PENSIONS REFORMS IN ACCEDING COUNTRIES

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A majority of Central and Eastern European acceding countries have undertaken radical reforms to their pension systems. These reforms came after a decade of transition from centrally planned to market economies. The economic and social consequences of transition posed a severe strain on pension systems, which made radical reforms both necessary and politically feasible. In any case, the prospect of a soaring dependency ratio, due to historically low fertility rates and growing life expectancies, had to be dealt with. Several pension frameworks were possible, as shown by the diversified picture of pension systems in Western countries. But a three-pillar system (PAYG tier– compulsory pension funds– voluntary pension funds) has been by far the preferred solution. The paper gives a brief presentation of the legacy of pre-transition pension systems and the demographic context. The general framework of reformed pension systems is then set out. The early stages of the reforms in some countries are then presented and the difficulties discussed. Finally, a few long-term issues are commented upon.

JEL classifications: H55, P35

As of May 2004, eight former communist countries will be members of the European Union[1] (EU). Romania and Bulgaria should join the Union three or four years later. Economic and social reforms have been legislated on a large scale in these countries. In many economic areas, Central and Eastern European (CEE) governments were not able to choose the measures undertaken, since conditions for entering the EU were very strict. This was not the case as regards pension schemes and welfare systems in general. In these areas, the *acquis communautaire* is very minimal, and indeed, the palette of pension systems within the Western countries of the EU is polychromatic. Hence governments were completely free with respect to the design of their pension systems.

1. Poland, the Czech Republic, Hungary, Slovakia, Slovenia and the three Baltic states.

In the communist era, CEE countries had pay-as-you-go (PAYG) systems. The economic consequences of liberalisation, especially unemployment and high inflation, then posed a severe burden on pension systems. All through the 1990s, governments were continuously modifying the rules of their schemes, but in most countries structural reforms were not introduced before the end of the decade.

But the financial difficulties of the systems increased the public airing of pension issues, which progressively rose to the top of the political agenda. The increasing dissatisfaction with existing systems made more radical reforms politically feasible. Demographic factors, currently quite favourable in CEE countries, have also been a major cause for concern: fertility rates have shrunk to among the lowest levels in the world and CEE populations are likely to decline in the coming decades. The proportion of the population aged over sixty is set to rise dramatically.

Instead of following one of the Western European pension models, most CEE countries followed an original route. The general pension framework adopted varies across countries, but a majority have decided to work out a radical overhaul of their systems and introduced the three-tier system advocated by international institutions: a scaled-down PAYG pillar; a mandatory funded tier made up with private defined-contributions pension funds; and voluntary pension funds.

The paper is structured as follows. The first section provides a brief overview of the pre-reform systems and the consequences of transition for pension schemes. The second part describes the demographic background and the demographic outlook for CEE countries. The third section analyses the reforms undertaken. After describing the pension structures adopted in all ten countries (CEE 10), we examine the common features of the reforms made to PAYG systems. Thereafter, a description of the new pension systems in Poland, Hungary and the Czech Republic is presented, and finally, the early stages of funded schemes are examined.

1. A specific context: transition to the market economy

1.1. Pension systems in the early 1990s

In the communist era, pensions were financed on a pay-as-you-go (PAYG) basis through taxes and– mostly employers'– social contributions[2]. In any case, the absence of labour markets meant that the difference between social contributions and transfers from the state was

2. In pay-as-you-go systems, pensions are directly paid out of social contributions (or taxes), whereas in funded systems, contributions are invested (generally on the financial markets), and pensions are drawn from the accumulated assets.

meaningless. In countries where state pensions were especially low, occupational schemes[3] topped up the replacement ratios.

On average, pensions were low. The link between wages and benefits was loose. Benefits were generally a mix between a flat-rate component and a percentage of the worker's previous income. In many countries, people working in specific sectors, especially industry, were favoured in terms of retirement ages and benefit levels. These advantages were not directed to high-risk occupations.

In general, workers could draw their pension at an early age. Legal retirement ages were lower than in Western Europe and early retirement was common. As a consequence, the systems' dependency ratios (number of pensioners for each worker contributing) were quite high: between 30 and 45 pensioners per 100 workers in the late 1980s, whereas there were only 20 pensioners per 100 workers in the large Western European countries, despite lower life expectancy in Central and Eastern European countries.

1.2. The economic transition and its impact on pensions

In most countries, transition brought a sharp decline in output and employment. For example, between 1989 and 1993, employment shrank by almost 30% in Hungary, by more than 15% in Poland and by 10% in the Czech Republic. Liberalisation also brought over-inflation. In some countries, such as Poland and Hungary, GDP has bottomed out since 1993 and reached pre-transition level by 1997. The recovery was mainly the result of productivity improvement and did not induce large-scale job creation. In many acceding countries, employment rates are still low compared with present EU member states, which themselves do not show particularly good performance (table 1).

1. Employment rate in 2000

	Poland	Czech Rep.	Hungary	Slovakia	Slovenia	Lithuania
50-54	61.4	80.4	66.4	69.0	64.4	72.8
55-59	37.7	50.2	33.7	34.5	29.0	56.8
60-64	20.9	16.9	7.6	6.1	15.1	26.4
15-64	55.1	64.9	55.9	56.3	62.7	60.1
	Latvia	Estonia	Romania	Bulgaria		**EU 15**
50-54	69.9	73.6	70.3	65.6		**70.0**
55-59	49.3	58.4	56.6	33.5		**51.9**
60-64	21.8	29.4	48.0	10.5		**22.6**
15-64	58.2	60.6	64.2	51.5		**63.2**

Source: European Commission, 2003.

3. Occupational schemes provide pension coverage to workers in a specific company (or sector).

The contraction of employment severely strained pensions systems. Revenues declined with the shrinking number of contributors and the expansion of the informal sector. In the meantime, governments opened up disability and early retirement provisions to alleviate the social cost of large-scale redundancies. As a consequence, systems' dependency ratios soared: they doubled in Romania and Latvia, and increased by some 50% in Hungary, Poland and Lithuania. In Bulgaria, the number of pensioners has exceeded that of contributors since 2000.

Governments' responses to the increasing pressure on pensions systems varied across countries. Between 1989 and 1996, Hungary, Slovakia and the Czech Republic cut back the real value of the average pension (by almost one third in Hungary), primarily by means of below-inflation indexation (Augusztinovics, 1999). Real wages declined less sharply, hence the ratio of the average pension to the average wage (the macro-economic replacement ratio) fell by around 10% in these countries. By contrast, in Poland, the average real pension rose by 9% throughout the same period, which led to a 36% rise in the macro-economic replacement ratio, in a context of declining real wages.

Today, in a majority of countries, retirement expenditures are lower than in Western European countries (table 2). In 2000, the ratio of the average pension to the average net wage was 53% in Poland, 56% in the Czech Republic and almost 60% in Hungary.

2. Pensions in CEE countries in 2000

	Pension expenditures / GDP	Average pension / average gross wage
Poland	13.5	43
Czech Republic	9.4	46
Hungary	9.1	38
Slovakia	7.9	44
Slovenia	14.5	43
Lithuania	7.3	32
Latvia	11.4	38
Estonia	7.6	29
Romania	6.4	33
Bulgaria	9.5	38
EU 15	12.0	—

Sources: GVG, 2002 and DREE, 2003.

2. Demographic prospects: old Europe

2.1. The current demographic outlook

Currently, demographic structures are quite similar in Central and Eastern Europe (CEE) and in Western European countries (EU 15). However, the proportion of people over 60 is lower in CEE (19.2%) than in EU 15 (21.7%). This makes it easier to finance pensions in CEE.

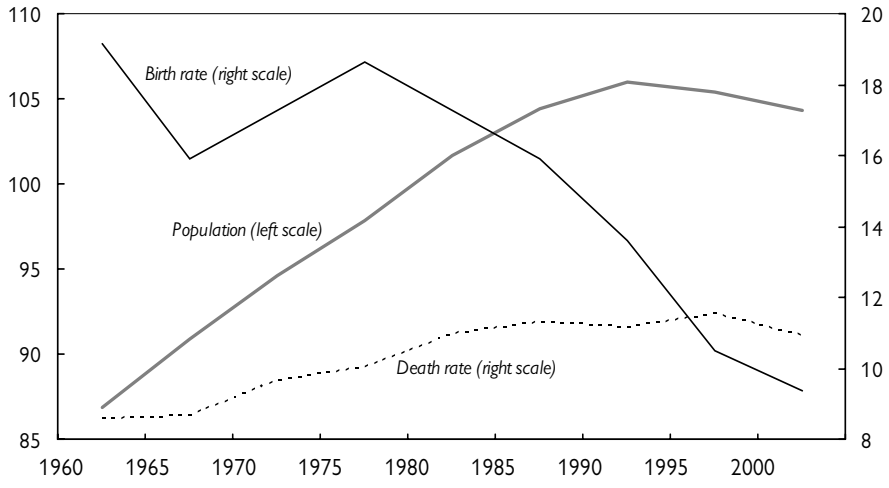
3. Population in 2004 and age structure in 2000 (in % of the population)

	Poland	Czech Rep.	Hungary	Slovakia	Slovenia	Lithuania
0-19	28.3	23.4	23.6	28.1	23.2	27.1
20-59	55.2	58.4	56.7	56.5	57.8	54.4
60-79	14.6	15.9	17.2	13.5	16.8	16.0
80 +	1.9	2.3	2.4	1.8	2.3	2.5
Population 2004[1]	38.2	10.2	10.1	5.4	2.0	3.4

	Latvia	Estonia	Romania	Bulgaria	**CEE**	**EU 15**
0-19	25.3	25.5	26.0	22.8	**25.6**	**23.0**
20-59	54.1	54.2	55.3	55.5	**55.1**	**55.4**
60-79	18.1	17.7	16.9	19.6	**16.9**	**18.0**
80 +	2.5	2.6	1.7	2.1	**2.3**	**3.7**
Population 2004[1]	2.3	1.4	21.7	7.8	**102.5**	**380.8**

1. In millions on 1st January.
Sources: European Commission, 2003 and Eurostat, 2004.

1: Population (in millions), and mortality and birth rates (for 1000 inhabitants) in CEE 10, 1960-2001



Source: Eurostat, 2002.

Life expectancy at birth is much lower in CEE countries than in EU 15 countries. In 2000, the discrepancy ranged from 1.7 years for Slovenian women (compared to Western Europe women) to 10 years for Latvian men. As in Western countries, Eastern women live longer than men. The difference is even greater in CEE and is over 10 years in the Baltic countries. Over the last two decades, life expectancy has increased in CEE (except for Bulgarian men), albeit much slower than in the EU (except in the Czech Republic and in Slovenia). As a consequence, the gap between Eastern and Western Europe increased during the 1980s and much of the 1990s. Since the mid-nineties, by contrast, life expectancy in CEE has been catching up that of Westerners, to some extent. A progressive convergence towards Western Europe life expectancy along with social and economic convergence is relatively likely. In such a– positive– context, the financial burden of pensions will increase over the coming decades. Unfortunately, in the meantime, working age population will decline because of historically low fertility rates.

4. Life expectancy at birth

	Poland	Czech Rep.	Hungary	Slovakia	Slovenia	Lithuania
Men, 1980	66.9	66.8	65.5	66.8	67.4	65.5
Men, 2000	69.7	71.7	67.2	69.2	72.3	67.5
Women, 1980	75.4	73.9	72.7	74.3	75.2	75.4
Women, 2000	77.9	78.4	75.7	77.4	79.7	77.7
	Latvia	Estonia	Romania	Bulgaria		**EU 15**
Men, 1980	63.5	64.1	66.5	68.7		**70.5**
Men, 2000	65.0	65.6	67.7	68.5		**75.3**
Women, 1980	74.2	74.1	71.8	74.0		**77.2**
Women, 2000	76.1	76.4	74.6	75.1		**81.4**

Source: European Commission, 2003.

Female fertility is very low in CEE. It plummeted during the 1990s, and this implies a shrinkage of the population. Over the nineties, the population dropped by 1.7 million people. The Czech fertility rate is the lowest of the 25 EU members. In most other countries, it is at the level of the less fertile EU 15 countries (Italy, Spain, Greece). These very low figures are partially due to the postponement of the average age of fertility. Therefore, a spontaneous rise in the fertility rate is likely when the average age of fertility stabilises. But the fertility behaviour of Central and Eastern Europeans is of considerable concern with respect to the economic and social outlook.

5. Fertility rates

	Poland	Czech Rep.	Hungary	Slovakia	Slovenia	Lithuania
1960	2.98	2.11	2.02	3.07	2.18	2.60
1970	2.20	1.91	1.98	2.40	2.10	2.40
1980	2.28	2.10	1.91	2.32	2.11	2.00
1990	2.04	1.89	1.87	2.09	1.46	2.00
2000	1.34	1.14	1.33	1.20	1.25	1.33
	Latvia	Estonia	Romania	Bulgaria		**EU 15**
1960			2.33	2.31		**2.59**
1970	2.01	2.16	2.89	2.18		**2.38**
1980	1.90	2.02	2.45	2.05		**1.82**
1990	2.02	2.05	1.83	1.81		**1.57**
2000	1.24	1.39	1.30	1.25		**1.53**

Source: European Commission, 2003.

2.2. Gloomy demographic prospects

The United Nations has carried out demographic projections for every country in the world. OECD has done the same for member countries of the organisation. In all CEE 10 countries, populations are expected to decline over the next 5 decades. According to the UN medium scenario, population in the CEE 10 countries will drop by 21 millions (20%). OECD projections are less pessimistic for Poland.

6. Population in 2050, United Nations (*OECD*) central demographic projections

Millions	2000	2050	Difference	Total decline (in %)
Poland	38.7	33.0 *(35.0)*	- 5.7 *(- 3.7)*	14.7 *(9.5)*
Czech Republic	10.3	8.6 *(8.4)*	- 1.7 *(- 1.9)*	16.7 *(18.6)*
Hungary	10.0	7.6 *(8.1)*	- 2.4 *(- 2.0)*	24.2 *(19.8)*
Slovakia	5.4	4.9	- 0.4	8.2
Slovenia	2.0	1.6	- 0.4	21.2
Baltic states	7.2	4.5	- 2.7	37.7
Romania	22.5	18.1	- 4.4	19.6
Bulgaria	8.1	5.3	- 2.8	35.1
Total	104.2	83.5	- 20.7	19.8

Source: United Nations, 2002 and Dang, 2001.

The projections assume a rise in fertility rates, but women will still have considerably fewer than two children on average (in 2050, 1.58 in Poland, 1.50 in the Czech Republic and 1.60 in Hungary in OECD projections). Life expectancy is supposed to increase significantly, which would

alleviate the negative impact of low fertility rates on the size of the population[4]. However, both rising life expectancy and low fertility rates will contribute to the dramatic increase in dependency ratios (table 7).

7. Demographic dependency ratio: (65 +)/(20-64)

Per 100 share

	2000	2050	Difference
Poland	20.4	55.2	34.8
Czech Republic	21.9	57.5	35.6
Hungary	23.7	47.2	23.5
OECD countries	23.8	49.9	26.1

Source: Dang, 2001.

3. Pension systems: new Europe

Structural pension reforms were undertaken only towards the end of the 1990s and, in some cases, at the beginning of the 2000s. During the first years of economic transition, reforms focused on economic issues, while pension systems were used as a social buffer. In the middle of the 1990s, considering the increasingly heavy burden of pensions on public finances, governments generally began to cut back the generosity of the systems, by means of parametric changes. In several countries, the second stage consisted of the implementation of private voluntary supplementary pension schemes. In the meantime, debates over the opportuneness of structural reforms to the public system were developing.

Over the second half of the 1990s, the need for reforms became obvious. In many countries, pension systems were running deficits and the demographic prospects made them unsustainable in the long run. Moreover, pre-transition systems were complex, involved strong but unclear intra-generational redistribution, and were considered to be unfair. An effective labour market required clear and stabilised rules.

In the absence of any requirement imposed by the *acquis communautaire*, and of a general consensus regarding the best pension system from a socio-economic perspective, several kinds of reforms were possible. Over the 1990s, the choice between pay-as-you-go and funded systems was much discussed. The pros and cons of shifting to funded schemes were also debated in Western European countries, but the context was different in transition countries that had undertaken a large-scale privatisation of the economy. Moreover, the World Bank,

4. In OECD's central scenario, life expectancy will increase by 8.8 years for men and 6.8 years for women in Poland, by 3.5 years for men and 3.1 years for women in the Czech Republic, and by 7.4 years for men and 5.4 years for women in Hungary.

which advocated the privatisation of pensions systems, had substantial influence as a counsellor in the transition process.

3.1. Towards a three-tiered pension system in most countries

A majority of countries decided to follow the three-pillar model: a mandatory PAYG-financed pillar, a mandatory second tier of private pension funds (commercially-managed defined-contribution savings accounts), and a third tier, consisting of voluntary private pension funds. This framework has already been introduced in Hungary, Poland, Latvia, Estonia and Bulgaria (*cf*. table 8). Legislation on the second pillar has been decided in Slovakia and in Lithuania. The Czech Republic, Slovenia and Romania have forgone the implementation of a mandatory funded pillar. Workers can save for their future retirement through voluntary private pension arrangements in every country except Romania.

All countries have retained a– reformed– public PAYG earnings-related scheme. This marks a noticeable difference from some Latin American countries that have undertaken pension privatisation, such as Chile or Mexico. Most countries have undertaken parametrical reforms of their defined-benefit (DB) systems, whereas Poland and Latvia have transformed their public system from a defined-benefit scheme, where pensions are worked out as a proportion of the applicant's average earnings, into a so-called "notional defined contribution" (NDC) system[5]. The latter provides pension benefits that directly depend on the record of lifetime contributions, economic growth and life expectancy.

Hence, the ten acceding former communist countries can be clustered in three groups according to the pension system architecture chosen:

— Latvia and Poland have undertaken the biggest overhaul of their system: the public scheme has been turned into a NDC system and a mandatory private-funded tier has been introduced[6], together with voluntary pension funds.

— In Hungary, Bulgaria, Estonia and, in coming years, Lithuania and Slovakia, new pension systems also have (or will have) three pillars, but the public system is still a defined benefit scheme.

5. In a DB scheme, pensions are set at retirement as a percentage of reference earnings. In a NDC scheme, pensions are financed on a PAYG basis, but entitlements are worked out in the same way as in private defined-contribution pension funds. The pension is an annuity drawn from a fictitious accumulated capital sum. The latter is the sum of lifetime personal contributions (which are fictitious savings) and returns on these contributions. The rate of return is set by the government. When it equals the wage sum growth, the NDC system is automatically balanced in the long run for any contribution rate: entitlements grow in line with the scheme's revenues.

6. As we shall see below, in countries where mandatory funded pensions have been introduced, a majority of workers can refuse to be covered by this pillar. But this possibility to stay in the pure PAYG system is only a temporary rule, which deals with the transition issue. Once the decision whether to join the second pillar or not is made, it is not possible to voluntarily stop contributing. And in the long run, as new workers are automatically covered by the mixed system, all workers will belong to the second "mandatory" funded tier…

— In the Czech Republic, Slovenia and Romania, the only mandatory system is the PAYG public scheme.

8. General framework of reformed pensions systems (start year)

Pillars	1-Public PAYG	2-Mandatory funded schemes	3-Voluntary funded schemes
Poland	NDC	1999	1999
Latvia	NDC	2001	1998
Hungary	DB	1998	1994
Bulgaria	DB	2002	1996
Estonia	DB	2002	1998
Lithuania	DB	2004	2000
Slovakia	DB	2005	1996
Czech Republic	DB (NDC by 2010)	X	1994
Slovenia	DB	X[1]	2000
Romania	DB	X	X[2]

1. Exist for specific professions.
2. The government has proposed occupational pensions schemes.
Various sources.

3.2. Common features of reforms to PAYG systems

In most countries, one of the first measures separated social security from the state budget. Governments also introduced social contributions from employees and ceilings on contributions and pension benefits.

In virtually all countries, benefit formulas are increasingly linked to earnings and contributions. The link between contributions and pensions is very tight in "notional defined contributions" schemes, in which benefits at retirement directly depend on the record of lifetime contributions. In such systems, redistribution towards workers with low-income or discontinued careers is eliminated, except for precisely defined reasons. In countries that have retained a defined-benefit PAYG system, the relation between lifetime earnings and pensions has been strengthened: benefits often take into account a longer reference period, and pension formulas are increasingly linear. Before reform, accrual rates[7] were frequently much higher for low-income earners than for middle or high-incomes. Reforms enacted in Hungary and announced in the Czech Republic will introduce constant accrual rates.

Even so, most reformed systems still include redistribution rules such as a minimum guaranteed pension or entitlement with respect to non-contributed periods (unemployment, illness, caring periods…). These elements are generally financed out of the state budget so that pension

7. In a defined-benefit system, pensions equal a percentage of the reference earnings for each working year (e.g. 2% of final-year earnings). This percentage is called the "accrual rate".

contributions respond strictly to an insurance objective. Hence, redistribution is completely transparent and its cost is well known.

One of the reasons for partly shifting contributions from employers to employees and for strengthening the link between contributions and entitlements was to improve the collection of contributions. Many countries have undergone severe problems with respect to contribution collection, not only because of the development of moonlighting, but also because the willingness to pay was low. In reformed systems, pensions will depend strictly on contributions paid (in NDC) or on declared earnings (in DB schemes), and hence incentives to officially declare effective earnings will improve.

Stable rules have been introduced in most countries, especially with respect to the indexation of pensions. The advantage of automatic indexation is to limit the possibilities for governments to change the real value of pensions for political or short-term economic reasons. Confidence in the system requires stable rules and predictability.

In most countries, future replacement ratios provided by state systems have been lowered. In defined-benefit schemes, this has been achieved not only through lower accrual rates but also by means of a drop in reference earnings, which is the consequence of longer reference periods. In NDC schemes, the decline in replacement ratios will be the spontaneous consequence of a declining labour force and increasing life expectancy.

Postponement of the effective retirement age has been an objective of reforms in all CEE countries. The current retirement age is low in most countries, and delaying retirement is an efficient way to mitigate pension expenditures. Increases in legal retirement ages are phased in everywhere. The rise ranges from two to three years for men and from three to six years for women, who generally could retire earlier in the old systems. However, legal retirement ages will still be lower than in most EU 15 countries[8] (table 9). Moreover, in Poland and in Slovenia, women will continue to be able to retire a few years before men (respectively 5 and 2 years).

9. Legal retirement ages after reforms

	Men	Women		Men	Women
Poland & Romania	65	60	Slovenia	63	61
Estonia	63	63	Bulgaria	63	60
Hungary, Slovakia & Latvia	62	62	Lithuania	62.5	60
			Czech Republic	62	57 to 61[1]

1. Depending on the number of children raised.
Source: Fultz, 2003.

8. In most EU countries, the normal retirement age is (or is being progressively increased to) 65 for both men and women. It is 60 in France and 67 in Ireland and Denmark.

In several countries, conditions for entitlement to invalidity pensions and early retirement have also been tightened up and pension privileges have been curtailed. In the Czech Republic and Lithuania, preferential treatment (special occupational pension rights) has been almost completely eliminated, while in other countries its elimination remains an important political issue (in Poland and Slovakia for instance). Disability pensions have received less public attention. Whereas the Czech Republic has successfully tightened the eligibility criteria for entitlement to disability benefits, Hungarian and Polish pension reforms have focused on old-age pensions and disability schemes remain unreformed. In Poland, disabled pensioners may continue to receive their disability pension after reaching retirement age. The forthcoming decline in old-age pensions means an increasing income gap between pensioners with and without disability pensions, as well as a strong incentive to be declared disabled before reaching retirement.

3.3. Examples of the reform decision and process

For the time being, Poland, Hungary and the Czech Republic have decided to follow different routes.

3.3.1. Poland: a shock-therapy

Transition imposed a particularly dramatic burden on Polish public finances, since the number of pensioners sky-rocketed and at the same time the real value of pensions grew. Pension expenditures soared from 7.0% of GDP in 1990 to 12.3% of GDP in 1992, and progressively decreased thereafter thanks to parametric changes (10.6% of GDP in 1998[9]). But despite several increases in contribution rates, an ever-increasing amount of state subsidies was necessary to pay pensions. And had the benefit formula remained unchanged, pension expenditures would have grown from 11.0% of GDP in 2000 to 17.3% in 2050[10]. Several scenarios of reform were in competition from the mid-1990s, and eventually the Ministry of Finance option was adopted. On January 1st 1999, the Polish PAYG pension system was replaced by a three-tier system.

The new system did not apply to workers aged 50 or more: they had to stay in the old defined-benefit PAYG system until retirement[11]. The rest of the working population (those aged under 50 on January 1st 1999) was transferred to the new NDC scheme, with past accrued

9. ZUS in Chlon-Dominczak, 2002.
10. Gdansk Institute for Market Economics in Chlon-Dominczak, 2002.
11. In the previous system, public pensions were the sum of :
– 24% economy-wide average wage
– 1.3% of applicant's average earnings for each year of contribution paid
– 0.7% of applicant's average earnings for each eligible year of non-contribution

rights translated into a fictitious accumulated capital. From 1999 on, those under 30 have been automatically covered by the new mixed PAYG/funded mandatory scheme, while those aged between 30 and 49 were given the choice between a purely PAYG defined-contributions scheme and a mixed PAYG/funded mandatory scheme. This was a once-and-for-all decision, which had to be made before 31 December 1999. Farmers and military workers stayed in the previous system, which, for the farmers, is a highly-subsidised special scheme.

In the new system, pensions depend entirely on the contributions made. For workers covered by the mixed system, old-age social contributions (19.52% of gross wage) are split between the PAYG pillar and the mandatory funded one: 63% of these contributions finance the NDC scheme (12.22%) and the remaining old-age contributions (7.3 percent) finance the second-tier pension funds. Workers not covered by the second pillar pay 19.52% of their gross wage into their personal NDC account and therefore build up higher entitlements from the PAYG system.

Whereas in private savings accounts, returns will depend on the performance of financial markets, in the PAYG pillar personal accounts will increase each year in line with the wage sum growth (i.e. GDP growth in the long run). At the time people retire, both accounts will be converted into an annuity. Benefits will be computed taking into account life expectancy at the retirement age.

The government pays out contributions in the name of the insured person for periods during which he/she receives unemployment benefits or is caring for a disabled family member, during maternity and parental leave, or during military service. A minimum pension supplement, financed out of the state budget, will top up individuals' pensions (NDC + mandatory funded pensions) when these are below a minimum pension guarantee equivalent to roughly 30 percent of the average wage.

The 1999 reform left the retirement age unchanged: 65 for men and 60 for women. However, early retirement provisions will be phased out as from 2007, except for those born before 1948 (aged 50 or more when the reform began to apply). Since pensions are entirely worked out on the basis of accumulated contributions, and on an actuarially-neutral basis, women retiring at 60 will be entitled to a much lower pension than a woman or a man retiring at 65. In a defined-contributions system, the retirement age is not as much a central issue as in DB schemes because the pension is worked out with complete actuarial neutrality.

3.3.2. Hungary: the first CEE country to privatise pensions

As in Poland, the dependency ratio for the Hungarian pension system soared during the transition period, from 51% in 1994 to almost 84% in 1994. Discretionary measures reducing average pensions compensated for the cost of the increasing number of pensioners, and hence pension expenditures remained under control (10.5% of GDP in 1991 and 9.1% in 1995). In 1995, the Hungarian government decided to phase in an increase in the retirement age from 60 for men and 55 for women to 62 for all (to take effect in 2000 for men and 2009 for women). Nevertheless, dissatisfaction towards a system felt to be unfair and arbitrary required a more structural reform.

Before the 1998 reform, Hungarian pensions were calculated as a percentage of a reference wage, but the system was much more generous towards low-wage earners. As in Poland, the reform introduced a mixed mandatory PAYG/funded system, but the first PAYG tier will remain a defined-benefit pillar. It will be reformed so as to provide a linear accrual rate. New labour market entrants are automatically covered by the mixed system, while all other workers were given the choice between opting for the mixed system and remaining in the purely PAYG system.

Workers remaining in the pure PAYG system pay old-age pension contributions amounting to 30 percent of their gross wages and earn an accrual rate of 1.65% for each year of service. For example, they will receive a pension of 66% of their reference earnings after 40 contributing years. For workers switching to the new mixed system, only 74% of these social contributions (namely 22% of their gross wage) are channelled to the PAYG pillar. Each year of service builds up entitlement to 1.22% of the reference earnings (which is 74% of 1.65). The remaining 8 percentage points of contributions are diverted into a private pension fund.

Unfortunately, the transition period between the old system and the new strictly earnings-related one is quite long: the new benefit formula will become effective by 2013. In the meantime, most of the shortcomings of the previous system will continue for more than a decade, especially the method of assessing earnings in the benefit formula, which disadvantages those retiring in periods of high inflation (since the average earnings are not indexed over the last three years before retirement).

3.3.3. The Czech Republic: the ongoing reform

From the beginning of the 1990s onwards, the Czech Republic has been quite successful in abolishing preferential treatment for special occupational pensions. In 1996, the law enforced a gradual increase in

the retirement age by 2007, from 60 to 62 for men and from 53-57 to 57-61 for women, depending on the number of children.

In the 1990s, a number of the Czech parametric reforms increased redistribution towards low-income workers, which is quite exceptional in CEE countries. In the current system, someone earning 50% of the average wage throughout his/her career can expect a replacement rate of 80%, whereas someone earning three times the average wage is entitled to some 30% of final earnings. The pension formula includes a constant element (roughly 10% of the net average wage) and a wage-dependent element in which only a fraction of the earnings is taken into account: the higher the wage, the smaller the percentage worked out.

Considering the grim demographic prospects, which would make a 50% increase in social contributions necessary under the current system, the government has proposed further parametric changes to the pension system. The measures include an increase in the retirement age to 63 for both men and women. The government also announced its intention to adopt a new pension reform making pensions increasingly dependent on earnings and to implement voluntary occupational pension funds. Moreover, the transformation of the system into a NDC scheme is proposed as of 2010.

3.3.4. Different political contexts

From a political perspective, it appears that a complete overhaul of the pension system has been easier to undertake than a tightening of entitlement rules in the existing earnings-related pension schemes. In Hungary and Poland during the 1990s, for instance, attempts to reduce replacement ratios were strongly rejected by the population, but more painful changeovers implied by structural reforms were accepted. There are several likely explanations. First, the existing systems had become highly unpopular and the prospect of being entitled to stable rights was warmly welcomed. Second, the complexity of the new rules, where replacement ratios were no longer explicit, allowed governments to hide the progressive decline in pensions (e.g. Poland). The influence of the World Bank has been crucial, especially in countries with external financial difficulties. In Poland, a former member of the Bank took a direct part in the drawing up of pension reform.

In Poland, other explanations about the feasibility of the 1999 reform must be mentioned. There was a political consensus between leaders of the two main parties (despite dissent within each) and with the main trade unions; a very effective communication campaign was carried out; and concessions were made to specific (politically influential) groups (workers over 50, miners) to win their consent. In Hungary, the price to pay for the acceptance of a two-mandatory-tier system that did not respect past accrued rights was a long transition period.

The idea that a radical overhaul of the system is necessary to overcome resistance of entrenched interests is disputable. In the Czech Republic, Lithuania and Slovenia, privileges have been curbed without privatisation, whereas in Poland the survival of specific interests was the price to pay for the acceptance of the reform. On the other hand, a two-stage strategy, consisting of making concessions to put through a structural reform and thereafter curtailing privileges, is still possible.

Although partial privatisation has been decided in most countries, the Polish political consensus has been an exception. In the Czech Republic, the current left-wing government dropped the previous majority's privatisation plan upon coming to power. Conversely, in Slovakia the new right-wing government abandoned the parametrical reform plan of the previous majority in favour of partial privatisation. By contrast, in Hungary– as in Poland– the socialists enacted partial pension privatisation, and when the *Fidesz* opposition returned to power, they repealed the scheduled rise in social contributions directed to the private pillar. In 2002, the new change of government made it possible to reactivate the rise.

3.4. Funded schemes: early stages

Almost every country has established voluntary private pension schemes. More importantly, a majority of CEE acceding countries have introduced a mandatory tier of individual retirement savings. And countries that forgo partial privatisation have nevertheless vigorously debated the issue. Whether voluntary or obligatory, pension funds are private commercially-managed financial companies, working on a defined-contributions basis.

The partial privatisation of pension funds responded to high expectations regarding its effect on pensions systems and on national economies. First, it was supposed to help resolve the looming financial difficulties of PAYG systems. The strategy consisted of planning a scaling-down of state pensions, which would be offset, for pensioners, by earnings from individual savings accounts. In reducing the role of the state in pension provision, the reforms also aimed at restoring confidence in the pension systems: the high volatility of state pensions over the 1990s had demonstrated the political risk inherent in a state pension system. It was commonly admitted that the political risk would increase with ageing, and a mixed system was supposed to share the risk on pensions between the political one and the financial risk entrenched in private funded schemes. Finally, growth in retirement savings should be favourable to the development of capitalism in general and financial markets in particular. Transition to capitalism needed private savings that could finance private investment, and pension funds were supposed to be the appropriate participants to play the role of investors in budding financial markets.

3.4.1. Financing the transition to funded schemes

Any transition to– partially– funded pensions inevitably generates "transition costs": cohorts currently working have to make contributions to meet PAYG benefit obligations towards retired households and, in the meantime, to build up savings for their future old age. Hence, these workers have to pay twice. The economic consequence of the regime change depends on the method adopted to finance transitional costs.

The cost of the transition depends on the number of workers involved in the new funded system, and on the size of the private system. In general, older workers (over 50) were not given the option to join the new mixed PAYG/private schemes. Other workers having contribution records in the PAYG system were generally given the choice to stay in the PAYG system or to move to the mixed one. In Hungary and Poland, the numbers who joined the partially private system significantly exceeded governments' expectations. Transitional costs were therefore higher than expected. Contributions into the individual savings accounts are significant in Slovakia (10% of earnings), Hungary (8%) and Poland (7.3%). Assessing transition costs is not an easy task. According to the International Labour Organisation, they range from 0.5 to 2.5% of GDP over several decades (Fultz and Ruck, 2003).

Considerations on transition costs

There are three possible strategies to finance transition costs. The first is to partly redirect contributions from the Social Security to private pension funds, and to accept an increase in the general government deficit. Such a strategy has *grosso modo* no macro-economic impact. The drop in general government savings exactly compensates for the rise in household savings. If pension funds are invested in the newly issued public bonds, the reform merely transforms the implicit debt of the PAYG system into an explicit public debt, which is more expansive. When the transition is over, workers will pay less social contributions and more taxes, for the government to pay increased interest payments. If the public balance is to remain steady, cuts in contributions to the public pension system can be offset by a rise in taxes or a reduction in public expenditure. The government can opt for so-called internal financing, i.e. a cut in current public pensions. The shortcoming of this second strategy is not to respect accrued rights. If contributions to private pension funds help to finance a rise in investment, it is true capitalisation: consumption by current– retired– households is lower, and a higher proportion of their income is directed to capital accumulation, and therefore eventually to productive capacity (or national assets in case of acquisition of foreign stocks). If investment does not follow suit, there is a risk that the decline in private consumption may have a negative impact on the economic outlook. The last possibility is to increase social contributions: contributions made to the public scheme remain unchanged, and compulsory savings into private pension funds then come in addition. With this strategy, younger generations (current workers) pay twice for the pensions system. They are the losers of the reform.

Considering the currently high contribution rates, acceding countries were reluctant to increase them further. Estonia was the only country to raise social contributions for those workers participating in the mixed system (+2 percentage points paid by workers). All countries have decided to meet the bulk of transition costs by increasing public borrowing and by cutting public pension benefits.

Contributions to private savings accounts were redirected from the Social Security system. Generally, the State budget compensates the Social Security for contributions lost; but such allowances leave the general government deficit unchanged and are ineffective from an economic perspective. Hence, the loss of contribution revenues implied by partial pension privatisation induced noticeable increases in public deficits. In Poland, transition costs were partially met by privatisation of state companies (although these have been quite disappointing so far). From a macroeconomic perspective, it is the same strategy as increasing public borrowing. But from a microeconomic and institutional perspective, this is a rational strategy: with privatisation of companies, the volume of floated stocks on the financial market rises and, symmetrically, pensions privatisation boosts financial savings. Moreover, pension funds are expected to become key players on the Stock exchange.

In several countries, transition rules also implied cuts in past accrued rights. Most reforms lowered public pensions and increased retirement age, and pension cuts not only involved future accrued rights but also past ones. Of course, such measures are also undertaken in countries which refused partial privatisation of pensions, but in privatising ones, it will undoubtedly help finance transition. Typically, deficits induced by partial privatisation are high during the first 10–15 years of the transition, and then start dropping when workers begin to retire with reduced entitlements. It is noteworthy that Poland, which radically overhauled its pension system, completely respected past accrued rights (in fact, the Polish reform did so only for men). By contrast, past accrued rights have been cut back in Hungary, especially for people who chose the mixed PAYG/funded system.

The Gdansk Institute for Market Economics has carried out estimates of transition costs of the Polish reform (Chlon-Dominczak, 2002). Until the end of the decade, the pension regime change will entirely translate into Social security deficits reflecting contribution outflows (about 1.5% of GDP each year). From 2008 on, deficits for the PAYG pillar will start to decline as workers with reduced benefits begin to retire. And from 2025 cuts in public pensions will more than compensate for contribution losses. Hence, according to the Gdansk Institute estimates, the Polish partial pension privatisation will induce transitional deficits of more than 1% of GDP on average over 25 years. Privatisation revenues are supposed to finance 8 percentage points out of the 30% of GDP cumulative costs.

Hungary, Latvia and Lithuania have chosen to phase the private tier in gradually. This helps mitigate the transition cost and the rise in public deficit, and allows governments to consider the way new private schemes are developing before increasing their share. But the risk is that changes in governments or in the economic situation may impede phasing in.

3.4.2. First developments: popularity and difficulties

In countries having introduced a second mandatory funded pillar, most people had the choice between staying in the– reformed– entirely unfunded scheme or shifting to the mixed one. In Hungary, all current workers were given the option. In Poland, everyone between 30 and 50 could move. The decision was tricky since it was a once-and-for-all choice, which required a high level of understanding. In both countries, the number of people who switched exceeded expectations. By the end of 2002, 67.1% of the labour force had moved to the two-tier system in Poland, against 50% initially estimated[12]. In Hungary, 54.1% had switched. In Latvia and Estonia, second pillars involve only a minority of workers for the time being (respectively 23.5 and 32.1%). But in Estonia, workers born after 1956 (45 or younger in 2002) can still join the second pillar after 2002.

Several reasons explain such enthusiasm in Poland and Hungary, especially the high level of unpopularity of the old system and an intensive public relations campaign. In Hungary, there is a strong concern with over-switching: an appreciable proportion of those aged 40 + moved to the mixed system, although many would have been better off staying under the reformed PAYG scheme.

In all but one country, savings are collected by the employer. In Estonia, workers directly contribute to the private pension fund. In Poland and Bulgaria, contributions are collected by the Social Security collection fund, which in turn redirects a portion to the pension fund chosen by the worker. Elsewhere, the employer directly transfers social contributions to pension funds. In any case, the implementation of individual accounts required information systems allowing greater individualisation in pension record-keeping, since it was necessary to know the exact amount of contributions made on behalf of each worker. Unfortunately, while political debates about privatisation have gone on for a long time, legislation was enacted almost overnight in Poland and Hungary. The administrative and technical requirements were not met, which implied big problems. In Hungary, the public pension administration has been unable to monitor the effectiveness of contribution transfers by employers to pension funds. In Poland, where the pension authority (ZUS) collects contributions and transfers them

12. In this section, figures come from Farkas (2003), unless otherwise stated.

to pension funds, the lack of effective IT systems obliged employers to report contributions on paper forms. These were confusing, and reporting errors amounted to some 50% (Fultz, 2002). Moreover, ZUS initially failed to make almost any transfer to pension funds. And the accumulated backlog soared.

Voluntary pension funds have been very successful in the Czech Republic (50.0% membership by the end of 2002) and quite popular in Slovenia (17.4% after two years of existence) and in Hungary (28.7%) despite the existence of a mandatory-funded tier in this last country. Conversely, membership has been disappointing in Slovakia (17.4% after six years), and, Hungary aside, voluntary pension funds did not develop at all in other countries having a mandatory-funded pillar, since there is almost no membership (Poland, 0.3% ; Estonia, 0.4% ; Latvia, 1.4%). In Lithuania, setting up voluntary pension funds has been possible since 2000, but none has been set up since. In Poland and Slovakia, slow economic growth is likely to be one of the reasons for this difficult start (Fultz, 2003).

In Hungary and Poland, the early financial performances of pension funds have been disappointing. From the workers' point of view, real returns were negative over the first three years of implementation. According to the ILO, in Hungary, the real rate of return averaged -4.1% in 1998-2000. In Poland, it ranged from -14 to -3% among firms between September 1999 and June 2001. This is not so much due to poor investment performance as the consequence of marketing and administrative expenditures. Fund management fees were high; marketing costs were sky-high. Keeping in mind experience in other countries (the United Kingdom for instance), such developments were quite predictable, especially because pension funds not only had to compete with their counterparts, but also to convince the large numbers of people who had the opportunity to remain in the fully-unfunded public scheme. In Poland, in 2000, costs were much higher than charges (respectively 22 and 13% of contribution revenues according to Chlon-Dominczak, 2003), which induced losses for pension funds. Unexpectedly, average charges per member were higher in large pension funds (in terms of members). On a more positive note, a progressive decline in sales and marketing costs is likely as time goes by and financial assets rise. In Poland, costs were already down to 9% of contribution revenues in 2002. And the rate of charges had also declined to 8%.

In order to limit administration costs and improve coverage, some governments have promoted occupational arrangements. In the Czech Republic, by the end of 2002, a quarter of members of voluntary pension schemes benefited from contributions by their employer (Kràl, 2003). Romania is currently considering the introduction of occupational pension schemes.

One of the arguments of the advocates of private schemes was the usefulness of pension savings to help finance nascent capitalism. But in the first years of the new partially private systems, it mainly helped increase the public debt. By the end of 2002, government bonds represented 68% of pension funds assets in Hungary, 67% in Poland and 50% in the Czech Republic. Domestic equities represented a mere 9% of the assets in Hungary and 6% in the Czech Republic. Only in Poland is the share of domestic equities other than negligible (27% of total investment). Pension funds hold less than 1% of the equity market capitalisation in all countries, except in Poland and in Hungary, where they hold respectively 7.8% and 2.3%.

Delayed privatisation did not contribute to the development of the stock markets in CEE countries, especially in Poland. These are still noticeably under-developed, and too high a rush towards companies' stocks would have probably created a financial bubble. In the medium term, improved regulation of financial markets and pension funds would help to raise confidence. In this context, continued economic growth should entail growing market capitalisation, which would in turn allow a rise in the share of stocks in portfolios.

4. Long-term prospects

4.1. Public spending on pensions

The demographic context will spontaneously pose a heavy burden on public finances. In the meantime, most reforms are tending to cut pension expenditures. The overall net impact of these two elements varies considerably across countries.

In 2001, OECD carried out projections of age-related public spending over the next 50 years for 22 countries including Poland, Hungary and the Czech Republic (table 10). These projections take into account the state of the legislation, and therefore advances in pension reforms. However, the last stage of the Czech pension change, recently enacted, is not taken into account. The study concludes that old-age public pension spending will rise only slightly in Hungary over the next five decades, and will decline in Poland. Conversely, had the last Czech pension reform not been undertaken, old-age public pension spending would have almost doubled as a share of GDP.

OECD also provides a breakdown of changes in old-age spending into four factors. First, the increase in the share of people over 55 potentially drives pensions spending up. But, second, this demographic effect can be mitigated (respectively strengthened) by a decline (respec-

tively a rise) in the share of those over 55 eligible for old-age pensions. Third, the employment rate also plays an important role, since more jobs imply a higher GDP. Lastly, pension expenditures depend on the average level of pension benefits.

10. Old-age pensions (per cent of GDP)

	2000	2050	Difference
Poland	10.8	8.3	- 2.5
Czech Republic	7.8	14.6	6.8
Hungary	6.0	7.2	1.2

Source: Dang, 2001.

11. Decomposition of changes in old-age pension spending 2000 - 2050

	Dependency[1]	Eligibility[2]	Employment[3]	Benefit[4]	Total[5]
Poland	7.3	- 2.1	- 1.3	- 5.9	- 2.5
Czech Republic	8.2	- 0.1	- 0.8	- 0.1	6.8
Hungary	2.9	- 0.4	- 1.0	- 0.3	1.2

1. Dependency : (Population aged 55 and over) / (population aged 20 to 64).
2. Eligibility : share of individuals aged 55 and over receiving benefits.
3. Employment : inverse of (employment) / (population aged 20 to 64).
4. Benefit: (average benefit) / (GDP per worker).
5. The sum of the four ratios is not the total because of linear approximations.
Source: Dang, 2001.

Prospects vary substantially across countries. In the Czech Republic, the large increase in the population over 55 would lead to a strong rise in old-age pensions, if another stage of the reform had not been decided. In Hungary, as in the Czech Republic, the relative level of pension benefits will stay approximately steady. But much more favourable demographic prospects, together with improved employment, will limit the expected rise in public pensions. In Poland, demography constitutes almost as great a burden as in the Czech Republic, but radical changes to the pension systems will have an even more impressive effect on public pensions: the share of old-age pensions in GDP is expected to decline in the coming decades. Of course, the price to pay will be as high as the achievement: relative benefits of pensioners will plummet.

4.2. Uncertainties on future replacement rates

In most countries, reforms induce a decline in public schemes' replacement ratios. The reduction is stronger in countries with mixed pension schemes, but private pensions will partially compensate for the loss.

When public systems are defined-benefit schemes, future replacement ratios are clearly determined. In Hungary, for instance, after the transition period, each working year will provide entitlements worth 1.65% of reference earnings for those remaining in the pure PAYG system. In the current system, accrual rates are not uniform, but on average they are roughly 1.8-2.0%. For those covered by the mixed system, the loss will be greater since accrual rates in the public system will be only 1.22%. But savings into private pension funds may compensate the discrepancy.

12. Expectations at stake, replacement ratio for an average worker in Poland

	Man 65	Woman 60	Source (central scenario)
Born in 1949	65	70	Chlon-Dominczak, 2002
New entrant	80	62	*Security through Diversity* programme[1]
New entrant	62	44	Chlon, Gora & Rutkowski, 1999
New entrant	40	30	Chlon-Dominczak, 2002
New entrant	78	56	Chlon-Dominczak & Gora, 2003

1. Figures cited by Chlon-Dominczak, 2002.
Various sources.

Uncertainty about the future level of pensions is a central issue in defined-contribution schemes. In NDC, future replacement ratios will depend on the rise in life expectancy and on employment growth. Declining working age populations, together with a rising life expectancy, will probably lead to diminishing replacement ratios in Poland and Latvia. Projected replacement rates vary importantly across studies (cf. table 12). Simulations carried out in the reform blueprint ("*Security through Diversity")* made very optimistic assumptions with respect to replacement ratios. Life expectancy was supposed to remain unchanged.

5. Conclusion

Most CEE countries have chosen not to move towards any of the Western European pension systems. Countries such as the Czech Republic or Slovenia have kept a Bismarkian PAYG public system, which is more or less the system existing in most continental Western European countries. And the introduction of a voluntary private pensions tier on top of mandatory systems has been a common trend in Eastern and Western Europe over the last ten years. But partial privatisation of pensions systems, undertaken or announced in a

majority (7 out of 10) of the former communist countries entering the EU in 2004 or 2007, is a more original choice in Europe. Compulsory defined-contributions private pension funds do not exist in the EU 15, except in Sweden, where their introduction is recent and where contributions to private funds are very low. In countries where funded pension funds play an important role, these are generally occupational defined-benefit schemes (e.g. in the Netherlands or in the United Kingdom). Individual private pension arrangements are undoubtedly gaining ground all over Europe, but on a voluntary basis, at least until now. Pension privatisation has been developing in Latin America over the last decade, but the three-tier pension framework, made up of a PAYG pillar, a mandatory defined-contributions pension funds pillar and voluntary pension funds, is a more original track. To date, three CEE countries have resisted the siren song, but they can still change their minds, as the Slovak and Lithuanian examples recently showed.

Some of the far-reaching reforms to PAYG systems, such as an increase in the link between contributions and benefits and in the retirement age, were undoubtedly necessary to make pension systems fairer, more transparent and sustainable. For the time being, Poland and Latvia have been the only two countries enacting a complete overhaul of their PAYG system towards a "notional defined contribution" system. But the Czech Republic is considering the option. NDC schemes are increasingly promoted by the World Bank, since they are supposed to have the advantages of private pension funds without their shortcomings.

The advantage of defined-contribution systems– whether funded or notional– lies in their "sustainability": the looming demographic prospects will be dealt with through delayed retirement, cutbacks in benefits or voluntary supplementary contributions. And these systems are supposed to remove inter-generation redistribution[13]. The price to pay for this achievement is an increasing uncertainty regarding future pension levels. While the link between contributions paid and entitlements becomes completely transparent with defined-contribution systems, replacement ratios become highly unpredictable, as does the level of savings needed to build up the appropriate level of pension. Considering the demographic background, replacement ratios will probably drop noticeably in several countries.

Many expectations with respect to funded pensions have not been fulfilled to date. In the first countries having introduced mandatory pension funds, early stages have been a complete confusion, financial returns have been negative over the first years of existence, and pension funds savings have not contributed to funding companies'

13. Theoretically, NDC systems are balanced with unchanged social contributions in any circumstances if the notional rate of return equals the wage sum growth: public expenditures on pensions grow in line with receipts whatever the demographic and economic developments.

investment. However, the bulk of these difficulties will probably be overcome in the coming years, as new private systems mature. Two main problems are more structural: transition costs and both administrative and marketing fees. Transition costs are high and this poses a burden on public finances. And there is a risk that rising public deficits might lead to pressures on public spending (either benefits received by today's pensioners or other expenditures), especially in the context of European convergence. This is why, far from improving confidence in the public system, partial privatisation may possibly drive it down further. In countries that refused partial privatisation, the main argument against it is the burden of transition costs. Pension fund fees will undoubtedly drop in the coming years. However, international experience shows that individual private pension fund fees are always high compared with other kinds of pension provision. Favouring occupational schemes will probably be an efficient possibility to explore. The absence of transition costs and of management/sales fees are the two main arguments given by the increasing number of those advocating NDC.

In many countries, frequent political changes have affected the pace of pension reforms and have made it difficult to adopt a coherent pension policy. Often, political parties disagree about pensions, but for the time being no mandatory private tier has ever been set aside. That is the reason why, the number of countries undertaking partial privatisation is progressively increasing... But parameters can still easily be adjusted (e.g. Hungary). The value of such parameters as the share of social contributions diverted to private schemes is a central issue: over a whole working career it induces noticeably different capital accumulation, and concerning more than 50% of the working population, it consistently modifies the public scheme balance.

In the coming decades, CEE countries will be confronted with the same central issue as Western countries, namely demographic ageing. The demographic background is even bleaker than in Western Europe, since fertility rates are lower. On the other hand, CEE countries are in transition and will probably catch up Western standards of living, and hence will undergo high growth rates in the medium term. The rapid rise in the pie will therefore make it easier to share between workers and the remainder of the population.

CEE countries will have to strike a balance between too high a rise in contribution rates and a huge decline in the relative purchasing power of pensions. In most countries, reforms tend to give priority to keeping contribution rates down. The central issue to avoid an increase in pensioners' poverty is the ability of CEE economies to create jobs. First, more jobs means more GDP per inhabitant, and second, lower unemployment will make it possible for those wanting to delay retirement to improve pension benefits, to continue working until they are older. In the current context of low employment, delaying

retirement might entail an ever-increasing unemployment rate, and therefore induce social pain. But from an economic perspective, it is far from certain that an increase in labour supply will translate into a decline in employment rates. And in any case, the demographic structure will cause a drop in working populations in CEE countries over the coming decades.

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