

## Aging and Pension Expenditures

### Introduction

An inevitable consequence of population aging in many Eastern European and former Soviet countries is that, at current benefit levels, pension spending will have to rise to accommodate the increased number of elderly people. This is an especially huge challenge for countries with unfunded pay-as-you-go (PAYG) social security systems, in many of which pension spending is already substantial. The good news is that a number of countries in the region have begun considering measures to mitigate the impact of imminent demographic changes and are engaging in aggressive pension reform. Other countries have yet to come to terms with the looming pressure of rising pension expenditures as their populations age. Although most of these countries are young, a few older countries have been slow to introduce much-needed reforms, and unless they change their pace, pension spending will come to pose a much heavier burden over time.

As pension expenditures have increased, the number of contributors across age groups has fallen considerably in most countries in the region. Even as economic growth has picked up in some countries, this decline has not reversed itself. As a result, the ratio of beneficiaries to contributors and the resulting ratio of expenditures to revenues

are much higher than even the aging population would suggest. In the longer run, as today's contributors begin to retire, many of them will not be eligible for pension benefits—unlike the current situation, in which most retirees collect some form of pension. This shift will put pressures on governments to consider some type of flat social assistance benefit for the elderly in addition to the contributory pension benefits being paid now—pressures that have implications for the financing requirements and appropriate design of old-age support.

This chapter analyzes the potential impact of aging on pension expenditures. Current pension systems in the countries of the region are described next. Then the projected impact of aging on those expenditures is considered. Prospects for further parametric reform are explored in the following section. The chapter concludes with a discussion of reform options.

### **Current Pension Systems in Countries of the Region**

Pension systems in Eastern European and former Soviet countries have a number of unique features that lead to a unique set of problems. One is the high pension system dependency rates, defined as the ratio of beneficiaries to contributors (box 4.1). Partly reflecting the aging of the population, these high dependency rates also arise partly from the labor market transitions still under way in the region. Although the vast majority of the region's elderly population collect pensions, the majority of the working-age population does not contribute to a pension system. This situation results from the high unemployment rates among some age groups and the lower retirement ages and early retirement provisions still prevalent in the region, but even more from the growing informalization of the labor market.

Under the socialist regimes, all physically able working-age individuals worked, and their employers made contributions on their behalf, which generated pension entitlements for the majority of the population. Contribution rates were usually high and benefits generous, but neither of these points mattered, because employers typically were not concerned about competitiveness or generating profits. In the posttransition environment, public sector employers and large enterprises continue to pay contributions, but even the large public enterprises often accumulate arrears in the social security funds, the resolution of which depends heavily on the solvency of the enterprise. The smaller and newer private enterprises often conclude that it is not worth participating in the system. Contribution rates are high; systems seem potentially insolvent, so that benefits provided

**BOX 4.1****Glossary of Pension Terms**

**Defined-benefit plan:** A pension plan with a guarantee by the insurer or pension agency that a benefit based on a prescribed formula will be paid. Such plans can be fully funded or unfunded.

**Defined-contribution plan:** A pension plan in which the periodic contribution is prescribed and the benefit depends on the contribution plus the investment return on accumulated contributions. Typically, such plans are fully funded.

**Full funding:** The accumulation of pension reserves that total 100 percent of the present value of all pension liabilities owed to current members.

**Indexation:** Increases in benefits by reference to an index, usually of growth in prices, although in some cases growth in average earnings.

**Legal retirement age:** The normal retirement age written into pension statutes.

**Means-tested benefit:** A benefit that is paid only if the recipient's income falls below a certain level.

**Notional accounts:** A defined-benefit plan that mimics the structure of funded defined-contribution plans but remains unfunded (except for a potential partial reserve fund).

**Old-age dependency rate:** The ratio of older persons to working-age individuals. The old-age dependency rate is defined as the number of persons older than age 65 divided by the number of persons age 15 to 64.

**Pay-as-you-go system:** A method of financing in which current outlays on pension benefits are paid out of the current revenues from an earmarked payroll tax.

**Pension system dependency rate:** The ratio of persons receiving pensions from a certain pension scheme divided by the number of workers contributing to the same scheme in the same period.

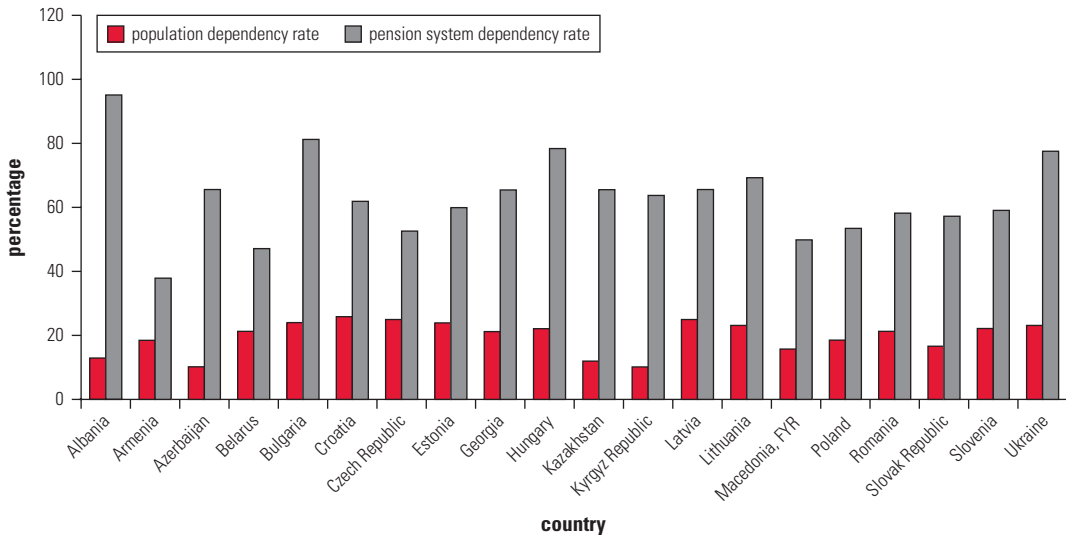
**Social pension:** A pension paid solely on the basis of age and citizenship, without regard to work or contribution records.

today may not be available for workers when they retire; and other taxes and regulations that accompany formalization of the labor force are all disincentives. Because enforcement is rarely strict, a large percentage of people who are working are not contributing.

Figure 4.1 shows the huge gap between the old-age dependency rates as measured by population statistics and the dependency rates derived from the pension systems. On average, pension system

FIGURE 4.1

### Old-Age Population Dependency Rates vs. Pension System Dependency Rates in Eastern European and Former Soviet Countries, Most Recent Year Available



Source: Population dependency rates are derived from data taken from *World Population Prospects: The 2004 Revision by the World Bank* (2005). System dependency rates are for the most recent year available in the Social Protection database of the World Bank.

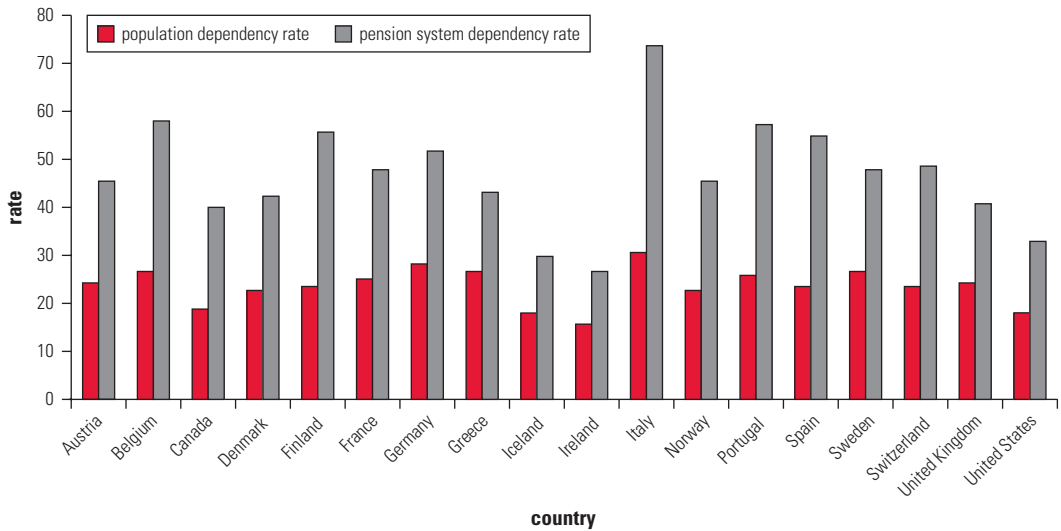
Note: Data for Moldova not available.

dependency rates in the region's countries are more than three times the population dependency rates; in individual countries, they can be even higher. As the pension system dependency rate rises, expenditures rise relative to revenues, thereby raising substantial fiscal problems for the system. Even in such demographically young countries as Albania, Azerbaijan, and the Kyrgyz Republic, the pension system dependency rate is more than six times the population dependency rates.

By contrast, the pension system dependency rate among member countries of the Organisation for Economic Co-operation and Development (OECD)—outside the region—is, on average, less than twice that of the population dependency rate (figure 4.2).<sup>1</sup> With such notable exceptions as Italy, the ratio between the two dependency rates averages less than 2.0 in most OECD countries.<sup>2</sup>

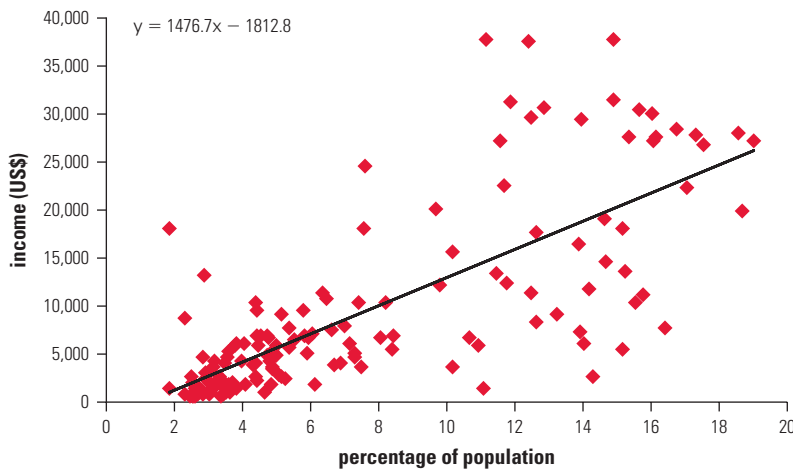
A second unique feature of the pension situation in the region is related to the income level of the countries that face an aging population. The demographically old countries of Western Europe and Japan are relatively high-income countries, able to devote a large share of expenditures to the care and support of the elderly without unduly cutting investment expenditures needed for rapid growth. This is not true of the countries in Eastern Europe and the former Soviet Union, where the aging of the population is occurring simultaneously with

**FIGURE 4.2**  
**Old-Age Population Dependency Rates vs. Pension System Dependency Rates in Selected Non-Eastern European and Former Soviet OECD Countries, Most Recent Year Available**



Source: Population dependency rates are derived from data taken from *World Population Prospects: The 2004 Revision by the World Bank* (2005). System dependency rates are for the most recent year available between 1998 and 2005 in the Social Protection database of the World Bank.

**FIGURE 4.3**  
**Population Age 65 and Older and Per Capita Income, 157 Countries Worldwide, 2003**

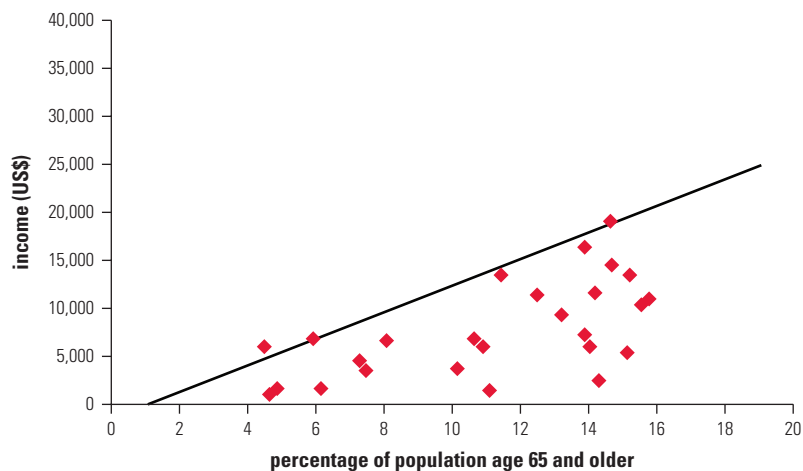


Source: World Bank World Development Indicators database.

pressing needs for expenditure in education, health, and infrastructure, that will allow them not only to grow but, more important, to regain the living standards that they previously enjoyed.

Figure 4.3 shows the positive relationship worldwide between income per capita and the percentage of the population age 65 and

**FIGURE 4.4**  
**Population Age 65 and Older and Per Capita Income in Eastern European and Former Soviet Countries, 2003**

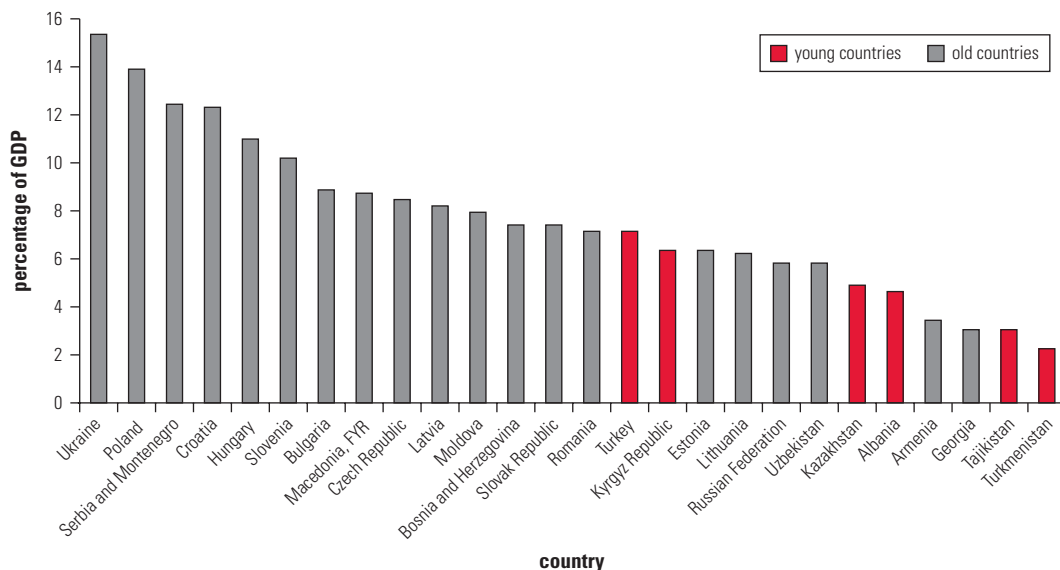


Source: World Bank World Development Indicators database.

older. The same upward trend is apparent for Eastern European and former Soviet countries (figure 4.4). However, when the trend line from the worldwide figure is superimposed on the regional figure, only one country—Turkmenistan—lies above it (that is, has a lower share of elderly than would be expected given its income level). Turkey, which is not a transition country, is fairly close to the line, as is high-income Slovenia. All other countries in the region fall below the trend line—with Moldova and Georgia, both old countries, lying significantly below it. Thus, virtually all countries in the region face a disproportionately high burden of caring for the elderly at low income levels. Furthermore, the worldwide trend line would have been steeper if the countries of the region—which, as a group, lie so significantly below the trend line—were not included. This finding underlines the substantial difference between the region and the rest of the world with regard to demographics and income levels. That difference raises the relative burden of caring for the elderly in the region.

Given all these economic and demographic trends, it should come as no surprise that the current level of pension spending in Eastern European and former Soviet countries is fairly high, particularly relative to income level. Figure 4.5 shows the pension spending in these countries, ranked from high to low. It is immediately apparent that the older countries dominate the high-spending end, while the younger countries dominate the low-spending end. There are exceptions: Georgia is an old country but is among the lowest spenders, while such young countries as the Kyrgyz Republic and Turkey spend

**FIGURE 4.5**  
**Pension Spending as a Percentage of GDP in Selected Eastern European and Former Soviet Countries, 2004 or Nearest Year**



Source: World Bank Social Protection database.

Note: GDP = gross domestic product.

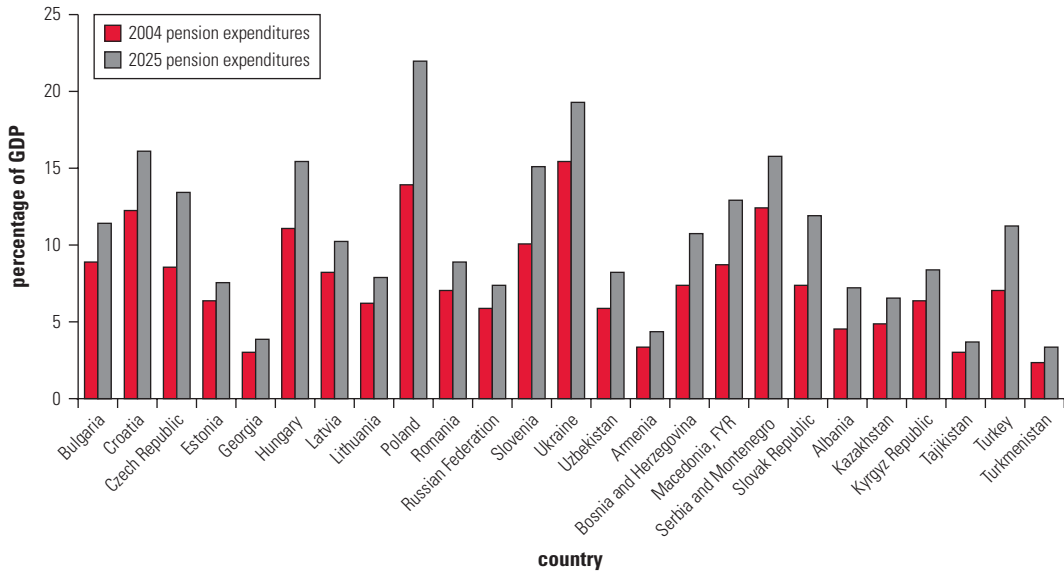
more than such old countries as Estonia, Lithuania, and the Russian Federation. The aging of the population is clearly one factor that raises the level of spending, but pension system parameters have a strong influence too. These effects can operate in either direction, mitigating the demographic pressure, as in Estonia, Lithuania, and Russia, or exacerbating it, as in the Kyrgyz Republic and Turkey. It is worth noting that Ukraine, the highest-spending country in the region, spends 15.4 percent of gross domestic product (GDP) on pensions—more than Italy, the highest-spending OECD country, which spends 14.2 percent of GDP. That Ukraine spends more on pensions than Italy is particularly noteworthy because Italy has relatively more elderly people (20 percent of the population is 65 years or older, compared with 16 percent in Ukraine) and because income per capita in Italy is more than four times higher.

### Projected Impact of Aging on Pension Spending

What is the potential impact of aging on future pension spending in the Eastern European and former Soviet countries? Under the simplest assumption—that is, that pension spending goes up in proportion to the future rise in the percentage of the population older than

FIGURE 4.6

### Pension Spending as a Percentage of GDP in Eastern European and Former Soviet Countries, 2004, and Projections for 2025 Based on Demographic Trends Alone



Source: World Bank Social Protection database.

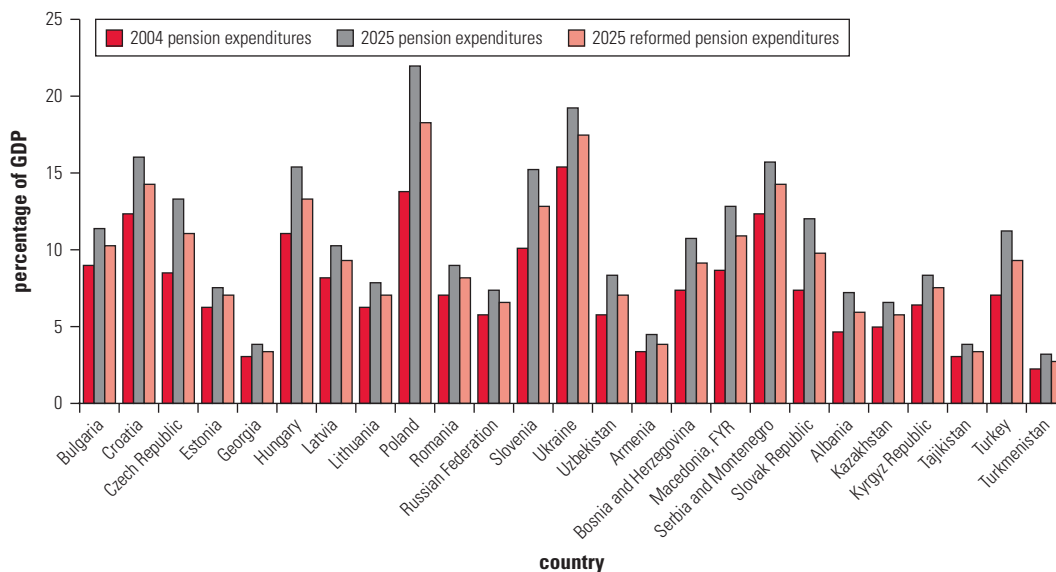
Note: Data not available for Azerbaijan, Belarus, and Moldova.

age 65—pension spending would be expected to rise significantly in a number of countries. By 2025, in Croatia, Hungary, Poland, Serbia, Slovenia, and Ukraine, it would rise above the current level of Italy, the highest spender in the OECD (figure 4.6). Poland could experience pension spending as high as 22 percent of GDP, with Ukraine not far behind at 19 percent. Even countries as varied as Bosnia and Herzegovina, Bulgaria, the Czech Republic, the former Yugoslav Republic of Macedonia, the Slovak Republic, and Turkey could face pension spending higher than today's European Union (EU) average of 12.7 percent.

Fortunately, this is only one potential scenario, and it does not take into account responses that countries might make that would affect future expenditures. A recent EU study assembled detailed projections from each EU member. It found that, on average, 47 percent of the demographic change EU members will experience will be mitigated by policy reforms, primarily changes in retirement ages and in benefit rates (European Commission 2006). There were considerable variations across countries: expected spending in Cyprus and Luxembourg that would be higher than spending levels based purely on demographic projections; only 13 percent mitigation in Belgium; and more than complete offsets of the demographically expected increases in Estonia, Latvia, and Poland (which are EU members).



**FIGURE 4.7**  
**Pension Spending as a Percentage of GDP in Eastern European and Former Soviet Countries, 2004, and Projections for 2025 Based on Demographic Trends and Policy Reforms**



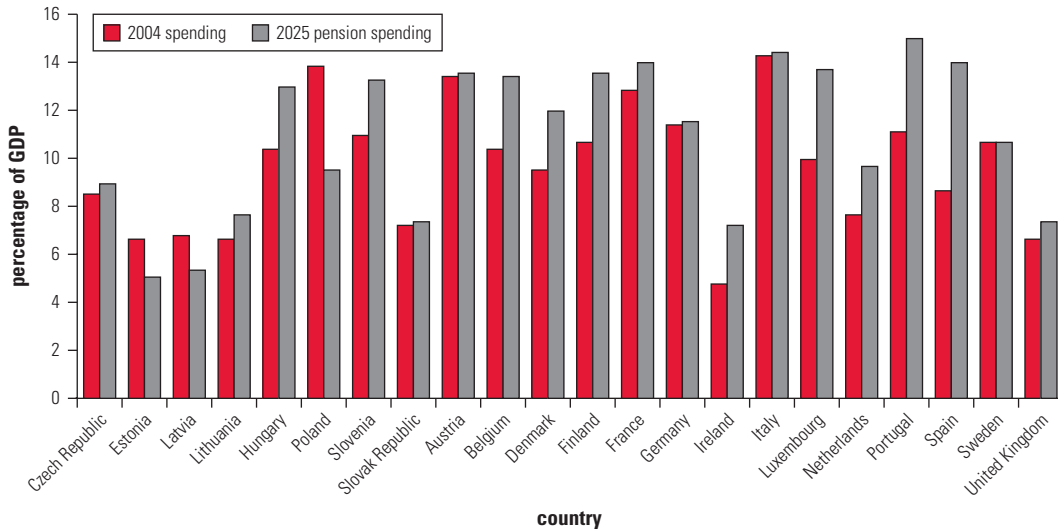
Source: World Bank staff calculations.

Note: Data not available for Azerbaijan, Belarus, and Moldova.

Figure 4.7 shows the impact on pension spending in the region if the average EU policy–related mitigation (47 percent of pure demographic effects) were applied to the Eastern European and former Soviet countries. Even with this mitigation, many countries still would have high expenditure levels. Croatia, the Czech Republic, Hungary, FYR Macedonia, Poland, Serbia, Slovenia, and Ukraine all would exceed today’s average EU spending on pensions of 12.7 percent. And even in the countries that would not exceed those levels, approaching EU levels of spending (25 percent of the per capita income) would involve increasingly difficult trade-offs.

However, it is not clear that uniformly applying the EU average across countries provides good estimates for the region, given that many of the region’s countries have undertaken fundamental reforms, whereas their EU counterparts have more typically tinkered at the margins. Among the eight regional countries participating in the EU study, Estonia, Latvia, and Poland expect spending declines; the Slovak Republic would hold steady; and the Czech Republic and Lithuania expect slight increases. Only Hungary and Slovenia project sizable increases by 2025 (figure 4.8). In no countries included from the EU15, shown in the right-hand side of figure 4.8, is spending expected to decline. Sharp increases are expected in Belgium,

**FIGURE 4.8**  
**Pension Spending as a Percentage of GDP, 2004, and 2025 Projections Derived from Selected Countries' Own Estimates**



Source: European Economy 2005.

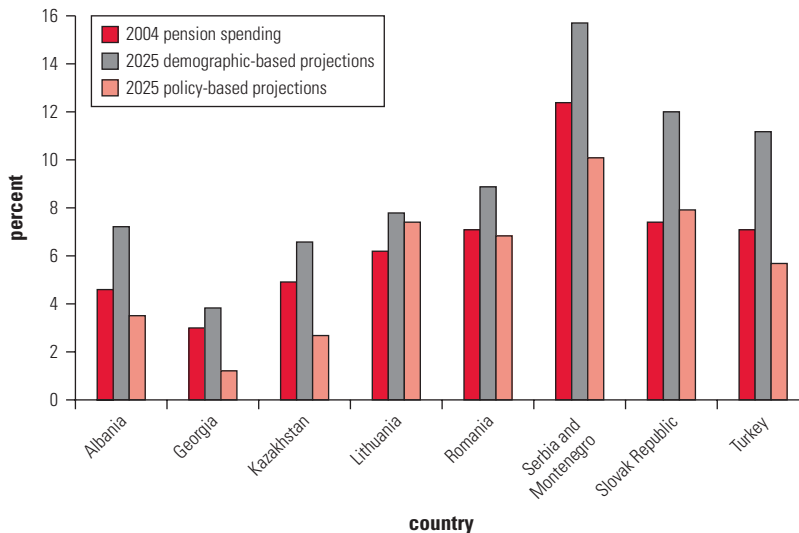
Note: The 2005 EPC projections of age-related expenditure for the EU member states are based on underlying assumptions and projection methodology.

Denmark, Finland, France, Ireland, Luxembourg, the Netherlands, Portugal, and Spain, with only modest increases expected in the rest. The World Bank has produced pension estimates for a number of the Eastern European and former Soviet countries. These numbers show roughly the same results: policy matters and forceful reforms can mitigate the impact of demographic change.

The World Bank has collaborated with a number of countries in the region (Albania, Georgia, Kazakhstan, Lithuania, Romania, Serbia, the Slovak Republic, and Turkey) to produce a set of projections using the Bank's PROST model.<sup>3</sup> For these countries, it is possible to make projections on the basis of the specific policy reform choices they have already made, rather than relying on the average policy reforms undertaken in the EU countries. Figure 4.9 shows the anticipated effect of these actual reforms on pension spending in 2025 by these countries. In almost all cases, the full effect of demographic changes has been mitigated by pension policy reform. Only in Lithuania and the Slovak Republic do projected pension expenditures rise above their 2004 levels.

Lithuania is the oldest country in the sample, and its pension spending was already quite modest relative to the age of its population. But even there the reforms already undertaken will mitigate some of the potential demographic impact. In Albania and Georgia,

**FIGURE 4.9**  
**Pension Expenditures in 2004 and PROST Projections for 2025 Based on Demographics and Existing Policy Reforms, Selected Eastern European and Former Soviet Countries**

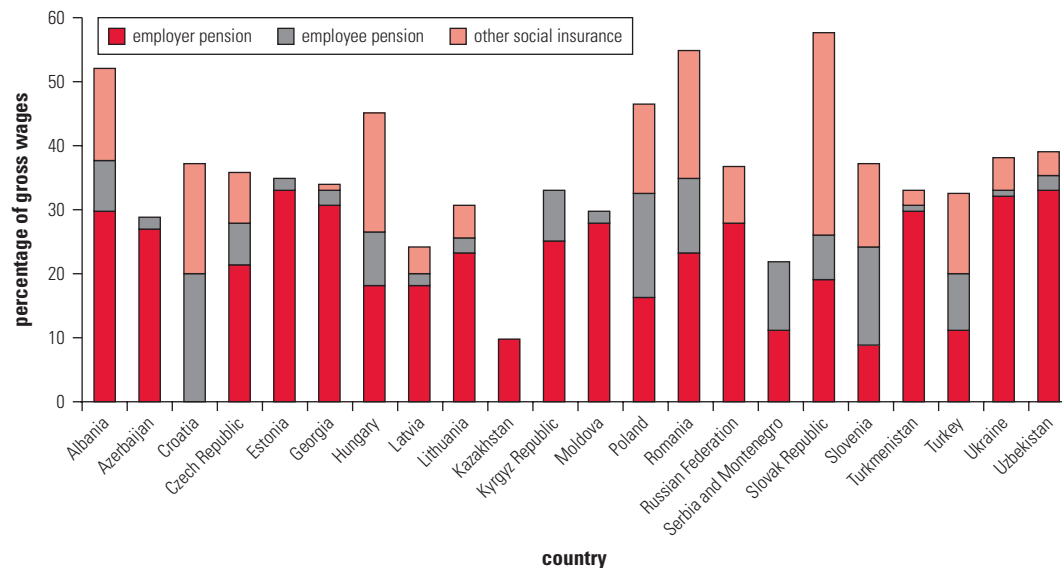


Source: World Bank staff calculations using the World Bank's PROST model.

maximum pension levels are linked to inflation, suggesting that—relative to average wage and GDP—pensions will fall dramatically between now and 2025. The same will be true in Serbia, but there pension levels start at much higher levels and fall more slowly. It should be noted that, while these policies may be fiscally cost-saving, they may not be politically and socially sustainable. Kazakhstan and the Slovak Republic have achieved their gains partly by introducing a funded pension system, which partially replaces the public system in the Slovak Republic and completely replaces it in Kazakhstan.

The good news, then, is that policy reforms can successfully mitigate the impact of aging on future pension spending. This news is especially encouraging given that the region faces two additional problems that have implications for financing incomes for the elderly. The first is the provision of old-age assistance to individuals who are not covered under the social insurance programs. This assistance will require additional expenditures from governments, so they will need the fiscal space to accommodate these expenditures. Moreover, some of the countries with pension systems that will be fiscally sustainable in the future have achieved that goal through considerable current or future lowering of benefit levels. At some point, these benefits may not be adequate, and social assistance may need to augment them, in addition to covering the elderly who fall outside the contributory system.

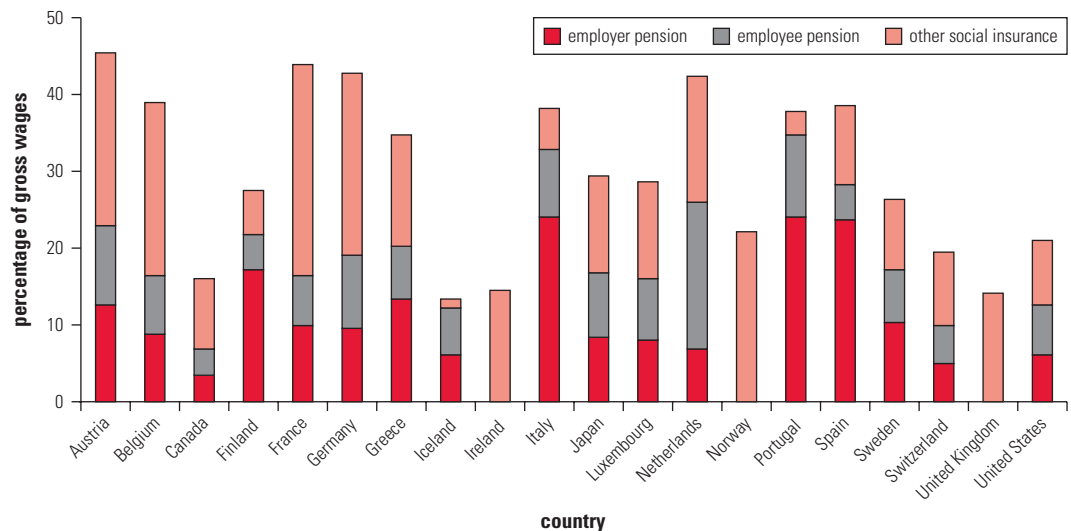
**FIGURE 4.10**  
**Labor Taxes as a Percentage of Gross Wages in Selected Eastern European and Former Soviet Countries**



Source: World Bank Social Protection database.

The second problem is payroll taxes, which are particularly high in the Eastern European and former Soviet countries. Figure 4.10 shows the current level of labor taxes, which include income taxes as well as social contributions, for countries in the region. Although these tax levels have negative consequences for growth in general and employment in particular, it becomes extremely difficult to reduce pension contributions when pension expenditures are high and the pension system is running a large deficit. Attempts to encourage formalization and thus increase revenues by reducing payroll taxes have not been very successful in Eastern European and former Soviet countries or elsewhere. Unless the other impediments to formalization are addressed simultaneously, reducing pension contributions results merely in less revenue for the pension system without a corresponding decrease in liabilities. Thus, the only way to successfully reduce payroll taxes and generate more growth and employment is to reduce pension expenditures.

The bottom part of each bar in figure 4.10 shows employer pension contributions, the middle section shows employee pension contributions, and the top section shows all other social insurance taxes, irrespective of whether they are paid by the employer or the employee. The average pension contribution (combining employer and employee shares) in the region is 28 percent of gross wages, with an overall social insurance contribution rate of 36 percent. By contrast, in the

**FIGURE 4.11****Labor Taxes as a Percentage of Gross Wages in Selected Non–Eastern European and Former Soviet OECD Countries**

Source: World Bank Social Protection database.

OECD, combined contribution rates for pensions average 19 percent, with an average of 30 percent for all social insurance contributions (figure 4.11).<sup>4</sup>

### Prospects for Further Parametric Reform

What are the prospects for additional reform? Proposals for detailed parametric reform would require detailed country-specific analysis, but two parameters tend to stand out in most countries of the region as atypical of international norms. The first is early retirement ages.<sup>5</sup> Table 4.1 (when compared with table 4.2) shows that many of the region's countries maintain lower retirement ages than their OECD counterparts, particularly for women. Women traditionally have retired at younger ages than men, despite their longer life expectancy, and there is no logical reason for maintaining the differences in retirement ages other than tradition or historical precedent. Although the region's somewhat shorter life expectancies could be a rationale for setting lower retirement ages than in OECD countries outside the region, health care improvements should result in longer life expectancies in the near term. Countries in the region also allow large numbers of individuals to retire early, through both general and occupation-specific provisions. Many countries also had pronatalist policies in place at one time, allowing women with more children to retire substantially earlier. Furthermore, substantial numbers of

**TABLE 4.1**  
**Statutory Retirement Ages in Selected Eastern European and Former Soviet Countries**

Country	Retirement age for men	Retirement age for women
Albania	65.0	60.0
Armenia	63.0	59.5
Azerbaijan	62.0	57.0
Belarus	60.0	55.0
Bulgaria	62.5	57.5
Croatia	63.0	58.0
Czech Republic	61.5	56.0–60.0
Estonia	63.0	59.0
Georgia	65.0	60.0
Hungary	62.0	60.0
Kazakhstan	63.0	58.0
Kyrgyz Republic	62.0	57.0
Latvia	62.0	59.5
Lithuania	62.5	60.0
Moldova	62.0	57.0
Montenegro	63.0	58.0
Poland	65.0	60.0
Romania	65.0	60.0
Russian Federation	60.0	55.0
Serbia	63.0	58.0
Slovak Republic	62.0	53.0–57.0
Slovenia	58.0	55.0
Turkey	49.0	44.0
Turkmenistan	62.0	57.0
Ukraine	60.0	55.0
Uzbekistan	60.0	55.0

Source: U.S. Social Security Department 2004.

workers left the labor force early with disability benefits, a mechanism that was used in the first decade of market transition—and continues to be used in some countries—to enable employers to shed surplus or unnecessary labor in the changing labor market. By contrast, as table 4.2 shows, the retirement age for men in all OECD countries outside the region, with the exception of France, is at least 65, with the same age for men and women in most countries.<sup>6</sup>

The second parameter that tends to be notably different in the region is the indexation of pensions after retirement. OECD countries have typically moved to inflation-based adjustment of pension benefits, both to minimize fiscal costs in the face of an aging population and to maintain the purchasing power of the pension during retirement age. Many Eastern European and former Soviet countries still adjust pensions after retirement by some mix of inflation and wage growth. This practice leads to higher benefit increases than inflation adjustment alone, because wages tend to increase more quickly than

**TABLE 4.2**  
**Statutory Retirement Ages in Selected Non–Eastern European and Former Soviet OECD Countries**

Country	Retirement age for men	Retirement age for women
Australia	65	65
Austria	65	60
Belgium	65	65
Canada	65	65
Denmark	67	67
Finland	65	65
France	60	60
Germany	65	65
Greece	65	60
Iceland	67	67
Ireland	65	65
Italy	65	60
Japan	65	65
Luxembourg	65	65
Netherlands	65	65
New Zealand	65	65
Norway	67	67
Portugal	65	65
Spain	65	65
Sweden	65	65
Switzerland	65	64
United Kingdom	65	65
United States	65	65

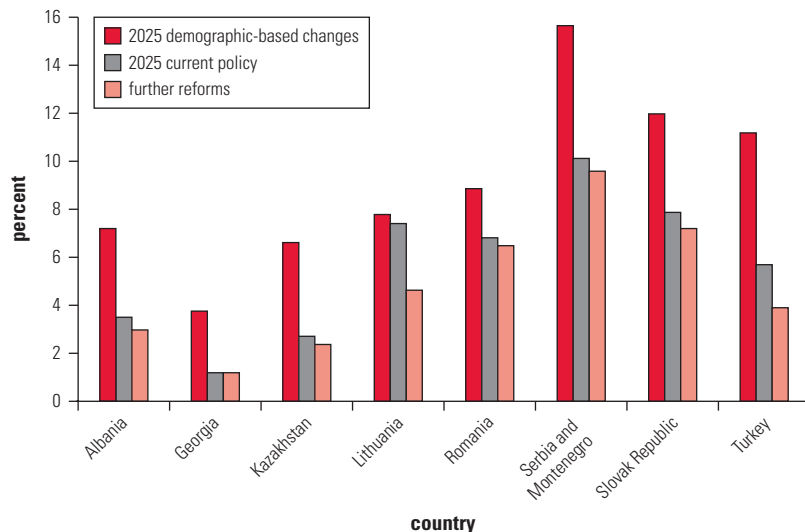
Source: World Bank Social Protection database.

prices. Moving to inflation indexation would bring countries in line with international standards as well as provide savings that would help counteract the impact of aging.

Figure 4.12 shows the fiscal effect of a move by 2015 to a retirement age of 65 for men and women and a move by 2010 to inflation indexation for the sample of countries for which we have sufficient data on pension spending. The effect varies considerably across countries, depending on the initial policies in the country.<sup>7</sup> In Albania, the only effect is through a rise in women's retirement age to 65 from the current age of 60. Georgia currently legislates both inflation indexation and a retirement age of 65 for both men and women. Kazakhstan would have a retirement age of 63 for men and 61 for women in 2015, so the proposed reforms involve an increase in retirement age for both men and women, although pensions should already be indexed to inflation. In Lithuania, both parametric changes have an effect. Retirement age would rise from 62.5 for men and 60 for women and indexation would change from wage growth to inflation. In Romania and in Serbia, only retirement ages would change, rising from the current age of 60. In the Slovak Republic, retirement age

FIGURE 4.12

### Fiscal Effects of Raising Retirement Age to 65 and Indexing Benefits to Inflation Only by 2025, Selected Eastern European and Former Soviet Countries



Source: World Bank staff calculations.

would rise for both men and women from 62, which is the retirement age under the current legislation; indexation would shift from its current 50-50 mix of inflation and wage growth to pure inflation. Finally, in Turkey, retirement ages would rise markedly from age 52 for men and age 48 for women (which would be the ages under current legislation); indexation would be unchanged from the inflation indexation passed in the 2006 pension law. In general, indexation changes have a bigger effect than retirement age changes in the medium run, because indexation affects the level of expenditure for all pensioners, whereas retirement age changes affect only the number of new pensioners added each year.

### Reform Options

Aside from minor parametric reforms, Eastern European and former Soviet governments may want to more fundamentally rethink their pension system designs. Publicly mandated systems serve two functions: (a) preventing poverty in old age and (b) allowing consumption smoothing across a lifetime, with contributions or savings made when young and benefits received when old or unable to work. Almost all the countries in the region have a pension system design that requires contributions from the working generations and provides benefits to the older generations. In many cases, the link between contributions



and benefits is quite loose. Georgia records only whether five years of contributions were paid by an individual in order to enable that individual to receive a flat benefit. In Albania, the maximum benefits are only twice the minimum benefits, whereas the maximum contribution is five times the minimum contribution. Other countries, such as Poland and the Slovak Republic, have adopted a point system or notional accounts that require each contribution to be recorded and linked to the benefit received in the future.

In many cases, because of the sharp drop in the number of contributors, an inability to enforce collections, and a lack of incentives to encourage contributions, governments are unable to collect social insurance revenues. With the resulting shortfalls, governments have focused their limited revenue on maintaining a reasonable minimum pension that prevents old-age poverty and have worried less about the consumption-smoothing objective of pension systems. Unfortunately, such a focus in a contributory system reinforces the disincentives to contribute. If individuals are going to receive a minimum pension (or something close to that), what incentives are there to declare actual earnings and pay high contribution rates on them? Turkey, for different historical reasons, has followed this path, and more than half of individuals are declaring a minimum wage and paying contributions only on the basis of the minimum wage. In Turkey, as in the other countries in the region, the government comes under enormous political pressure to raise the minimum pension when pensions based on these minimum wages are too low to prevent poverty.

The advanced transition economies have not gone down this path; instead, they have adopted pension systems that are based on a point system, on notional accounts, or on traditional defined benefits based on lifetime wages. Under these designs, the pension is based on the contributions actually made, with some mechanism to deal with past wages, giving individuals a strong incentive to declare their full wages in order to receive pensions based on those wages. In some countries, as in Latvia, a moderately high minimum pension has been instituted, which loosens the link between benefits and contributions to some extent, but the link still holds beyond that minimum level. In the Slovak Republic, almost all redistribution has been eliminated from the social insurance-based pension system with the removal of the minimum pension. All individuals, including pensioners, are eligible for a means-tested social assistance benefit, marking a complete separation between social insurance and social assistance. In most cases, these publicly managed systems have been complemented by a move toward mandatory or voluntary privately managed funded pension systems, which reinforce the concept of little redistribution and remove the government's ability to reimpose redistribution even

if pressed. Some redistribution can exist in these systems if governments choose to make contributions (or additional contributions) on behalf of some groups, but these policy choices are very explicit and have defined limits, unlike the open-ended promises that occur in many publicly managed systems.

In these advanced transition economies, significant investment has taken place in administrative apparatus, to enable accurate collection and recordkeeping. But even more important, these administrative reforms have taken place in an environment where the economies are growing, new jobs are being created, and unemployment rates are beginning to fall. A whole slate of enabling reforms has accompanied the pension reforms, including reforms in the labor market, in public finance and tax structure, and in the financial markets. The partial move to a funded system has been financed partly by privatization revenues received when large public enterprises were sold—to private investors, in many cases.

The less advanced transition economies confront more of a dilemma. Many are faced with supporting large numbers of the elderly through pensions financed by contributions from a markedly smaller number of workers. As a result, regardless of whether these countries are old or young, their pension systems require significant support from the government budget.<sup>8</sup> Raising contribution rates is not really an option, given the high contribution rates inherited by these countries and the likelihood that raising rates would only push even more people into the informal sector. In fact, many governments have lowered or are considering lowering contribution rates in a bid to increase formal sector coverage. If coverage does not increase—as it has not in other countries that have tried this approach—then the pension system becomes financed only partially by contributions and thus also partially by government revenue. Limiting expenses by raising retirement ages and indexing pensions to inflation may help, but some of these countries have already moved in those directions.

### **Noncontributory Social Pensions**

At some point, it might make sense to explicitly move away from a contributory system that is actually only partially contributory, with its higher administrative costs, toward a noncontributory social pension provided at an appropriately advanced age to all individuals and financed through government revenue. Government revenue is financing a portion of the contributory pensions anyway. This option is particularly relevant for many transition economies, because the contributions in the past were made solely by employers that were

public enterprises, unconstrained by the need to make profits or to provide returns to shareholders. The wages on which these contributions were paid were somewhat arbitrary, in those nonmarket economies, so linking benefits to those wages makes less sense than it does in an economy where wages are market based. Furthermore, in many countries wage records from those times are either nonexistent or incomplete.

Moving everyone to a flat pension has essentially already happened in some countries, and it would fulfill the first objective of pension systems, which is to prevent old-age poverty. The benefit provided could then be adjusted to what is affordable for the economy, by adjusting both the level of the benefit and the age at which it would be available. The benefit could be financed by the least costly, most efficient tax mechanism available. In many countries, virtually the only workers paying contributions are civil servants and employees of the remaining large public enterprises. In those cases, the revenues of the pension system come mainly from general government revenue anyway, so in that sense the change would largely be a relabeling of the financing source. But there is an important political difference. Because these pensions would no longer constitute acquired rights, the government would have more freedom to adjust the level of benefits and the age at which they were provided. Also, the additional administrative costs of maintaining a collection and recordkeeping institution could be eliminated. Countries that have limited revenue collections and weak links between contributions and benefits should definitely consider this approach.

The argument for a social pension provision becomes even more compelling in light of the low contributory coverage. Some countries require relatively long durations of contributions in order to be eligible to receive a pension. Since contribution coverage has fallen markedly, in the future—when the full contribution histories of the pretransition period are no longer relevant—large numbers of individuals will reach retirement age without achieving pension eligibility. Politically and socially, it will become unacceptable for a government to allow large numbers of the elderly to live in penury or even perish because they have no means to survive. Governments will be forced to provide something to these people. The justification becomes even stronger when the government has been subsidizing contributory pensions for many years, partially financed by value added tax revenues collected from individuals outside the system. It may become difficult to support this practice, particularly as the percentage of pension expenditures financed through the budget in one way or another becomes large.

**TABLE 4.3**  
**Cost in 2005 and 2025 of a Social Pension Equivalent to 10 Percent of Per Capita GDP in Selected Eastern European and Former Soviet Countries**

Country	2005 (% of GDP)	2025 (% of GDP)
Albania	0.83	1.31
Armenia	1.21	1.57
Azerbaijan	0.71	1.04
Belarus	1.47	1.76
Bosnia and Herzegovina	1.4	2.02
Bulgaria	1.68	2.14
Croatia	1.72	2.25
Czech Republic	1.42	2.23
Estonia	1.65	1.97
Georgia	1.43	1.81
Hungary	1.52	2.13
Kazakhstan	0.85	1.14
Kyrgyz Republic	0.61	0.80
Latvia	1.69	2.10
Lithuania	1.55	1.96
Macedonia, FYR	1.11	1.64
Poland	1.29	2.05
Romania	1.48	1.86
Russian Federation	1.38	1.76
Serbia and Montenegro	1.41	1.79
Slovak Republic	1.18	1.91
Slovenia	1.56	2.33
Tajikistan	0.39	0.49
Turkey	0.54	0.85
Turkmenistan	0.47	0.67
Ukraine	1.61	2.01
Uzbekistan	0.47	0.67

Source: World Bank staff calculations.

Even in the more advanced transition economies, some social pension will need to be provided, given the decline in coverage in those countries. Most have such provisions in place. However, the cost of the provisions will rise as more people with no history of contribution make use of them.

What would be the cost of such a social pension? Table 4.3 shows the impact of providing all individuals age 65 and older with a pension equal to 10 percent of per capita GDP in 2005 and 2025. In most cases, such a pension would clearly be affordable, particularly as a replacement for the current pension expenditure. Although it may be argued that 10 percent of per capita GDP is not sufficient for the elderly, experience in Africa and Asia shows that social pensions—even small ones—do make a difference in the living standards of the elderly. The costs of a social pension could be managed so that countries that choose to make it the only public pension expenditure could afford to be more generous in setting the benefit level. For those

countries where a social pension is a complement to other pension expenditures, the costs could be contained in multiple ways. First, the age at which the pension is received could be raised to limit the number of individuals who qualify. Second, the qualifying conditions could also include explicit means and asset testing or proxy means testing, which also would limit the number of beneficiaries. Third, the level of the pension could be adjusted to accommodate fiscal constraints. The advantage of a social pension is that, because it no longer represents acquired rights, the decision of how much to spend is left to society rather than being defined by acquired rights.

### **Voluntary Supplemental Pensions**

Historically, countries in Eastern Europe and the former Soviet Union had comprehensive pension systems, covering all individuals and providing generous pensions that kept the living standards of the elderly on par with the living standards of workers. This kind of policy is not affordable in a market-oriented, aging economy. Although fiscal constraints may limit what is provided through the public sector, individuals will often want a higher level of old-age provision than is publicly affordable; they will need to be encouraged to save for these higher benefits.

Regardless of whether they have a publicly administered, earnings-related benefit or a flat social benefit, all countries in the region should put in place a supervision mechanism for voluntary pensions. In an environment of reduced public benefits, middle- and high-income individuals will want to supplement their old-age income in some manner, and financial institutions will begin offering products to satisfy this need. Thus, whether or not it is regulated, a voluntary pensions market will arise. Once such a market appears, it will be better to regulate and supervise the products being marketed than to leave individuals at risk. The regulation may be as basic as indicating that pension products fall under the saving provisions of banking products or that they will be regulated as insurance products. But some regulation is required to prevent the pension products that will be offered in the market from falling through regulatory cracks. Governments can use the lure of tax-advantaged pensions to grant licenses to providers that follow the regulations, where pension products already exist.

In countries that opt to follow the basic social pension approach, the supplemental pension is even more necessary, because middle- and high-income individuals will clearly want to receive higher benefits than the basic benefit and will be willing to pay for them. Ideally, these pensions should be provided by private pension fund managers on a

defined-contribution basis, resulting in no government liability. However, the financial market structure in each country would need to be evaluated to determine whether sufficient financial market instruments exist to support a defined-contribution system and whether it can be sufficiently regulated. The incomplete financial markets in the region were discussed in chapter 3. In low-income and some middle-income transition economies, it may be determined that the financial market infrastructure is insufficient to support such a pension system, even on a voluntary basis. Governments would then face three choices: (a) allow such pension systems, but insist on overseas investment as a means of protecting the assets of workers; (b) begin a new publicly managed pension system that explicitly excludes the use of government subsidies; or (c) provide no tax-advantaged supplemental pension at all.

### Mandatory Funded Pension Systems

Most of the advanced transition economies have introduced mandatory funded pension systems as a mechanism both to transfer responsibility for old-age provision to individuals and to increase benefits with a given contribution rate. Table 4.4 shows the status of

**TABLE 4.4**  
**Status of Mandatory Funded Systems, Selected Eastern European and Former Soviet Countries**

Country and status of system	Starting date	First pillar	Size of second pillar as percentage of payroll	Switching of strategy to new system
Bulgaria, operating	January 2002	PAYG defined benefit	2, growing to 5	Mandatory for age <42
Croatia, operating	January 2002	PAYG defined benefit	5	Mandatory for age <40; voluntary for age 40–50
Estonia, operating	January 2002	PAYG defined benefit	6	Voluntary (opt-out + 2 percent)
Hungary, operating	January 1998	PAYG defined benefit	8	Mandatory for new entrants; voluntary for others
Kazakhstan, operating	January 1998	Guaranteed minimum for existing workers; social pension	10	Mandatory
Kosovo, operating	January 2002	Minimum pension	10	Mandatory
Latvia, operating	July 2001	PAYG notional accounts	2, growing to 9	Mandatory for age <30; voluntary for age 30–50
Lithuania, operating	January 2004	PAYG defined benefit	2.5	Voluntary, but one-way switch
Macedonia, FYR, operating	January 2006	PAYG defined benefit	7	Mandatory for new entrants
Russian Federation, partially legislated and operating	January 2002	PAYG notional accounts	2 (age <35) to 6 (age 36–50)	Mandatory for age <50
Romania, partially legislated	—	PAYG defined benefit	8	Mandatory for >20 years from retirement
Slovak Republic, operating	January 2005	PAYG defined benefit	9	Mandatory for new entrants
Ukraine, partially legislated	—	PAYG defined benefit	2, growing to 7	Mandatory for new entrants

Source: Holzman and Hinz 2005.

Note: PAYG = pay-as-you-go; — = not get implemented.

mandatory funded systems in the region. Kazakhstan has replaced its public system entirely with a mandatory funded system. A similar arrangement also exists in Kosovo. In both cases, basic social pensions are provided to the elderly population. Most of the countries included in the table also undertook substantial reforms of their inherited PAYG systems to rein in the costs of the inherited plans. A move to a funded system usually involves transition costs: all or part of the contribution of today's workers is invested in their own funded accounts, leaving less or no revenue to finance today's pensioners. Such a move can be financed only if the pension costs have been reduced. Privatization revenues from the sale of former public enterprises have often been earmarked to help finance these pension reforms.

As already noted, the financial market infrastructure in the middle- to low-income transition countries is unlikely to be able to support mandatory funded pensions, although it needs to be evaluated on a case-by-case basis. In these countries, the financial imbalances in the inherited pension systems tend to be greater, making it fiscally more difficult to move to a funded pension system right away—especially because many of the middle- to low-income transition countries have not successfully privatized large public enterprises, ruling out this additional source of revenue.

However, with the aging of the population, public PAYG systems will either generate lower and lower benefits with time or will require continuously rising retirement ages or higher contribution rates. The popular notional accounts reforms are financed on a PAYG basis, with contributions from current workers used to pay benefits for current pensioners. Thus, they essentially lower benefits automatically as life expectancy increases, with the hope that individuals will voluntarily elect to delay retirement in order to get higher pensions. A partial move to a funded system helps diversify old-age support and can result in better pensions for the same contribution as the population ages.

As the middle-income transition countries that opt to keep their earnings-related schemes continue to reform them to make them more financially sustainable, the benefits paid by these systems are becoming more and more modest. As financial sustainability improves, these countries may be able to add in a funded pillar or to move some of the current contribution rate to a funded system, but this phase may not be viable for another 10 to 20 years. The middle- to low-income transition countries that choose to go with a flat pension complemented by a voluntary system may opt to make the voluntary system mandatory in the future. Doing so would provide a

TABLE 4.5

**Pension Reform Agenda for Aging Countries by Country Grouping**

Country grouping	Policy Recommendations
EU countries	<ul style="list-style-type: none"> <li>• Improve financial sustainability of public systems, largely through retirement age increases and reduced generosity of indexation.</li> <li>• Enhance growth of funded system by encouraging growth in financial markets and by strengthening regulation and supervision.</li> <li>• Ensure that mechanisms are in place to provide some minimal means of support to those elderly who might not be eligible for pensions.</li> <li>• Encourage growth of voluntary pensions to complement reduced public pensions.</li> </ul>
Southeastern Europe and middle-income CIS	<ul style="list-style-type: none"> <li>• Evaluate current pension strategy to determine its long-run sustainability in terms of both fiscal and social objectives.</li> <li>• Implement changes to public pension system that either guarantee sustainability with the public system alone or downsize the public system in preparation for adding a funded system.</li> <li>• Build the financial market infrastructure, including regulatory and supervisory capacity, to support voluntary pensions that will supplement the downsized public pension system and potentially a mandatory funded pillar.</li> <li>• Provide a safety net for the increasing number of the elderly who will retire without access to a pension system.</li> </ul>
Low-income CIS	<ul style="list-style-type: none"> <li>• Focus on providing a noncontributory social pension for all the elderly regardless of contributory status.</li> <li>• Build the financial market infrastructure, including regulatory and supervisory capacity, to support voluntary pensions that will supplement the social pension for those who are able and willing to make contributions.</li> </ul>

Source: World Bank staff compilation.

Note: CIS = Commonwealth of Independent States.

natural bridge to a pension system that both protects against old-age poverty and furnishes a mechanism for smoothing consumption in a fiscally sustainable manner. No transition costs would be involved if the voluntary pension pillar became mandatory.

### Policy Implications

High-income transition countries can reform their public pension systems by tightening the links between contributions and benefits. They also have much of the financial market infrastructure to move toward funded pensions. Many have already done so. Middle-income transition countries need to evaluate how much of the labor force is actually contributing to the pension system and whether to reform the public pension system further or institute a social pension available at a specified age instead. The social pension may be more attractive for younger countries because the fiscal expenditures involved in providing for elderly people will be lower if there are fewer of them. In either case, the pension system should be complemented with voluntary funded pensions. Low-income transition countries should probably opt for social pensions and may or may not be able to effectively add a voluntary pillar. Recommendations by country group are summarized in table 4.5.



## Notes

1. There is always a gap between population and pension system dependency rates because the working-age population is calculated as the population from 15 to 64 years. Typically, in high-income OECD countries, 15 year olds are neither working nor contributing to the pension system. The pension system dependency rates rise even further because of the lower labor force participation of women—even in prime working ages—in some countries. These women, who did not participate in the workforce, will nevertheless be eligible to collect widows' pensions when their husbands die, raising the number of current beneficiaries relative to the number of current contributors.
2. The figure does not include Australia and New Zealand, which do not have contributory systems.
3. PROST (Pension Reform Options Simulation Toolkit) is a pension model that is produced by the World Bank and is in use in more than 80 client countries.
4. However, it should be noted that all of these rates are not strictly comparable. Different countries include different components in their social insurance programs. For example, in the United States, employers do bear a large percentage of health costs, but these costs are not provided through a publicly mandated social insurance program and therefore are not included here.
5. The early labor force exit that characterizes many countries in the region was discussed in chapter 2. According to available data, women in these countries leave the workforce, on average, about five years earlier than their counterparts in the OECD countries outside the region. The average for men is four years earlier (table 2.8). This finding reflects the more limited employment opportunities for older workers, as well as the statutory features of the pension systems described here.
6. Needless to say, in both groups of countries, there are early retirement possibilities, particularly for some occupational groups, although these are more prevalent in Eastern Europe and the former Soviet Union than they are in the OECD countries outside the region.
7. The sample itself is not representative of the region in that it consists largely of countries that have been engaged in pension dialogue with the World Bank and that have already undertaken reforms. The results are also not comparable or readily adaptable because not only are the initial conditions different but also the macroeconomic growth assumed in each case is different, as appropriate to the particular country.
8. It should be noted that some subsystems in the advanced transition economies find themselves in a similar state, such as the farmers' system in Poland.

