decline in 1991-1994 in Lithuania was one of the larger declines in the post-socialist countries (chart 4.B.2). Of course, we know that there is a problem of comparing the economic situation before and after the change of system. In the “shortage economy” of the old system, some products were

produced although there was little or no demand for them, while it was impossible to buy many goods on the open market at their official prices.²⁰⁵ This meant that after price liberalization there was a certain statistical exaggeration of the fall in output. There is, however, no doubt that there was such a fall.

Thirdly, there were negative labour market developments which Lithuania, along with other post-communist countries, failed to prevent. The number of people in formal employment subject to social insurance deductions from their wages decreased by 22 per cent in 1991-1993.²⁰⁶ The majority of self-employed people, as well as those employed in the grey economy, do not contribute to the pension schemes, and these groups are a much larger proportion than they were previously. At the same time the system retained, of course, its obligation to pay the pensions of all those who had retired in a period when the parameters of the system had been constructed on the assumption of full employment. Thus the system dependency rate increased from 38 per cent in 1991 to 62 per cent in 1994.²⁰⁷

Sustainability of the social insurance pension scheme

It is obvious that these economic developments presented a long-term danger to pension financing. This was taken into account in the new pension laws of 1994.

First of all, a gradual increase in the retirement age (four months for women and two months for men every year) resolved the problem of the low retirement age. As we might expect, increasing the retirement age significantly reduces the number of retired people (this is clear in chart 4.B.1); if it continues to be increased until 2025, it will then reach 65 years for both male and female. This measure will thus have resulted in a reduction of 36 per cent in the number of retired persons by 2025, as against the number which would have been projected if the inherited low retirement ages had been preserved.

Secondly, Lithuania excluded from the social insurance system some groups which explicitly enjoyed the privilege of early retirement in the communist period. Moreover, new schemes for encouraging early retirement were also avoided. Thus the PAYG system was able to cope with the claims of different vocational groups and

²⁰⁵ For example, it was typical to report how many kilograms of meat could be purchased with the average monthly wage. From this, we could calculate that this wage was worth 100 such kilos. However, such a purchase was not actually possible in the shops at that price. It was only possible with an additional payment to the director of a factory or shop. This example shows that in a command economy with pervasive shortages and without freely flexible prices, GDP could be overstated relative to later periods following price liberalization.

²⁰⁶ *Statistical Yearbook of Lithuania* (Vilnius), 1998, pp. 89-90.

²⁰⁷ *Valstybinis Socialinis Draudimas 1997. Statistiniai Duomenys* (Vilnius), 1998, p. 32.

this shows that such claims should not be accepted as a valid argument for the privatization of pensions.

Thirdly, rights of individuals to pensions were strictly related to their contributory records. This may result in a future problem for universal pension coverage later on, but it did help underpin the financial sustainability of the pension system.

In the fourth place, the pension itself was set at a modest amount, so that 40 years of contributions would result in a pension of 40 per cent of the average wage.

Fifth, by 1993 Lithuania had already created a system of computerized individual pension accounts, one of the first post-communist states to have done so. A sound administrative system for contributions further reinforced the positive dynamics. Of course, such an administration is of little help if the employer's bank account is empty. However, a good social insurance institution is able to find out which accounts are empty and which are not, thus requiring payments of contributions from the latter in an effective way.

Positive consequences of pension reform

This austere pension policy produced positive results. The reformed system in Lithuania requires only a small share of GDP to go to pensions, that is, approximately 6 per cent,²⁰⁸ while Hungary²⁰⁹ and Poland²¹⁰ take more than twice as much. The average figure in the European Union is also approximately 12 per cent of GDP.²¹¹

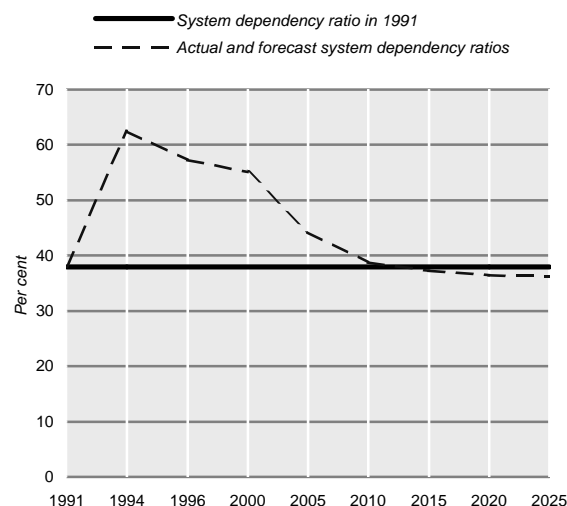
The payroll deduction is 23.5 per cent, which fortunately has not been increased from 1991 to 1999, despite pressure from the above-mentioned factors. Thus the low replacement rate for pensions and the elimination of privileges meant that up until 1998, Lithuania has had a balanced pension budget. For eight years no subsidies have been assigned from the state budget.

As we can see in chart 4.B.3, by about 2015 the underlying pension system will be as balanced as at the beginning of the transition period, i.e. the system dependency rate will be the same as it was at the outset.

The introduction of the reformed pension system has coincided with the start of economic growth. As pension size is linked to the payroll, this means that pensions increase with economic growth. Consequently,

CHART 4.B.3

System dependency ratio of the Lithuanian social insurance pension scheme, 1991-2025
(Per cent)



Source: R. Lazutka and D. Bernotas, "The development of social insurance pension in Lithuania", *PHARE Research Report*, No. P96-6064-R (Vilnius), 1998, p. 25.

Note: The ratio expresses pension system beneficiaries as a proportion of pension system contributors.

the old age pension increased by 18 per cent in 1997 and by 13 per cent in 1998.²¹²

Old and new problems

A more austere pension system produces not only positive results, but also raises problems.

The first problem is the prevalence of poverty in households of retired people: 22 per cent of these are poor, a higher proportion than the national average, which is 16 per cent.²¹³ Retired people who receive pensions below the average and get no support from family members are even more exposed to the risk of poverty.

Secondly, the degree of pension coverage will decline quite significantly in the future, as many of the self-employed and long-term unemployed will not have had a sufficiently long period of contribution. Therefore, the social safety net for those without such a pension needs to be significantly extended.

Other problems of the Lithuanian Social Insurance Pension Scheme are related to what is often called political risk. In 1995 widows' (and widowers') pensions were paid in addition to any old age or invalidity

²⁰⁸ *Statistical Yearbook of Lithuania* (Vilnius), 1998, p. 156.

²⁰⁹ UNDP, *Poverty in Transition?* (New York), 1998, p. 95.

²¹⁰ B. Milanovic, *Income, Inequality and Poverty during the Transition from Planned to Market Economy* (Washington, D.C., The World Bank, 1998), p. 209.

²¹¹ European Commission, *Social Protection in Europe 1997* (Brussels), 1998, p. 15.

²¹² Statistics Lithuania, *Economic and Social Development in Lithuania* (Vilnius), March 1999, p. 14.

²¹³ R. Lazutka, *The Standard of Living and Poverty. Lithuanian Human Development Report 1998*, UNDP (Vilnius), p. 64.

pensions. Since 1997 the number of recipients of such double pensions has significantly increased. The number of invalidity pension recipients has been growing very rapidly, as the legal procedure for establishing invalidity has not yet been adapted to new conditions.

Another problem is that in 1995 a "ceiling" to contributions was introduced, so that no contributions are paid on that part of the wage or salary which exceeds three and half times the average wage, and no alternative source of financing has been set up to replace this.

These problems are not necessarily inherent in any PAYG system. It is true that they might be seen as problems arising from political risk, since they have arisen as a consequence of political decisions or the absence of appropriate decisions. However, if we compare PAYG and funded systems in the light of their sensitivity towards political risks, we may see that both of them are sensitive in this way. In the case of funded pensions, the political risk is expressed through an increased rate of inflation caused by the public expenditure of the government and its influence on rates of interest.

Privatization objectives and actors

From the Lithuanian experience we can thus see that an increase in the statutory retirement age should result in a reduction of the number of retired people. During a complicated transition period Lithuania has, moreover, managed to prevent an increase of expenditure on pensions, primarily at the price of keeping the pension level low.

In Hungary and Poland, the partial privatization of the existing public pension funds may reduce the share of GNP going to retired people. In Lithuania there has been no need for this as the low level of the public pension has stimulated private initiatives in savings.

The rather strict rules with regard to pension entitlement and the increase in the retirement age in Lithuania mean that expenditure on pensions will be under control in the future as well. Therefore there is enough room to introduce a second, private, pension pillar for those not covered by the existing system (first of all for the self-employed) and for those who wish additional pension coverage. Participation in the second pillar could be voluntary, at least until such time as reliable institutions are established in the financial markets and experience in the monitoring of funded pension schemes has been acquired by governmental agencies.

However, we cannot really hope that private funded pensions will have a significant effect on investment and economic growth in Lithuania. Due to the fact that it is a small open economy, the investments of pension funds will not be held within the country. If they were it would contradict the requirement to diversify the pension fund's

portfolio. The influence of foreign investment on a small economy is more significant than the operation of pension funds.

Therefore, neither demographic nor economic reasons suggest that it would be reasonable for Lithuania to emulate the Polish or Hungarian reforms and thus partially to privatize social insurance pensions. It would, indeed, be regrettable if a logically designed and potentially effective system were dismantled rather than improved and supplemented.

However, there is a danger of more revolutionary change in the pension system, a threat which could emerge in Lithuania as well. What factors might encourage such radical changes, if there are no economic preconditions?

In a number of post-communist countries societies are not well-structured and tend to be atomistic, and the organization of the partners in the labour market is in an embryonic phase. Therefore their influence is often slight. It is to be noted that the employers, who have one third of the votes on the Social Insurance Council (the other two thirds are held by the trade unions and the government) are not using their powers to try to improve the existing pension scheme and protect it from excessive increases. Seeking to reduce the burden of pensions, they tend to support ideas of creating capital-based pension schemes instead of employment-based schemes. Any deficit in the pension scheme caused by short-term popularity-seeking on the part of some politicians, and the consequent necessity of supporting the pension scheme from the state budget, could be an important argument leading the Ministry of Finance to support proposals to privatize the social insurance pension system.

Therefore, at the end of a decade we may observe that despite the successful start of a pension reform, the pension issue in Lithuania remains open for discussion. This occurs even though there is neither a significant danger from the point of view of population ageing, nor from an overly heavy financial burden on the economy. It would be, therefore, regrettable, if efforts and resources were used for risky experiments, instead of improvements in the existing system and the introduction of supplementary private voluntary schemes.

This brief review of the Lithuanian pension scheme allows us to draw some conclusions for the entire central and east European region. It would appear that the desire to privatize the pension system springs from more than population ageing and/or perceived problems of the PAYG system. Because of the historical circumstances of the post-socialist countries, the political influence of employers and employees can be less significant than that of politicians and those involved in financial markets. Developing private financial institutions have been gaining increasing influence, and they would like access to pension funds. They cannot hope for a rapid increase

in voluntary savings at the present time because of the relatively low income level of the population. Therefore gaining access to the mandatory contributions to funded pension schemes would be attractive. In 10 years of doing business in central and eastern Europe, these institutions have often found it advantageous to be involved when one of the contracting parties is a weak state. Thus they may seek amendments to pension laws in order to direct a part of the mandatory pension contributions to private financial institutions, which would represent a contract of this type.

4.C Growth, pension reform and capital markets in transition economies

Paul Wachtel

The reform of national pension systems is truly a topic that cuts across all the differences among countries. Virtually every nation in the world is grappling with the issue in some fashion – from the United States to Chile to Slovenia to Japan and most points in between. The issues are hotly debated and invite polemic. There are both practical and theoretical disputes that make it hard to strike a balance between publicly provided transfers to the elderly and the provision of pensions from private retirement saving.

There are at least three reasons why pension reform has attracted so much attention lately. The first two – public sector restructuring and demographic trends – have been extensively discussed already at this conference:

- (1) Restructuring of the public sector has become more common after decades of abuse. This includes both the transition countries that are emerging from an era of Soviet planning and many market economies where reforms have ended decades of bad fiscal policy and the ravaging effects of inflation. In both instances, reform of public sector provision of pensions is an important issue.
- (2) Changes in the demographic structure of the population are occurring in countries all over the world. Declining birth rates and rising life expectancy means that the elderly are a rapidly increasing fraction of the population. Although there are differences among country trends, the phenomenon of rapidly increasing dependency ratios is widespread. The increase in dependency ratios challenges the ability and willingness of both rich and poor to provide resources for the elderly.

However, there is also a third reason why countries around the world should pay even more attention to the design and choice of pension systems:

- (3) The way in which an economy chooses to provide support for the elderly may effect levels of capital formation and economic growth. The choice of a pension system is particularly important because the

choice can have long-term effects on the economy. Both pay-as-you-go (PAYG) and funded pension systems need to be judged by their effects on economic growth because with an ageing population, real growth is essential for sustaining any reasonable pension scheme.

These observations are not new. They were thrust into the eye of policy makers around the world when the World Bank published *Averting the Old Age Crisis* in 1994. Some of the policy recommendations from that volume have quickly become part of an unchallenged neo-liberal economic orthodoxy. Specifically, the World Bank suggested that at least part of any national pension scheme should be on a funded instead of a pay-as-you-go basis. Amidst the debate over pension systems, it is easy to lose sight of the reasons why the choice is important.²¹⁴

First, funded systems are usually (though not necessarily) privatized. Privatization is preferable to government provision of pension services because it is likely to result in more efficient administration. Second, a funded system (run by the private or public sectors) will enhance growth if it uses market oriented criteria in making investment decisions. Third, a funded system that channels investment decisions through private sector financial institutions will strengthen capital markets and improve both the availability and allocation of capital.

Nevertheless, social service professionals who are concerned with the well being of the poor and elderly are reluctant to do anything that reduces the public sector's responsibilities. A reduced reliance on the public sector is not an abrogation of social responsibilities. Moreover, the argument has been made (see John Eatwell's paper) that a transfer of resources through a PAYG system is the same as the transfer between savers (workers) and dissavers (retirees) in a mature funded system. This may be true in a static approach that ignores the effects of the pension structure on capital allocations and economic growth.

All in all, a closer look at the reasons why the choice of a pension system structure matters is overdue. The discussion starts with a review of the practical and theoretical drawbacks of many PAYG systems. It then turns to the advantages of a pension system that is privatized and funded.

To begin, there are several drawbacks common to many public PAYG pension systems that suggest that other systems should be explored:

- Social security can introduce distortions to individual decision making that can have effects on economic growth. For example, they can discourage labour

²¹⁴ For a description of the differences between PAYG and funded systems, see S. Figlewski, P. Wachtel and L. White, "What's wrong with pay-as-you-go social security programs: lessons from the United States", *Central European Banker*, December 1996.

supply because some individuals would retire at a later age if the system did not penalize continued labour force participation. Of course, early retirement may be an overriding goal but with increased life expectancy this has become less attractive;

- The public provision of pensions through the tax system is likely to depress private savings. Although the empirical literature on the effects of social security provision on saving is ambiguous, there is ample reason to be concerned about the potential effects;
- Public pension systems have developed perverse entitlements such as very early retirement ages for certain individuals or the expectations that pensions will be provided at high real levels. These entitlements are very hard to reform;
- There may be an emerging political and social consensus that the tax burden for providing public pensions will become greater than society is willing to bear. Already, younger generations are resentful of their tax obligations to pay for current pensions because they feel that society will be unable or unwilling to provide similar benefits later on.

These observations suggest a gradual transformation of public pension systems in developed countries as dependency ratios increase. It is particularly important to encourage and develop private sector and/or voluntary pension tiers because the public pension systems are unlikely to provide more than a minimal or subsistence level pension. In transition economies, the existing PAYG schemes are already in disarray because of waves of early retirement and the inability to collect payroll taxes. The phase in of private sector alternatives is even more urgent.

Transition to a funded pension scheme has costs. In the transition period, the working population bears double costs – it must pay taxes to the PAYG scheme for the pensions of the currently retired and it must make payments to the pension fund that will pay future pensions. Such a transition has to be judged against its effects on capital formation and growth. It is easy to imagine a situation where nothing is gained from a costly transition. Imagine that the government borrows to pay its current pension obligations while individuals contribute to pension savings funds that buy government debt. Nothing has been accomplished. In this instance, the change in the scheme has not increased capital formation or growth. A true transition occurs when the PAYG scheme is tax financed and pension savings is intermediated into private sector capital formation. A change in the pension system needs to be judged by its effect on economic growth.

The importance of economic growth cannot be understated. Without it, both a funded and a PAYG

system will have problems particularly with an ageing population. If capital markets cannot provide sufficient investment projects to absorb successfully a large increase in private savings – the transition from public (PAYG) to private may not be sustainable. This is particularly important where inflation has eroded the value of existing pension commitments and there is a large temptation to start a funded payment system by directing substantial payroll taxes to private sector capital markets.

With higher dependency ratios, a PAYG system implies higher taxes or government borrowing, both of which discourage economic growth. The only alternative is to lower benefit levels which might spur the spread of private sector pension provision. However, if the economy is growing rapidly then there is a greater ability of the working population to make transfers to the retired. The puzzle or challenge is that PAYG systems which increase in size will tend to depress growth while at the same time economic growth is needed to sustain the viability of the PAYG system.

With a funded pension scheme, pensions can be paid by having the pension fund sell accumulated assets. The pension fund must find customers to buy the assets and this will be easy in an economy with growing real wages – the pension saving of the next (working) generation (even if it is smaller) will absorb plenty of assets. Or, if asset sales depress prices, foreign investors might absorb some of those assets and finance local dissaving. In both instances, the smooth transfer of assets requires that there be liquid and deep financial markets for the intermediation of savings and dissavings flows.

To summarize, a growing economy is important for both funded and PAYG pension pillars because:

- For the funded pillar, growth increases the ability of current wage earners to save, absorb asset sales from the retired and fund new capital formation as well. Further, in the event of asset sales, it provides foreign investors with a reason to buy assets from pension funds;
- For the PAYG pillar, growth provides increased earnings to pay taxes that fund pensions for an increased numbers of retirees.

In addition, pension system viability calls for:

- Deep and liquid financial markets to absorb savings flows and allocate them efficiently;
- Fiscal discipline to avoid distortions from pension provision and to avoid the crowding out of private sector capital formation.

The lessons for transition economies are clear. If fiscal discipline can be maintained, a funded pension pillar should be introduced because it is likely to increase national savings. This might force one generation – the

transition to a funded system generation – to pay twice, but the effects on saving make this worthwhile. In many transition economies, inflation and economic crisis have eroded the existing public sector pensions so much that the transition from PAYG to funded system is less painful.

The change from a PAYG to at least a partially funded system for transition economies rests on the argument that the change in the pension structure will lead to increased saving. In fact, it should not even be attempted if there is concern about the ability to maintain fiscal discipline.

Once the transition has been accomplished, are there any advantages to a funded system? This question is particularly relevant to wealthy economies with large PAYG systems (Germany and Japan, among others). Should they undergo a costly transition that either imposes sacrifices on this generation or reduces the value of the social safety net (a choice made in the United Kingdom)?

On first glance, there is no difference between a mature funded system and a PAYG system. The latter uses the tax structure to shift resources from one group of the population to another – the taxes of the young pay the pensions of the old. The former uses the private sector to do the same – the pension saving of the young is offset by the dissaving of the old. As long as fiscal discipline is maintained under the PAYG system, national saving is the same. Is it correct to conclude that in the long run with a mature system, the approaches are equivalent?

My answer to that question is a vehement ‘no’. It is an important statement because it provides important lessons to transition economies about what kinds of pension models they should emulate. My answer is predicated on two hypotheses:

- It is desirable to keep the size of public sector transfers down (even when fiscal discipline is maintained);
- It is preferable to keep resource allocation flowing through private sector capital markets.

What is the economic transition from planned to market-oriented economies all about? Government allocation of a large fraction of GDP invites allocative inefficiencies that hinder growth. Similarly, market allocations of resources are better than budget or plan determined allocations. Isn't that the reason why per

capita GDP in pre-unification eastern Germany was barely one third of the level in the west?

How do financial markets contribute to economies? The role of the financial sector is to intermediate between savers and investors and allocate resources to their most efficient – growth promoting – uses. Well performing financial markets are the reasons why countries with equally high savings rates grow at different rates.

The reason to have a private, funded pension pillar is to first, help keep the size of the public sector from growing and, most importantly, to encourage the capital formation and an efficient capital market as the means of allocating resources. Of course, a privatized pillar that is built too quickly can be problematic:

- The costs of intermediation may be prohibitively high;
- The private sector may not provide enough investment projects to efficiently absorb mandated pension saving;
- Financial intermediaries need time to develop;
- Guarantees of privatized sector returns by the government will be counter-productive.

As a result no single system is a panacea. There clearly is a role for the public provision of social welfare including pensions. However, there are distinct advantages to not relying exclusively on public sector promises. When they become burdensome, a loss of fiscal discipline is inevitable. And there are distinct advantages to introducing and encouraging a pension pillar that develops the use of the capital markets for resource allocations. If there is a transition lesson it is that growth depends on the efficiency of allocations and not just the savings rate.

In both instances – PAYG and funded – system changes (that are inevitable with demographic changes all around the world) that are under consideration in the transition economies need to be judged by their potential effects on economic growth. The use of such a criterion could protect against the excesses of unsustainable public sector pension promises and against unrealistic expectations about private sector alternatives. For most countries, a single funded pillar scheme is premature or even inappropriate given social service needs. On the other hand, a single public sector transfer scheme for pensions is undesirable because it is likely to inhibit economic growth.