Reversal and Reduction, Resolution and Reform
Lessons from the Financial Crisis in Europe and Central Asia to Improve Outcomes from Mandatory Private Pensions

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Abbreviations

ATP  Danish Labor Market Supplementary Pension (Denmark)
ECA  Europe and Central Asia
EFC  Economic and Financial Committee
EPF  Employees Provident Fund (Malaysia)
EU   European Union
GDP  Gross domestic product
IMF  International Monetary Fund
MTO  Medium-term budgetary objective
NEST National Employment Savings Trust (United Kingdom)
OECD Organisation for Economic Co-operation and Development
PAYG Pay-as-you-go
PFMC Pension fund management company
PPM  Premium Pensions Authority (Sweden)
SGP  Stability and Growth Pact
SODRA Social security (Lithuania)
TSP  Thrift Savings Plan (United States)
UCITS Undertakings for collective investment in transferable securities
VAT  Value added tax
Executive Summary

This report examines the impact of the financial crisis on privately funded pensions in the Europe and Central Asia region. It describes their pension systems and the impact of the crisis. It explores whether funded private systems have a continuing role to play in meeting the pension challenge. It then focuses on why the crisis led to the changes that took place and the policy implications of those changes.

Chapter 1 sets out the key facts. It describes the original pension reforms and what the pension systems looked like before the recent financial crisis. It then briefly describes the global financial crisis and the changes that were made to the private pension system as a result. A companion paper sets out the longer and deeper historical context in which these events occurred (Schwarz and others 2013).

Chapter 2 asks what these facts tell us about the role, if any, that privately funded pension pillars have in a country’s overall pension system. It argues that a funded second pillar—mandatory private pensions—has a role to play in a diversified approach to meeting the pension challenge. A diversified approach entails a mix of state and privately funded pensions as well as pension and non-pension sources of income and consumption in retirement.

Chapters 3 and 4 build on the premise that funded systems have a critical role to play as one part of a diversified system. Chapter 3 highlights the weaknesses in the mandatory funded schemes that were exposed by the crisis. Chapter 4 describes policy responses to these weaknesses. It sets out an agenda for change. While much of the original foundations are sound, all countries with mandatory and voluntary pensions need to focus on several critical areas. This is true whether their pension systems are mature, relatively new, or newly implemented. The region is very diverse. Not all proposals will apply with equal weight to each country. But given the very long time periods over which pension systems develop and pay out benefits, it is likely that all countries will eventually face some or all of these challenges. Some were well known but not tackled before the financial crisis. But the crisis exposed them more starkly and caused greater problems than if the challenges had been addressed earlier. Taking action makes sense—whether to remedy current problems or to prevent future ones.

The report distinguishes between three main responses to the crisis: reversals, which end mandatory funded private plans by collapsing them back into the state pension system; reductions (both permanent and temporary), which reduce contributions to the privately funded systems but keep the second pillar; and resolution, where countries have made no adjustments to the privately funded pension system despite the challenges of the crisis.

There are two overall messages. The first is that reversals—collapsing funded private pensions back into the state system—are the wrong answer. Long-term damage is done for no long-term benefit. If the first message is “do not reverse,” the second is “pursue reforms actively.” The scale of the pension challenge remains. The original drivers of reform were not wrong. If anything, they have become more acute. Funded pensions, particularly mandatory funded pensions, still have a role to play as part of a diversified system for ensuring a decent and sustainable retirement income for all. But the robustness to shocks and the outcomes for members can and must be improved. So the reform messages certainly apply to

---

1 The first pillar consists of state income-related pensions (often on a pay-as-you-go basis), the second pillar consists of mandatory, funded, defined contribution schemes, the third pillar consists of voluntary, private pension schemes, and the fourth pillar includes alternative sources of retirement income and consumption, including other financial assets, family support, and housing.
those countries that have lowered contributions to the system. But most of the messages apply more generally to other countries in the region, including those that have resolved to stick to the reform path in the face of significant shocks. The recommendations offered here are intended to improve the outcomes for a given level of contributions. But for countries that have lowered the contributions, reform can only achieve so much. If the contributions are not increased, and the reductions are not made up, workers will retire on lower pensions in the future. For most countries, there is time to ensure that the impact of the crisis is not still being felt in 30 years, when current members retire with lower pensions. Importantly, higher contributions should not always be linked to wages. Other sources of contributions, such as consumption taxes, are also needed to reduce the labor market impact of high labor taxes.

What does reform mean?

• Use taxes instead of debt financing for financing the transitional pension deficit created by pension reforms.

• Make the Stability and Growth Pact truly reward, not penalize, governments for trying to ensure pension promises are funded and not hidden in implicit (and risky) unfunded liabilities.

• Reduce costs to improve outcomes. Reducing management costs by 0.5 percent (50 basis points) could increase future pension plans by some 10–15 percent over current levels.

• Diversify the asset allocation of pension portfolios. Key solutions include using portfolio benchmarks set externally or ensuring that the demand side of the market has the combination of scale, expertise, and member-focused governance to ensure asset allocation for the long term.

• Realize that improving performance with regard to costs (and investment) may require changing the “industrial organization” or the demand, supply, and distribution dynamics of the pension industry to tackle issues created by vertically integrated pension management companies.

• Develop a proactive agenda of capital market reforms; do not expect development simply because a private pension system is in place.

• Ensure labor market policies that make working lives long enough to support adequate replacement rates and make retirement ages rise with longevity.

• Secure pensions until death so that old-age poverty is defeated, not postponed.

• Create, develop, and sustain political and public acceptance of the need for long-term contributions to tackle demographic challenges.
Chapter 1. Pre-crisis Pensions and the Impact of the Crisis

1.1 Introduction

This report looks at the impact of the financial crisis on privately funded pensions in the Europe and Central Asia (ECA) region. This chapter sets out the key facts. It describes the original pension reforms to establish what pension systems in the region looked like pre-crisis. It then reviews the impact of the global financial crisis and the changes that have been made to private pensions as a result.

The next chapter takes these core facts and asks what they tell us about the role, if any, of privately funded pension pillars in a country’s overall pension system. It argues that funded pillars have a role to play as part of a diversified approach to meeting the pension challenge. Addressing this challenge requires a mix of state and privately funded provision as well as pension and non-pension sources of income and consumption in retirement.

The final two chapters build on this premise. Chapter 3 highlights the weaknesses that have been exposed by the crisis. The final chapter sets out policy responses to these weaknesses and proposes an agenda for change. It argues that much of the original foundations are sound, but that all countries with mandatory pensions need to focus on certain critical areas.

1.2 The original pension reforms

A number of countries in the region introduced mandatory, privately funded pension funds (second pillar) in the late 1990s and early 2000s. Hungary (1998) and Poland (1999) led the way. Five countries introduced funded pension pillars in 2001 and 2002 (Latvia, Estonia, Bulgaria, Croatia, Kosovo). A steady flow of countries have introduced funded pillars. They include Lithuania (2004), the Slovak Republic (2005), the former Yugoslav Republic of Macedonia (2006), and Romania (2008).

The introduction of mandatory second pillars was part of a wider strategy consisting of reforms to the public sector pay-as-you-go (PAYG) schemes (first pillar). Among other objectives, they aimed to address growing and unsustainable deficits in these schemes (Schwarz and others 2013).

These reforms are summarized in table 1.1. This sets out key elements of the changes in the first pillar as well as the headline features of the (new) second pillars and their date of enactment. As the final column shows, by the start of the crisis, most countries had a reformed first pillar and a relatively new second pillar. They also typically had voluntary funded private pensions (third pillar). It is crucial to understand what each of these pillars can and cannot deliver with regard to ensuring that a country delivers pension outcomes for its people that achieve adequacy and coverage alongside efficiency, sustainability, and security. A central argument of this report is that no single part of a pension system can deliver all of the objectives required.
### Table 1.1 Structure of Pension Systems in Central and Eastern Europe

<table>
<thead>
<tr>
<th>Country</th>
<th>Public Scheme Type</th>
<th>Public (PAYG) 1st Pillar Reform</th>
<th>Second Pillar Contributions</th>
<th>Enactment Date</th>
<th>Who Participates</th>
<th>Pillars as of 2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>DB</td>
<td>Ret Age: 60/55—63/63</td>
<td>Benefits: 55% best 5 +1%—flat component + earnings related points</td>
<td>2002</td>
<td>Mandatory only for new entrants</td>
<td>X X X</td>
</tr>
<tr>
<td>Latvia</td>
<td>Notional accounts</td>
<td>Ret Age: 60/55—62/62</td>
<td>Benefits: 55% highest 5 +1%—full career based on notional accumulation</td>
<td>2001</td>
<td>Mandatory for new and young workers, &lt;30, Voluntary 30-50</td>
<td>X X X</td>
</tr>
<tr>
<td>Lithuania</td>
<td>DB</td>
<td>Ret Age: 60/55—62.5/60</td>
<td>Benefits: 55% highest 5 plus 1%—earnings unrelated and related</td>
<td>2004</td>
<td>Voluntary for current and new workers</td>
<td>X X X</td>
</tr>
</tbody>
</table>
| Poland        | Notional accounts  | Ret Age: 65/60 (many exemptions) 
(>65/60 fewer exemptions) | Benefits: 7.30% flat + 1.3%—full career notional accumulation | 1999           | Mandatory for new and young workers, <30, Voluntary 30-50 | X X X              |
| Hungary       | DB                 | Ret Age: 60/55—62/62            | Benefits: 3.3% for first 10 + 2.5%— 1.65% full career | 1998           | Mandatory only for new entrants       | X X X              |
| Romania       | DB                 | Ret Age: 62/57—65/60            | Benefits: 75% first 30/20 year+1%—full career points based | 2008           | Mandatory for <35, voluntary 36–45   | X X X              |
| Bulgaria      | DB                 | Ret Age: 60/55—63/60            | Benefits: 55% highest 3—full career 1% | 2002           | Mandatory for workers <42.            | X X X              |
| Croatia       | Points             | Ret Age: 65/60                  | Benefits: 0.825% full career | 2002           | Mandatory for workers <40, voluntary 40-50 | X X X              |
| Macedonia     | DB                 | Ret Age: 64/62                  | Benefits: defined by minimum wage ratio and total years of participation | 2006           | Mandatory for new entrants            | X                  |
| Kosovo        | Universal flat for all at >65 | Ret Age: 65/65                  | Benefits: defined annually by the value of minimum consumption basket | 2002           | Mandatory for all working habitual residents, <55 | X X X              |
| Russia        | Notional accounts  | Ret Age: 60/55                  | Benefits: defined by individual lifetime accumulations | 2002           | Mandatory only post 1966 born         | X X X              |
| Kazakhstan    | DB                 | Ret Age: 63/58                  | Benefits: 60% of monthly average of best consecutive three years | 1998           | Mandatory for all                     | X X X              |


Note: Newer reforms such as those in the Kyrgyz Republic and Armenia could be included in future work. For the relative importance of the second pillar in each country, see the modeling presented in OECD (2011b) and Pallares-Miralles, Romero, and Whitehouse (2012), among other publications.

### 1.3 The evolution of pension systems after the initial reforms

A central problem in pension policy is that systems need to be designed to deliver over 60–80 years, but they operate as an important part of the (daily) political debate. When constructing any reform package, the balance between adequacy and sustainability (for government and for workers and employers) has to be based on long-term projections, which have to be based on assumptions. These assumptions relate, for example, to life expectancy, investment returns, GDP and wage growth, labor force participation, contribution rates, and contribution density (how many years a person actually contributes).
Even if the assumptions are correct, volatility in the economic cycle means that *nearly every important variable will show regular and persistent deviations from its long-term path*. In the pre-crisis period, the variables performed above expectations, while in the crisis period, they often performed below expectations.

Unfortunately before the crisis, when many ECA countries experienced strong economic growth, governments expanded pension benefits above the initial reform package. In other words, a period of temporary above-trend performance led to permanent increases in the generosity of the system. The experiences of Poland and Hungary provide a good case study of this impact (see figures 1.1 and 1.2).

**Figure 1.1 Increases in Pension Generosity in Poland after the Initial Reform**

![Diagram showing increases in pension generosity in Poland](source)

*Source:* National authorities.
1.4 The financial crisis

The countries of the ECA region entered the financial crisis with pension systems that had often changed profoundly in the past decade. These initial reforms had been followed by a very supportive economic environment, as experienced, on average, globally during the period of the “great moderation.” The reforms to the second pillars were part of an effort to reduce the political risks to future pensioners from unsustainable promises “funded” by implicit government debt. Crucially they did this by investing funded contributions in financial markets, thereby taking on market risk. But as the reaction to the crisis shows, when the pressures are great enough, political risk can reappear—especially when government seeks to divert contributions earmarked for funded pensions to finance a (growing) general budget deficit.

The financial crisis has already been studied extensively (see Narain, Ötker, and Pazarbasioglu 2012; World Bank 2009, 2010; OECD 2009, 2010), so this report does not repeat the analysis in detail. But it is important to highlight the impact of the crisis on broad economic aggregates such as GDP, the fiscal position, and the capital market to provide the backdrop for the changes that occurred. And it is essential to highlight the diversity of experience. There is no simple link between those countries having the worst experience of the crisis being those deciding on reversals or reductions.

Figure 1.3 shows GDP over the past 10 years. There are three important messages. The first is that GDP growth rates were healthy in the period after the original reforms and up until the crisis. This experience was positive, but it made the long-term problem seem simpler than it was. It led to some improvements in the generosity of the systems, which exacerbated the pension problem. In other words, it led to changes that offset some of the tough decisions made in the original reforms.
The second message is that the crisis had a very clear impact on real GDP. There was a wide range of experience—from Poland and Kosovo, which avoided any negative growth on an annual basis, to Estonia, Latvia, and Lithuania, which had negative growth rates of −14.3, −17.7, and −14.8 percent, respectively, in 2009. As we will see, the decision to reverse or reduce payments into the second pillar is not well correlated with the GDP story.

The third message is that all countries rebounded quickly, followed by subdued growth. In 2011, Estonia, Latvia, and Lithuania reported annual growth above 5 percent. The size of the decline in output in a number of countries means that reaching pre-crisis levels of output will take many years of growth. But the performance has been relatively strong considering the size of the headwinds from weak global demand and the continuing sovereign debt crisis in the European Union (EU). For more information see World Bank (2011). Whether GDP growth can attain and sustain pre-crisis levels is a fundamental factor in determining outcomes in the future. Table 1.2 shows the figures.

Figure 1.3 Real GDP Growth in ECA Countries, 2002–12

Source: IMF database.
### Table 1.2 Real GDP Growth in ECA Countries, 2007–12

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>7.49</td>
<td>-3.67</td>
<td>-14.26</td>
<td>2.26</td>
<td>7.64</td>
<td>2.45</td>
</tr>
<tr>
<td>Latvia</td>
<td>9.60</td>
<td>-3.28</td>
<td>-17.73</td>
<td>-0.34</td>
<td>5.47</td>
<td>4.45</td>
</tr>
<tr>
<td>Lithuania</td>
<td>9.80</td>
<td>2.91</td>
<td>-14.84</td>
<td>1.44</td>
<td>5.87</td>
<td>2.74</td>
</tr>
<tr>
<td>Poland</td>
<td>6.79</td>
<td>5.13</td>
<td>1.63</td>
<td>3.87</td>
<td>4.32</td>
<td>2.35</td>
</tr>
<tr>
<td>Slovak R.</td>
<td>10.49</td>
<td>5.75</td>
<td>-4.93</td>
<td>4.18</td>
<td>3.35</td>
<td>2.64</td>
</tr>
<tr>
<td>Hungary</td>
<td>0.10</td>
<td>0.90</td>
<td>-6.80</td>
<td>1.27</td>
<td>1.70</td>
<td>-1.02</td>
</tr>
<tr>
<td>Romania</td>
<td>6.32</td>
<td>7.35</td>
<td>-6.58</td>
<td>-1.65</td>
<td>2.45</td>
<td>0.95</td>
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<tr>
<td>Bulgaria</td>
<td>6.45</td>
<td>6.19</td>
<td>-5.48</td>
<td>0.39</td>
<td>1.67</td>
<td>1.00</td>
</tr>
<tr>
<td>Croatia</td>
<td>5.06</td>
<td>2.08</td>
<td>-6.95</td>
<td>-1.41</td>
<td>-0.01</td>
<td>-1.14</td>
</tr>
<tr>
<td>Macedonia</td>
<td>6.15</td>
<td>5.00</td>
<td>-0.92</td>
<td>2.90</td>
<td>3.11</td>
<td>0.96</td>
</tr>
<tr>
<td>Kosovo</td>
<td>6.26</td>
<td>6.91</td>
<td>2.90</td>
<td>3.90</td>
<td>4.96</td>
<td>3.76</td>
</tr>
<tr>
<td>Russia</td>
<td>8.54</td>
<td>5.25</td>
<td>-7.80</td>
<td>4.30</td>
<td>4.30</td>
<td>3.70</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>8.90</td>
<td>3.20</td>
<td>1.18</td>
<td>7.25</td>
<td>7.50</td>
<td>5.47</td>
</tr>
</tbody>
</table>

*Source: IMF database.*

*Note: 2012 figures are based on estimates.*

### 1.4.1 Government finances

Figure 1.4 shows fiscal deficits in the ECA countries. For many countries, fiscal deficits were already large before the crisis, despite generally strong economic growth. Therefore, some economies entered the crisis with little fiscal space. So they needed to find short-term savings on both the revenue and expenditure sides from across the whole government budget more quickly than if they had had greater fiscal prudence beforehand. The weak fiscal picture in the pre-crisis years is particularly important for the pension story. First, the planned fiscal consolidation as part of the reforms to ensure that future funded liabilities were financed with taxes rather than debt in general did not happen. Second, when the crisis started, the public and privately funded pension system was at risk because both pillars constituted large components of government spending.

As with GDP, there is a considerable range in the fiscal numbers, although again the size of deficit is not necessarily related to the scale of reductions in the contributions to pensions.
Figure 1.4 Fiscal Deficits as a Share of GDP in ECA Countries, 2000–12

The evolution of gross sovereign debt to GDP closely mirrors the rising deficits caused by the crisis. However, as shown in figure 1.5, many ECA countries entered the crisis with relatively low levels of government debt to GDP. Important exceptions were Hungary and Poland. Strong GDP growth had helped to keep the ratio of government debt to GDP relatively low. This changed quickly as fiscal policy aimed to support growth at the cost of rapidly rising debt levels. The need to access highly stressed global capital markets limited the government’s ability to use fiscal policy to support demand (see figure 1.5).

Source: IMF database.
Figure 1.5 Sovereign Debt as a Share of GDP in ECA Countries, 2000–12

![Gross Sovereign Debt (2000-2012)](image)

**Source:** IMF database.

Many of the debt levels at the start of the crisis were below EU-15 comparators (see figure 1.6), but the drivers of change vary by country. For example, in Poland debt levels before the crisis were allowed to approach the constitutional ceiling of government debt to GDP of 60 percent. Intended to encourage fiscal sustainability, the ceiling meant that Poland had to react more quickly than would have been required if *pre-crisis* fiscal policy had been tougher and if debt rather than taxes had financed the transition to a funded pension system.

Figure 1.6 Ratio of Government Debt to GDP in ECA Countries and Select EU-15 Countries, 2008

![Gross Debt as % of GDP in 2008](image)

**Source:** IMF database.
1.4.2 Financial market conditions

Sovereign bond spreads

The financial markets did, to some extent, differentiate between the experiences of the different countries in the ECA region. Table 1.3 shows the spreads between government bonds in the different markets and German 10-year bonds. Spreads were very low in 2007, but widened dramatically as the crisis took hold. Poland, whose fundamentals were relatively strong, saw an increase in spreads of 2 percentage points between 2007 and 2009. Even strong performers faced problems with the flight to “quality.” For some countries, particularly Latvia, Lithuania, Hungary, and Romania, spreads widened dramatically, ranging between 6.7 and 11 percent in 2009.

Table 1.3 Sovereign Spreads in ECA Countries, 2007–11

<table>
<thead>
<tr>
<th>Country</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a</td>
<td>n.a</td>
<td>n.a</td>
</tr>
<tr>
<td>Latvia</td>
<td>1.06</td>
<td>1.73</td>
<td>9.28</td>
<td>7.58</td>
<td>2.98</td>
</tr>
<tr>
<td>Lithuania</td>
<td>0.01</td>
<td>0.81</td>
<td>11.03</td>
<td>2.61</td>
<td>2.16</td>
</tr>
<tr>
<td>Poland</td>
<td>0.96</td>
<td>1.90</td>
<td>2.87</td>
<td>3.33</td>
<td>2.99</td>
</tr>
<tr>
<td>Slovak R.</td>
<td>0.10</td>
<td>0.42</td>
<td>1.61</td>
<td>1.19</td>
<td>1.50</td>
</tr>
<tr>
<td>Hungary</td>
<td>2.15</td>
<td>3.98</td>
<td>6.68</td>
<td>5.06</td>
<td>4.33</td>
</tr>
<tr>
<td>Romania</td>
<td>2.43</td>
<td>2.63</td>
<td>7.79</td>
<td>4.56</td>
<td>4.53</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>0.01</td>
<td>0.65</td>
<td>3.83</td>
<td>3.67</td>
<td>2.50</td>
</tr>
<tr>
<td>Russia</td>
<td>5.81</td>
<td>5.43</td>
<td>5.04</td>
<td>6.43</td>
<td>5.60</td>
</tr>
<tr>
<td>Croatia</td>
<td>0.12</td>
<td>1.07</td>
<td>4.26</td>
<td>1.93</td>
<td>1.07</td>
</tr>
<tr>
<td>German Yields</td>
<td>4.56</td>
<td>4.52</td>
<td>3.47</td>
<td>2.54</td>
<td>2.89</td>
</tr>
</tbody>
</table>

Sources: European Central Bank; European Commission.
Note: Estonia does not have sovereign long-term debt securities on the market.

Credit ratings of sovereign bonds and explicit versus implicit debt

As is discussed in chapter 3, one problem is that levels of and changes in implicit rather than explicit debt appear to have little impact on a country’s credit rating (see Cuevas and others 2008). This produces an incentive to “hide” future pension liabilities in implicit debt rather than to pre-fund them, through either government reserves or second pillars. However, the rating agencies should not necessarily be identified as misrepresenting the underlying picture of a country’s total debt position. It does matter whether there are explicit contractual creditors or not. This is because pension promises by

---

2 Credit ratings used by Standard and Poor’s are defined as follows: A indicates strong capacity to meet financial commitments, but somewhat susceptible to adverse economic conditions and changes in circumstances; BBB indicates adequate capacity to meet financial commitments, but more subject to adverse economic conditions; BBB– indicates lowest investment grade; and BB+ indicates highest speculative grade. Credit ratings above and below BBB– are considered investment grade and junk bonds, respectively.
governments are subject to often very significant “defaults.” Both the original reform programs and changes made during the crisis and since have reduced the cost of the pension promises governments have made—for example, by increasing the retirement age so that pensions are paid later and for a shorter number of years. As we highlight in the next chapter, pension risk is minimized when contributors diversify the sources of retirement income.

Table 1.4 shows the change in ratings over the crisis period. Among other considerations, Poland’s credit rating remained unchanged because the package of responses to the crisis allowed the country to avoid a recession and maintain stable government debt levels. Hungary, for example, was downgraded from investment grade to junk status. Latvia was downgraded and then partially upgraded.

### Table 1.4 Long-Term Sovereign Bond Ratings in ECA Countries, 2007–12

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>A</td>
<td>A</td>
<td>A</td>
<td>A-</td>
<td>AA-</td>
<td>AA-</td>
</tr>
<tr>
<td>Latvia</td>
<td>BBB+</td>
<td>BBB+</td>
<td>BB+</td>
<td>BB+</td>
<td>BB+</td>
<td>BBB-</td>
</tr>
<tr>
<td>Lithuania</td>
<td>A</td>
<td>A-</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
</tr>
<tr>
<td>Slovak R.</td>
<td>A</td>
<td>A</td>
<td>A+</td>
<td>A+</td>
<td>A+</td>
<td>A</td>
</tr>
<tr>
<td>Hungary</td>
<td>BBB+</td>
<td>BBB+</td>
<td>BBB-</td>
<td>BBB-</td>
<td>BBB-</td>
<td>BB+</td>
</tr>
<tr>
<td>Romania</td>
<td>BBB-</td>
<td>BBB-</td>
<td>BB+</td>
<td>BB+</td>
<td>BB+</td>
<td>BB+</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>BBB+</td>
<td>BBB+</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
</tr>
<tr>
<td>Croatia</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB-</td>
<td>BBB-</td>
</tr>
<tr>
<td>Russia</td>
<td>BBB+</td>
<td>BBB+</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
<td>BBB</td>
</tr>
<tr>
<td>Macedonia</td>
<td>BB+</td>
<td>BB+</td>
<td>BB+</td>
<td>BB</td>
<td>BB</td>
<td>BB</td>
</tr>
</tbody>
</table>

*Source: Standard and Poor’s.*

**Investment returns**

It is also important to highlight what happened to different investment markets. One of the most important policy areas in a second pillar is asset allocation. Given the mandatory nature of pension systems, governments typically regulate the investments of pension funds. Unfortunately, these regulations may be driven by goals other than optimizing future pensions. These include the need to fund fiscal deficits, to maintain low volatility in returns, and even to direct investments to specific sectors of the economy, among others.3

As argued later, inadequate investment regulations have undermined an essential benefit of funded pillars. But decisions on asset allocation are also influenced by what are considered to be “appropriate” or “safe” investments for pension funds. Figure 1.7 shows how returns differed between 2004 and 2012. The optimal long-term strategy may involve high return volatility. These strategies may bring high volatility in the short term. But if properly implemented, they will also minimize the pension risk at retirement age, which is the final objective of a pension system. The use of well-designed and targeted schemes of guarantees—for example, guarantees of the value of contributions at retirement age—can

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3 The Russian Federation has used the default pension fund to satisfy government’s social policy objectives.
help to increase the tolerance of people and politicians for short-term volatility and therefore avoid unnecessary distortions in asset allocation (Antolin and others 2011). These guarantees need to be priced at market value and provided by an independent agent.

Figure 1.7 Nominal Returns of Mandatory Pension Funds Relative to MSCI Europe, 2004–12

Sources: National regulatory authorities; MSCI.
Note: Returns for Russia refer to the performance of Vnesheconombank’s “Enhancement” portfolio, which constitutes more than 70 percent of total second-pillar assets.

Table 1.5 shows allocations, by major asset classes, for different countries between 2004 and 2010. The allocation to fixed-income, particularly government, bonds was relatively high in the early years of the reform process. For some countries, this changed significantly over time, for example, in Estonia. In Poland the high allocation to bonds did not produce particularly low returns, as the secular fall in interest rates over the first decade of the system led to large capital gains for the portfolios. This highlights that the (very) long-run recommendation to have a diversified portfolio in equities needs to be seen in light of the potential for a country to reap a “stability” bounce as interest rates fall significantly as the economy develops. But such a bounce is not guaranteed and will not deliver the best long-term result for pensioners if the asset allocation does not subsequently adjust.
Table 1.5 Average Allocation of Pension Fund Portfolios in ECA Countries, 2004 and 2010

<table>
<thead>
<tr>
<th>Country</th>
<th>Bonds</th>
<th>Equity</th>
<th>Other</th>
<th>Bonds</th>
<th>Equity</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>53.0</td>
<td>41.0</td>
<td>6.0</td>
<td>31.0</td>
<td>54.0</td>
<td>15.0</td>
</tr>
<tr>
<td>Latvia</td>
<td>48.6</td>
<td>15.5</td>
<td>36.0</td>
<td>31.5</td>
<td>1.2</td>
<td>67.3</td>
</tr>
<tr>
<td>Lithuania</td>
<td>64.5</td>
<td>31.5</td>
<td>4.0</td>
<td>37.4</td>
<td>57.9</td>
<td>4.8</td>
</tr>
<tr>
<td>Poland</td>
<td>60.8</td>
<td>33.7</td>
<td>5.5</td>
<td>59.4</td>
<td>36.3</td>
<td>4.4</td>
</tr>
<tr>
<td>Slovak R.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>68.4</td>
<td>1.4</td>
<td>30.2</td>
</tr>
<tr>
<td>Hungary</td>
<td>75.0</td>
<td>16.4</td>
<td>8.6</td>
<td>54.5</td>
<td>9.2</td>
<td>36.3</td>
</tr>
<tr>
<td>Romania</td>
<td>n.a.</td>
<td>n.a.</td>
<td>n.a.</td>
<td>80.3</td>
<td>12.2</td>
<td>7.5</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>74.0</td>
<td>8.1</td>
<td>17.9</td>
<td>45.6</td>
<td>31.2</td>
<td>23.3</td>
</tr>
<tr>
<td>Croatia</td>
<td>77.6</td>
<td>15.4</td>
<td>7.0</td>
<td>67.9</td>
<td>15.5</td>
<td>16.6</td>
</tr>
</tbody>
</table>

Source: National regulatory authorities.

1.5 Changes caused by the crisis

The global financial crisis has led to some high-profile changes in private pension systems. These are reviewed below. It is important to put these changes into context, first in terms of changes to the overall pension system and second in terms of other changes to the expenditure and revenue accounts of the government budget.

The context is important because it highlights that, when a crisis is severe enough, few areas of public spending are safe. So pensions were not uniquely targeted, but they typically constitute a large proportion of government expenditure. A key issue with changes to pension systems is that “temporary” changes can have long-term implications for future retirement income. But the “resolution” in the title of this report is to highlight that many countries with second pillars made no changes to their contributions despite being under significant fiscal pressure.

1.5.1 Changes in private pensions

The changes made in the ECA region have been grouped under the term “reversals” because they reversed elements of the original reform packages that were introduced in the region starting in the late 1990s. However, to compare the actual changes properly to other changes in the pension system, we distinguish between the following:

- A reversal, which ends the second pillar by reversing it into the first pillar (as in Hungary and Argentina) or offsets any changes in the second-pillar contributions by increasing promised benefits from the first-pillar state pension system

- A reduction, which cuts the contributions going into the second pillar, reducing the size of the final pension balance to a greater or lesser extent. Announced reductions can be permanent or temporary.
The most important impact of a reduction is on final pension balances. In other words, a permanent 1 percentage point cut in contributions may be better than a temporary cut of 5 percentage points for 10 years. Here we draw out not just the difference between temporary and permanent reductions, but also their likely impact in order to understand their full implications and hence the most appropriate policy response. Table 1.6 sets out the changes in rough order of severity, with countries that maintained their system and continued reforms at the bottom of the table.

Table 1.6 Second-Pillar Policy Reactions in ECA Countries: From Reversal to No Change

<table>
<thead>
<tr>
<th>Reversal</th>
<th>Hungary</th>
<th>8% 2nd pillar contribution rate reduced to 0% in January 2011 and transferred to the 1st pillar - state PAYG system. Reversal is of a permanent nature.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Part reversal part reduction</td>
<td>Poland Permanent</td>
<td>7.3% contribution rate cut to 2.3% in May 2011. Rates will rise back gradually to 3.5% by 2017. From 2017 onwards contribution rates will remain constant. Reduction in the size of mandatory funded system is permanent, however rights in the PAYG state pension system have increased.</td>
</tr>
<tr>
<td>Part reversal part reduction</td>
<td>Russia Permanent</td>
<td>State Duma of the Russian Federation backed the plan to reduce rates from 6% to 2% in November 2012. Change are permanent and will go into force on January 2014.</td>
</tr>
<tr>
<td>Reductions in contributions</td>
<td>Slovakia Permanent</td>
<td>9% contribution rate to be reduced to 4% in 2013. Since 2008 workers have initial choice of state or mandatory system participation.</td>
</tr>
<tr>
<td>Reductions in contributions</td>
<td>Estonia Temporary</td>
<td>6% (4%+2%) rate cut to 0% from June 2009 to January 2011. Contributions shifted from 2nd to 1st pillar. Gradual increase from 2011. Rate set at 3% in January 2011, and 6% in January 2012. Rate may rise to 8% in 2014-17 to catch-up missed contributions.</td>
</tr>
<tr>
<td>Reductions in contributions</td>
<td>Latvia Temporary</td>
<td>8% contribution rate reduced to 2% in May 2009. No change since then. Rates are planned to increase to 6% from January 2013.</td>
</tr>
<tr>
<td>Reductions in contributions</td>
<td>Lithuania Temporary</td>
<td>5.5% contribution rate reduced to 2% in July 2009. Rates lowered again January 2012 to 1.5%. Increase to 2% default planned in 2013 (4% with 1% gov match if worker adds 1%).</td>
</tr>
<tr>
<td>Reductions in contributions</td>
<td>Romania Temporary</td>
<td>Reduction in planned growth path of contribution rate from 2% to 6%. Rate froze in 2010 at 2% but started to increase again in 2011 at annual rate of 0.5%.</td>
</tr>
<tr>
<td>No changes in 2nd pillar arrangements announced as of June 2012</td>
<td>Croatia</td>
<td>No changes, 2nd pillar contribution rate remains at 5%.</td>
</tr>
<tr>
<td>No changes in 2nd pillar arrangements announced as of June 2012</td>
<td>Bulgaria</td>
<td>No changes, 2nd pillar contribution rate remains at 5%.</td>
</tr>
<tr>
<td>No changes in 2nd pillar arrangements announced as of June 2012</td>
<td>Macedonia</td>
<td>No changes, 2nd pillar contribution rate remains at 7.42%.</td>
</tr>
<tr>
<td>No changes in 2nd pillar arrangements announced as of June 2012</td>
<td>Kosovo</td>
<td>No changes, 2nd pillar contribution rate remains at 10% (additional voluntary contributions can add up to 20%).</td>
</tr>
<tr>
<td>Planned implementation of 2nd pillar continuing</td>
<td>Czech Republic</td>
<td>2nd pillar reform is planned to go into force on January 1, 2013. Contribution rate will be set at 5%.</td>
</tr>
</tbody>
</table>

Sources: National regulatory authorities; Schwarz 2011; IMF 2011; OECD 2012b.

The overall impact of the changes on the public finances depends on what the government does with any social security contributions that were previously going to the funded second pillar and are now going to the government. In Latvia, the contributions were effectively treated as a new solidarity tax and did not create any new liabilities in the first pillar. In some countries, such as Poland, additional benefits were created in the first pillar to compensate (but not fully) for the decline in contributions. In other countries, these decisions are still unclear, making the long-term impact difficult to measure. Simulations prepared by the Organisation for Economic Co-operation and Development (OECD) suggest that, for Poland and Hungary, the fiscal impact was positive, but at the cost of much lower replacement rates—a cut of 15 and 20 percent in Poland and Hungary, respectively (see OECD 2012b). Future pension
benefits for contributors will face greater risk concentration with respect to government finances (see more detailed discussion in chapter 2).

1.5.2 Impact of temporary versus permanent reductions in contribution rates

To understand the impact of the changes in contribution rates, it is crucial to know how long they will last. Table 1.7 shows some very simple comparisons of the impact of different types of changes on the size of the final pension fund relative to a baseline: contributions equal to 7 percent of salary, real returns of 3.5 percent, and contribution period of 40 years. To make the impact of the change in contributions transparent, no other changes are assumed (for example, differential wages or inflation profiles).

As the table shows, a permanent reduction in the contribution rate to the funded pension scheme of 5 percentage points—from 7 to 2 percent—clearly has a massive impact. The final pension balance would only be 29 percent of the reference scenario. A cut of 5 percentage points for only five years would reduce the final pension balance by 15 percent if it occurred at the start of a worker’s accumulation period and by only 8 percent if it occurred in the middle (because the earlier cut means a greater loss of interest for the whole period). The final comparison shows that if there was a 5 percentage point cut initially, then even if contributions for the next 35 years were increased by 1 percentage point—for example, contributions were 8 percent, not 7 percent—there would still be a reduction of 4 percent in the final pension pot.

### Table 1.7 Impact on Final Pensions of Different Types of Reductions

<table>
<thead>
<tr>
<th>Size of cut from initial 7 percent contribution</th>
<th>Final pension as percentage of original expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Permanent cut of 5 percentage points</td>
<td>29</td>
</tr>
<tr>
<td>Five-year cut of 5 percentage points at outset</td>
<td>85</td>
</tr>
<tr>
<td>Five-year cut of 5 percentage points in middle</td>
<td>92</td>
</tr>
<tr>
<td>Permanent cut of 1 percentage point</td>
<td>86</td>
</tr>
<tr>
<td>Five-year cut of 5 percentage points, then a permanent 1 percent higher contribution</td>
<td>96</td>
</tr>
</tbody>
</table>

*Source: World Bank estimates.*

1.5.3 Impact of the crisis on the wider pension sector

If some countries reversed or reduced their second pillar and some made no changes, were these the only changes made to the pension system as a result of the crisis? The simple answer is no. As well as making changes to second-pillar pension contributions, many countries made changes to other parts of their pension system. This is where the distinction between a reversal and a reduction is important. Many countries raised the retirement age, lowered the rate of benefit accrual, or changed benefit formulas for the years in the state system. They did not do away with the system altogether, but they did cut benefits, and hence costs, to reduce current and future fiscal burdens.

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4 The figures do not factor in sophisticated second-round or general-equilibrium effects; they merely highlight the need to focus on the effect of a change (whether temporary or permanent) on overall pension outcomes.
In addition to these changes in state and private pensions, there were often cuts or freezes to the wages and pensions of public sector employees. These schemes are clearly very vulnerable to a public finance downturn, as both the wages and pensions are paid out of the current budget. The cuts to these schemes highlight that many of the changes were driven by the need to find short-term reductions in government expenditure or short-term increases in revenue to deal with ballooning fiscal deficits.

1.5.4 Impact of the crisis on wider public spending

In the same way that the crisis drove governments to search anywhere within the pension system for ways to cut short-term expenditure, even if this would increase long-term (implicit) liabilities, there was a search in the wider public sector for measures to cut public expenditure and increase revenue.

Many of these measures were politically very controversial. The combined impact for a number of countries is summarized in Table 1.8. It shows how pensions made up part of the fiscal adjustment plans introduced in countries across the region. The key message to take to the next chapters is that all pensions are clearly vulnerable to cuts driven by a fiscal crisis. In this respect, pensions are like many other government expenditures—for example, government salaries or capital projects—which have a continued long-term need but can be cut in the short term. Changes to pensions were seen as politically more palatable than cuts elsewhere, highlighting a lack of political and broad public support for pension systems in several countries.

<table>
<thead>
<tr>
<th>Table 1.8 Changes in Revenue and Expenditure to Restore Fiscal Stability in Three ECA Countries, 2011–12</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Cumulative Impact of Fiscal Policy in 2011 and 2012</strong> As % of GDP</td>
</tr>
<tr>
<td><strong>Expenditures</strong></td>
</tr>
<tr>
<td>Hungary</td>
</tr>
<tr>
<td>Cancellation of 2010 pension correction 0.29</td>
</tr>
<tr>
<td>Changes in pension indexation system 0.72</td>
</tr>
<tr>
<td>Elimination of 13th pension 1.24</td>
</tr>
<tr>
<td>Tightening disability pension, freezing pension minimum, early retirement changes 0.35</td>
</tr>
<tr>
<td>Second pillar contributions 2.58</td>
</tr>
<tr>
<td>Other 5.09</td>
</tr>
<tr>
<td>Total 10.27</td>
</tr>
<tr>
<td>Total 8.44</td>
</tr>
<tr>
<td>Poland</td>
</tr>
<tr>
<td>Public sector wage freeze 0.60</td>
</tr>
<tr>
<td>Reduced early retirement 0.60</td>
</tr>
<tr>
<td>Cut in labor market policies 0.30</td>
</tr>
<tr>
<td>Other 0.10</td>
</tr>
<tr>
<td>Total 1.60</td>
</tr>
<tr>
<td>Estonia (based on 2009 and 2010 figures)</td>
</tr>
<tr>
<td>Suspension of second pillar in 2009 0.62</td>
</tr>
<tr>
<td>Decreasing the raise in pension 0.56</td>
</tr>
<tr>
<td>Reduction in social security benefits 0.82</td>
</tr>
<tr>
<td>Other 5.78</td>
</tr>
<tr>
<td>Total 7.78</td>
</tr>
</tbody>
</table>

Source: European Commission.
These broader cuts, like changes in pensions themselves, will have implications for intergenerational equity. These are beyond the scope of this report, but they are important for understanding the overall fairness of recent changes and for determining the burden of adjustment by age and gender.

**1.6 Conclusion**

This chapter shows that there has been great diversity among countries both in the initial reforms and in the impact of and reaction to the crisis. Funded pensions have come under attack. There has been one complete reversal of earlier reforms, one partial reversal along with a reduction in contributions, and a series of reductions in contributions that will have differing long-term impacts on future pensions. So the crisis and its aftermath pose a real threat to these kinds of pension arrangements. But many countries did not reverse or reduce contributions to the second pillar. Estonia shows that it is possible to have reductions in the short term with a future path to make up the shortfall when economic conditions improve. Changes to meet a fiscal crisis were focused at times on the state pension system, the wages and pensions of public sector employees, and a wide range of other expenditure-reducing and revenue-raising measures.

In chapter 2 we put the crisis response into a longer-term framework. We ask, what is the overall lesson of the crisis for pension arrangements? In particular, do second pillars (mandatory systems) have a role to play in meeting the pension challenge? Chapter 3 then looks at the implications of the crisis for particular features of the privately funded pension system. Chapter 4 then presents overall policy conclusions.
Chapter 2. Diversified Solutions to the Retirement Challenge

2.1 Introduction

As chapter 1 showed, the severity of the financial crisis was so great that pensions were only one of many areas that were cut. Moreover, it is difficult to link the impact of the crisis on a country overall with the impact on the pension system. Some countries made large changes in state pensions, some in privately funded pensions, some in both, and some in neither.

So in this chapter we put this complicated pattern into a more strategic and long-term framework, attempting to determine the nature of the overall package of measures needed to have a successful pension system. We have to answer this big-picture question first. If the message from the crisis is that second-pillar pensions are inherently flawed, there is little point in discussing how they might be improved.

To answer this broader strategic question, we look at three main issues. First we look in theory at the fundamental requirements of a successful pension system: does the system provide retirement income or, more accurately, retirement consumption? Second, we return to the scale of the retirement challenge. Has the fundamental challenge changed compared to the original picture at the time of the reforms? Third, we take this theoretical discussion to a practical level and compare the crisis experience in other countries to provide insight into the strengths and weaknesses of different elements of a pension system. Specifically, we look at the following:

- Countries in the same region but with different pension systems, for example, European countries with public pay-as-you-go pensions and larger voluntary private pensions (third pillars)
- Countries in different regions but with similar pension systems, for example, Latin American countries with the second-pillar model but a (largely) different crisis experience.

2.2 The nature of the retirement problem

The original reforms were driven by a desire to have adequate, affordable, and sustainable pensions that had good coverage, were fair and efficient, and would be robust over the long term (Holzmann and Hinz 2005). A comprehensive pension system seeks to combine elements of poverty reduction, consumption smoothing, insurance, and redistribution (see, for example, Barr and Diamond 2008; European Commission 2012c). The vision for pensions is expressed in different ways by different countries and organizations, usually with a common set of aspirations that implicitly or explicitly combine these elements.5

The model used by the World Bank identifies multiple sources of income and consumption to deal with multiple needs. It is summarized in figure 2.1.

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5 OECD (2012b) reiterates the core objectives of a pension system as delivering coverage, adequacy, financial sustainability, and affordability, work incentives, administrative efficiency, and diversification of retirement saving.
2.2.1 Claims, assets, income, and consumption

Different sources of consumption and income have different characteristics. Basic poverty-alleviating public assistance for old age, for example, is a claim contingent on current rules and dependent on sufficient funding from the current budget. The pensioner does not own any assets. The government (taxpayer) takes on the longevity risk, and the old-age population takes on the risk that the rules will continue to allocate money to them and there will be sufficient money to pay the transfers. Second-pillar pension schemes provide access to legally owned assets funded by a range of sources that can be exchanged in the future for a guaranteed stream of income until death (an annuity), drawn down gradually (phased withdrawal) or taken as a lump sum and spent or saved again (Milevsky 2006).

Other sources of income for pensioners also can be extremely important in determining the adequacy of retirement income. Although for many years the World Bank has discussed the notion of the “fourth” pillar, it typically does not receive enough attention (see, for example, Holzmann, Robalino, and Takayama 2009). But the fourth pillar is important in this discussion about the potential role of the second pillar or mandatory private savings because it emphasizes the diverse strategies that people have and must use to ensure sufficient income in old age.
The crisis shows how these sources of income and consumption are subject to some common and some very different risks. Relying on family income is a very significant source of income in many, particularly Southeast Asian, economies. It exposes individuals to the risk that their children will not have enough income, which in turn is dependent on the labor and capital markets that affect their ability to make contributions and get returns on invested assets (Park 2011). It also exposes them to the risks of family dynamics, which would have little obvious correlation with market risk.

Reliance on housing has become a popular theme of discussion in pensions. It has been both overplayed and underplayed. It has been overplayed as a source of fungible income because houses are typically very illiquid assets and reverse mortgage markets are thin or nonexistent. In addition, the crisis emphasizes (once again) that the value of housing is particularly prone to asset price bubbles. This means that a house is one of the more volatile elements of an investment portfolio. But housing has also been underplayed because ownership of a house provides the equivalent of an annuity guaranteed against longevity risk and changes in rental price inflation. In countries with poor-value, thin, or nonexistent annuity markets, this is a very valuable characteristic. The value of owning a house can be calculated as the “imputed rent.” Including this in measures of income inequality reduces measured income inequality in the EU, with the impact largest for pensioners (Sauli and Tormalehoto 2010).

Labor income provides a direct source of income and allows other assets to be drawn down over a shorter period of time. It is subject to the same participation risk of employment in general, but employment does not necessarily fall to zero when individuals turn 60, 65, or even 70 years of age (Kidd and Whitehouse 2009). Own-production—for example, from a smallholding—can also be a source of both (retirement) consumption and income, but is a negligible component of incomes in nearly all EU countries except Romania (Paats and Tiit 2010).

Table 2.1 shows the different sources of retirement income on which people choose or have to rely and the different types of risk to which these income sources are exposed.

**Table 2.1 Sources of Retirement Income and Risks to Good Outcomes**

<table>
<thead>
<tr>
<th>Sources of retirement consumption</th>
<th>Risks affecting payout size</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zero pillar: Poverty prevention</td>
<td>Fiscal, intergenerational, longevity</td>
</tr>
<tr>
<td>First pillar: Public contributory, consumption smoothing</td>
<td>Fiscal, intergenerational, political, longevity, labor market</td>
</tr>
<tr>
<td>Second pillar: Mandatory private contributory, defined benefit or defined contribution, relative poverty and consumption smoothing</td>
<td>Capital market (investment returns, costs), labor participation, longevity</td>
</tr>
<tr>
<td>Third pillar: Private contributory, defined benefit or defined contribution</td>
<td>Capital market (investment returns, costs), labor market, individual myopia</td>
</tr>
<tr>
<td>Fourth pillar: Financial assets</td>
<td>Economic growth, instability</td>
</tr>
<tr>
<td>Fourth pillar: Family transfers</td>
<td>Family size, wealth, culture, location</td>
</tr>
<tr>
<td>Fourth pillar: Housing</td>
<td>Housing market, labor income</td>
</tr>
<tr>
<td>Labor income and own-consumption</td>
<td>Labor market, agricultural market</td>
</tr>
</tbody>
</table>
The following are the key points from table 2.1:

- All sources of retirement income and consumption are exposed to risk.
- The types of risk differ, often significantly.
- Some sources of income are subject to multiple sources of risk (which on the positive side sometimes explain why they can also generate additional returns).
- Some risks overlap, but in complex ways.
- Predicting the size of any of these sources and the impact of the risks over 40–80 years is very difficult, although stress testing can help to identify particular weaknesses.
- A strong theoretical case can be made that the most robust strategy for a person and for a country is to gain access to multiple sources of retirement income or consumption that create the best chance of gaining a secure income in the future.

Although financial education can in theory help individuals to understand and adapt to these risks, the financial literacy required is often significant and beyond the ability of a general education campaign to convey. Hence well-designed public and private pensions are needed that are robust to (pervasive) low levels of engagement and financial literacy.

In addition, the inevitable public and political reactions to volatility need to be factored into decisions regarding the exact nature of the private pension system chosen. The debate has often been, mistakenly, characterized as a choice between either a (final salary) defined benefit model or a pure defined contribution model (Modigliani and Muralidhar 2004). However, the correct framework is one that assesses how best to share and manage the risks. This is done most effectively in a multi-pillar framework. For example, a pure defined contribution system exposes individual members to more risk of variable outcomes. But guaranteeing capital, or investment returns, may not be the right answer if the cost of the guarantee is borne by a government that is already exposed to a very large amount of investment and longevity risk in underwriting defined benefit promises.

The right outcome for a system with very large private assets but little government provision is likely to be different from one with very significant public (defined benefit) pension provision and some additional private savings above a generous publicly provided minimum. In addition, the right option in the risk-sharing spectrum will depend on relative risk appetites and the objectives of public and workplace policy. So there should be no first-principles choice between defined benefit and defined contribution pensions and risk-sharing mechanisms in between each extreme; instead, different options need to be examined within the context of the other pillars in a country and their ability to deliver the five core pension outcomes highlighted above. The provision of privately managed funded pensions in the European Union has a diverse set of accumulation and de-accumulation provisions, and there is certainly no “one-size-fits-all” model presented in this paper (European Commission 2008b).

### 2.3 Scale of the retirement income challenge

 Achieving a vision of pension systems that are efficient, sustainable, and secure so that they deliver inclusive coverage of adequate pensions lasting the whole of retirement is difficult. The fundamental
challenge is demographic—falling birth rates, greater life expectancy, and a rising ratio of the old to the young (EIU 2012). This challenge—partly due to the positive achievement of reducing the risk of dying year on year—becomes critical for an economy in which the rising old-age dependency ratio turns into a rising economic dependency ratio, where the ratio of the years spent working (and contributing) falls relative to the years spent not working. In addition to rising longevity (in most countries), there is a significant impact from shifting cohort sizes, including the impact of outward migration, which exacerbates the reduction in the size of the working population relative to that of pensioners. This shift poses challenges not only for pensions but also for wider issues such as long-term care and health expenditures, which have been detailed extensively in earlier work (Chawla, Betcherman, and Banerji 2007).

The demographic challenge is as large as, if not larger than, it was at the time of the original reforms. So the scale of the challenge remains huge. As well as the issues discussed in this report, it will be important to improve the targeting of entitlements to tackle poverty so that scarce tax revenues are used most effectively.

Figure 2.2 shows how the old-age dependency ratio in the region is set to rise significantly over the period from 2010 to 2050. This will take many countries from below to above the EU average. So the demographic challenge is particularly acute.

**Figure 2.2 Actual and Estimated Population Dependency Rates in ECA Countries, 2010–60**

![Population Dependency Ratio (2010-2060)](chart.png)

*Source*: Eurostat demographic projections (convergence scenario).

*Note*: Dependency is defined as the ratio of persons 65 years of age and older to persons between the ages of 20 and 64.

This pattern of seeing major changes in the latter part of the projection periods between 2010 and 2060 is echoed in the estimates of overall increases in public pension spending as a percentage of GDP. Table 2.2 shows estimates from European Commission (2012c) that include government spending on pensions in both the state and second pillars.

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6 These issues are reviewed in greater detail by Schwarz and others (2013).
Table 2.2 Actual and Estimated Changes in Gross Pension Expenditures as a Share of GDP in ECA Countries, 2010–60

<table>
<thead>
<tr>
<th>Country</th>
<th>2010</th>
<th>2020</th>
<th>2040</th>
<th>2060</th>
<th>Change 2010-2060</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>8.9</td>
<td>7.7</td>
<td>8.1</td>
<td>7.7</td>
<td>-1.1</td>
</tr>
<tr>
<td>Latvia</td>
<td>9.7</td>
<td>7.3</td>
<td>6.3</td>
<td>5.9</td>
<td>-3.8</td>
</tr>
<tr>
<td>Lithuania</td>
<td>8.6</td>
<td>7.6</td>
<td>9.6</td>
<td>12.1</td>
<td>3.5</td>
</tr>
<tr>
<td>Poland</td>
<td>11.8</td>
<td>10.9</td>
<td>10.3</td>
<td>9.6</td>
<td>-2.2</td>
</tr>
<tr>
<td>Slovak R.</td>
<td>8</td>
<td>8.6</td>
<td>10.6</td>
<td>13.2</td>
<td>5.2</td>
</tr>
<tr>
<td>Hungary</td>
<td>11.9</td>
<td>11.5</td>
<td>12.1</td>
<td>14.7</td>
<td>2.8</td>
</tr>
<tr>
<td>Romania</td>
<td>9.8</td>
<td>9.2</td>
<td>11.6</td>
<td>13.5</td>
<td>3.7</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>9.9</td>
<td>9.2</td>
<td>10.1</td>
<td>11.1</td>
<td>1.1</td>
</tr>
<tr>
<td>EU 27</td>
<td>11.3</td>
<td>11.3</td>
<td>12.6</td>
<td>12.9</td>
<td>1.5</td>
</tr>
<tr>
<td>Euro Zone</td>
<td>12.2</td>
<td>12.3</td>
<td>13.9</td>
<td>14.1</td>
<td>2</td>
</tr>
</tbody>
</table>

Source: European Commission 2012c.

Once again, the factor that converts the challenge into a potential crisis is whether the total years of employment in an economy rise to offset the total years of non-employment. Here we need to factor in not just retirement but also unemployment, population size, and the impact of migration. In other words, employment issues are at the heart of many pension issues, so that changes to any pillar are not going to achieve the vision if the labor market performance of a country does not improve.

The EU’s 2012 White Paper on pensions makes this point clearly (European Commission 2012c). The old-age dependency ratio is set to double from 26 percent in 2010 to 50 percent in 2050. If the EU achieves its target of increasing labor market participation to 75 percent of the 20–64 age group by 2020 and if this increases further to 80 percent by 2050, then the economic dependency ratio would only increase from 65 percent in 2010 to 79 percent in 2050. This is still a very significant problem. But it illustrates how important underlying labor market performance is in determining the scale of the challenge to be met.

Unfortunately, the ECA region is facing a difficult situation, as figure 2.3 shows. Although some increase in labor force participation is forecast, the ratio of the population over 65 to the population employed is expected to deteriorate further between 2010 and 2060 (European Commission 2012c). The dependency ratio is expected to increase in all countries, but the increases for most ECA countries are higher than the EU average. Indeed, the six worst figures are for Latvia, Bulgaria, Hungary, the Slovak Republic, Poland, and Romania.
Substantial reforms have already been undertaken to address the challenge. These efforts have tackled some of the problem. The International Monetary Fund (IMF), among others, has prepared cross-country estimates of the impact on public pension expenditures of the demographic challenge and the amount of the challenge that has been met by reducing the eligibility for benefits (for example, by raising the retirement age), reducing the generosity of benefits (for example, by reducing accrual rates or increasing contribution periods), and increasing labor market participation (for example, by increasing the base of contributions).\(^7\)

As figure 2.4 shows, some of the problem has been addressed over the shorter term—to 2030. But as figure 2.3 also shows and the IMF analysis confirms, the bulk of the problem will be felt between 2030 and 2050. This affects the group of people entering the labor market from 1990 onward, which is the group that will be most affected by changes introduced as a result of the current crisis. For this group of people, whether public or private sources of pensions will be needed to provide a sustainable and adequate retirement is not a matter of debate; both will be needed. In the same way that the public sector cannot meet all of the costs, neither can the private sector alone.

\(^7\) See also OECD (2012a, ch. 1) for a description of reforms in OECD countries.
2.4 Insights from other countries and pension pillars

This section reviews international experience to see if countries that placed more emphasis on other pillars of the pension system fared better in the crisis or if particular pillars fared better than others. In addition, it asks whether countries not part of the World Bank client group are moving away from second pillars as part of the solution: is there a more compelling alternative vision?

Moving from global to ECA comparisons, the IMF estimated the impact of legislated reforms on future replacement rates and the poverty rate of pensioners for a wide sample of European countries (IMF 2011). They used a model to compare the impact of announced changes over two periods, one from 2010 to 2030 and another from 2010 to 2050. The impact was greatest over the longer time period, with only one country, the United Kingdom, showing an increase in replacement rates. Similarly, only the United Kingdom showed a decrease in pensioner poverty. All other countries showed decreases in replacement rates and increases in poverty. As figure 2.5 shows, both measures deteriorated in nearly all European countries, showing that the impact of the crisis has been felt across all types of pension systems, from the traditional “continental” European or EU-15 model to the approach in the EU-10.

Sources: OECD, EC, ILO, UN, and IMF staff estimates.
2.4.1 Voluntary pensions as an alternative to mandatory pensions

Both Poland and Hungary have identified the voluntary pension sector as a source for filling the gap created by the reversal of and reduction in the second pillar, respectively. A number of countries have very large voluntary private pension sectors—notably the United Kingdom, Ireland, the Netherlands, the United States, and Canada. It is clearly possible to have very significant third pillars without having a mandatory second pillar.

Two questions need to be answered. How well do such systems do in general in achieving pension objectives, and how well did such systems perform in the crisis?

Mandatory and voluntary private pensions are not really totally distinct systems so much as either ends of a spectrum of how to deliver private pensions (see figure 2.6). In addition, they operate with different levels of labor market formality. At one end of the spectrum is the mandatory system as seen in the Europe and Central Asian region and in Latin America. At the other end are the purely voluntary systems reliant on individuals who actively seek out a personal pension. There is also a spectrum from highly informal labor markets to formal ones. In very general terms, informality is higher in Latin America than in the ECA countries. So a mandatory system with very high levels of informality may lead to a relatively low level of coverage, similar to that of an employer-based occupational pension market. A mandatory system with high levels of labor market participation will have the highest coverage.
The United Kingdom and Ireland are in the middle of this spectrum. The size of their systems was driven not by members individually seeking personal pensions but by employers and unions creating pension schemes. Coverage, however, is not at adequate levels.

The United Kingdom, for example, has had a voluntary system for more than 50 years. Coverage was higher in the 1950s and 1960s and has fallen progressively to approximately 40 percent of the private sector labor force (ONS 2011). Between 2002 and 2005 the United Kingdom’s Pensions Commission examined how the country should deal with future challenges (Pensions Commission 2005). While the third pillar was more robust in the United Kingdom than in other European countries, it had no prospect of achieving coverage for the majority of workers in the future. In addition, coverage was particularly low for lower- and middle-income workers. Following the recommendations of the United Kingdom’s Pensions Commission, the government introduced automatic enrollment8 in phases from October 2012, turning the voluntary private pension system into a quasi-mandatory system.9 Some other European countries are also strengthening their efforts to improve coverage in voluntary schemes.

Coverage in voluntary schemes depends on the organization of the social contract between employers and employees and the degree of formalization of the labor force. Figure 2.7 compares the coverage of the workforce in some countries with a large third pillar. It shows that, for most countries, the coverage of the voluntary pension pillar is driven by occupational pensions. A time series for some of these countries would also show how this occupationally driven coverage has fallen over time (for the United States, see Munnell and Quinby 2009). The Netherlands and Sweden deliver occupational coverage through strong collective bargaining arrangements that are close to being effectively mandatory.

Purely voluntary private provision has provided non-negligible coverage. But it is important to be sure that this coverage is genuinely additional—not people with both occupational plans and private pension plans. In some countries, people who have private plans may also have occupational plans and own other financial assets; they may also have higher rates of homeownership (see, for example, the United Kingdom’s Wealth and Asset Survey, ONS 2011).

So a move from a mandatory system to a voluntary system will almost certainly see coverage fall significantly. Moreover, this fall will be even larger unless the voluntary system has a very strong element of employer engagement and involvement.

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8. The work of Thaler and Benartzi (2004), among others, on behavioral economics provided some of the inspiration for this middle path between a pure voluntary system and a mandatory system.

9. Recall that the earlier IMF analysis of changes in replacement and poverty rates showed the United Kingdom as an outlier, with an increase in replacement rates and a decrease in pensioner poverty expected over the period 2010–50. In addition to introducing auto-enrollment, the United Kingdom is increasing the generosity of its basic state pension and increasing the degree of indexation, so the basic pension is higher for everyone. This is being paid for by a higher retirement age, with the steps from 65 to 66 and 66 to 67 on the way to 68 being introduced more quickly than originally planned. The United Kingdom has also made changes to the inflation rate at which the pensions of public sector workers are indexed, which some private schemes mimic. This has the effect of reducing the size of the defined benefit liabilities.
Figure 2.7 Mandatory and Voluntary Pension Coverage in Select Countries

![Mandatory and Voluntary Pension Coverage in Select Countries](image)

Sources: OECD pension statistics; national authorities.

As highlighted previously, the crisis has put stress on all parts of the pension system. Are third pillars less likely to suffer reversals or reductions during a crisis than third-pillar or voluntary pensions? Making such comparisons is not straightforward. Seeing changes in second pillars is relatively simple because the government has to decide (and typically legislate) whether to continue collecting the contributions from workers’ salaries and redirecting them to the state pension system, effectively claiming them as additional tax revenue. In voluntary third pillars, there may be some similar elements, particularly if government makes a contribution either directly or via tax relief. But the main source of funding is usually the combination of employer and employee contributions, which is often decided on a scheme-by-scheme basis. These combinations can be and are changed. But such changes are less visible, and there is typically not an easily accessible database with which to make comparisons.

The crisis saw continuity in third pillars but also in most forms of reductions as well. For example, in the United Kingdom the government has twice restricted the value of tax relief that could be claimed as a contribution in an effort to improve its fiscal position (HM Treasury 2010, 2012). Some companies, such as American Express in 2009, announced that they would reduce their employer contributions to 0 percent—at least until the new reforms force them to offer a scheme into which they will contribute at least 3 percent. And perhaps most important, the crisis significantly reduced the funding levels of defined benefit plans, which still contain the bulk of the assets of U.K. pension funds despite their almost total closure to new members (Pension Regulator and Pension Protection Fund 2011). The long-term impact of the funding reductions is not yet clear because it depends on the ability of employers and members to make contributions and the financial markets to create returns that restore the funding balance.

Pension funds in the Netherlands were exposed to the same market volatility. The value of the assets of pension funds fell significantly during the crisis but recovered in the following years (see OECD 2011a, 2012b). However, the poor investment performance meant that not all pension funds were able to

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10 See www.employeefunds.co.uk.
index pensions that were in payment. This is a conditional rather than an absolute right in the Netherlands for many schemes. As highlighted in ABP (2010), the cumulative impact of the lack of indexation meant that in 2010 pensions were 8 percent below the level they would have been if indexation had followed the practice of previous years (although with a clear aspiration to make this up when conditions allow).

The case of Ireland demonstrates that in a severe crisis, not even voluntary savings for retirement are protected. As a result of a very large bill to recapitalize the country’s banks, the Irish government took several steps to find revenue and cut expenditures. This included transferring the assets from the €24 billion National Pension Reserve Fund—established in 2001 to pre-fund future state/first-pillar pension liabilities—to the Ministry of Finance to recapitalize the banks. In addition, the retirement age was raised from 65 to 66 beginning in 2014, to 67 beginning in 2021, and to 68 beginning in 2028. The contribution period needed to receive a state pension was doubled from 260 to 520 weeks. There was a tax of 0.6 percent for three years on the assets of the private pension funds. And the level of tax relief for private pensions for high earners was reduced from 40 percent to 21 percent; the amount of earnings eligible for tax relief was also reduced. Employer contributions were no longer tax deductible.

So in Ireland all sources of pension assets, contributions, and expenditure were identified across all pillars. Amid these changes, a proposal was made to adopt automatic enrollment into a defined contribution plan (hence moving toward the mandatory and away from the voluntary end of the spectrum).

These examples serve to highlight the point that voluntary pensions can be an important part of a country’s solution to the retirement challenge. But as with other pillars, voluntary pensions are not immune from the impact of deep financial crises. Moreover, countries that have long-established, significant third pillars are making changes to fix their relatively poor record on coverage.\(^{11}\)

The final note on third pillars as a solution to the retirement challenge—or as a substitute for the second pillar—is that all of the countries studied here already have them. In other words, there has been nothing preventing third pillars from gaining traction. But the size of the third pillar is generally a tiny fraction of that of the second pillar. Figure 2.8 illustrates this for countries in the region.

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\(^{11}\) Auto-enrollment is not a panacea or always successful. As the experience of Italy shows, if the features are not designed correctly, levels of opt-out can be very high. See Rinaldi (2010).
Figure 2.8 Second- and Third-Pillar Pensions as a Share of GDP in ECA Countries, 2012

Voluntary and Mandatory Pension Savings in 2012

Sources: World Bank staff calculations; national regulatory authorities.
Note: The year in parentheses is the year of creation of the mandatory funded schemes. Data for Ukraine and Slovenia refer to 2011. GDP values for 2012 are based on IMF estimates.

2.4.2 Comparing similar second-pillar systems in different regions

So far we have compared the experience of countries with a second pillar in Europe and Central Asia with that of countries with different systems in the wider European region. A natural comparison is also to countries in Latin America on whose systems the second-pillar, individually funded, defined contribution account was modeled.

The reforms in Europe and Central Asia were obviously not identical to those in Latin America. One important difference is that all of the ECA countries in this report maintained their first-pillar pensions, although they were reformed (with reduced generosity) when the second pillars were introduced. In three of the Latin American countries (El Salvador, Chile, and Mexico) the new defined contribution pillar replaced the earnings-related public pension system or workers had a choice of either one or the other, but not both, as in Peru (OECD 2012a). In addition, the second pillars in Latin America have struggled to achieve coverage levels of anything like those in the ECA region (Rofman, Lucchetti, and Ourens 2008). This lack of coverage makes it more difficult to sustain the system—at least politically.

Although there are differences in the systems overall, comparing ECA to Latin America has some of the elements of a natural experiment because one can ask what happened to second pillars in a region that was on average less severely hit by the crisis and does not have the burden of being heavily dependent on members of the Euro Area for their exports? Does something inherent in the second pillar make it particularly vulnerable to reversals or reductions?

The message from this comparison is that the vulnerability of a second pillar, or indeed any pillar, is clearly related to the scale of the crisis. Latin America saw less stress on nearly all of the indicators.
reviewed in chapter 1 and recovered from stress more quickly (World Bank 2012). The one notable exception in Latin America is Argentina, which, like Hungary, reversed the second pillar into the first pillar, nationalizing the assets.

The example of Argentina highlights the combined impact of politics and past performance of the system. The reformed private second pillar had struggled to extend coverage and reduce fees. These factors taken together with the political choices being made by the government in power created the same kind of dynamic as was seen in Hungary.

But if the Latin American example in general shows that there is nothing inevitable about reversals or reductions, the equally important message is that the relative absence of reversals or reductions does not mean that all is well with second-pillar pensions. On the contrary, and as set out in detail in chapter 3, several pressing issues need to be addressed. Moreover, the experience of the crisis issues a warning that addressing these issues is critical if pension systems are going to generate the outcomes and the political and public support needed to sustain them in the future.

### 2.4.3 Fourth pillar

The crisis has two opposing messages for the fourth pillar, particularly with regard to the role of housing for the future provision of retirement consumption and retirement income. The positive message is that in countries with rule of law, house ownership is well protected and not subject to “reversals” as in the case of pension accounts. This means that the retirement consumption that will be provided by owning the asset is secure. The same story is true of assets held in private banks—since these in general are subject to deposit insurance—which is, of course, one of the causes of the scale of the impact on public finances due to bank bailouts.

But the negative message comes from the behavior of housing as an asset class. The crisis has shown the volatility in housing prices. Many of the most affected countries had very overheated housing markets. Indeed problems in the housing market were part of the original cause of the crisis. Many people saw the real value of their house fall dramatically, which brings up the importance of the role of diversification of the sources of retirement income. The market for reverse mortgages is difficult, and the illiquidity of housing has been well demonstrated again.

### 2.5 Conclusion

This chapter has asked a series of strategic questions: What is the nature of the retirement income challenge and the tools available to address it? Is the scale of the challenge large enough to warrant a diversified set of tools? And how did different countries with different systems perform?

Views are very likely to differ about the precise mix in different countries and the relative merits of each pillar or source of retirement income. But the key conclusions are the following:

- The huge challenge of securing a vision that delivers poverty reduction, consumption smoothing, insurance, and redistribution over a 60–80 year period requires a diversified approach, not just to the type of pension program but also to non-pension programs as well (fourth pillar).

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12 The experience of Cyprus in March 2013 is the notable exception to this finding.
• All parts of the system came under stress during the recent crisis, and examples can be found of any of the pillars being unpicked by governments to a certain extent.

• Countries that are reforming to meet the challenge are of course following a number of routes, including introducing new second pillars or moving third-pillar voluntary pensions down the spectrum to being quasi-mandatory, which may achieve the same objective.

• Therefore, second pillars should remain part of a diversified pension system going forward.

This underpins the overall message: do not reverse second-pillar pensions back into the state system; accept that some temporary reductions may be an inevitable response to a fiscal crisis for some countries; and undertake a proactive reform agenda that improves the outcomes of second pillars and hence improves the outcomes of the retirement income system as a whole. It is to this more specific reform agenda that we now turn.
Chapter 3. Issues Identified with Mandatory Private Pensions

3.1 Introduction

Eleven ECA countries engaged in multi-pillar pension reforms between 1998 and 2008, including the creation of funded pension schemes. From the perspective of public finances, pension reforms sought to stabilize the medium- and long-term fiscal imbalances of the existent pension system. Governments were also expecting a series of other positive externalities in the domestic economy, including increases in national savings, capital market development, and economic growth.

While it is still early to evaluate the final outcome of these reforms, the high expectations for them are unlikely to materialize fully. A full evaluation requires a sample of individuals who have completed their working life with a reformed pension system. Making an overall evaluation of the pension reform 10 or 15 years after it was enacted gives only a partial view of the results of the reform. There have been some improvements (see, for example, Holzmann and Guven 2009). However, some initial fiscal indicators suggest that some of the expected results of the reform will not be close to the expectations. Since most of the transitional deficit of these reforms has been debt financed, the net impact on national savings has been minimal, and therefore the impact on economic growth might be limited.\(^\text{13}\)

Most of the fiscal benefits of the reform so far can be attributed to the parametric reforms. Although the impacts on savings, economic growth, and capital market development need to be evaluated over a longer time span, the expected results will be modest at most given the current policy framework.

This chapter argues that weaknesses in the design and implementation of pension reforms in the region have jeopardized the virtuous circle of reforms. But it keeps the view that the multi-pillar scheme should be considered as the blueprint for pension reform suitably tailored to each specific country.

This chapter identifies three broad areas that help to explain the sense of underperformance of the funded pension systems:

- Tension between short- and long-term objectives affecting financing and politics
- Incomplete reforms or lack of implementation
- Institutional and market design issues particularly affecting costs and investment allocation.

3.2 Tension between the short and long term

Pension policy is inherently long-term. It involves complicated trade-offs between financing from current transfers and future funding. Long-term liabilities can be financed in advance, but at the expense of competing (short-term) priorities for scarce fiscal resources. An intergenerational trade-off exists that needs to be examined in each country. The creation of funded pillars brings future liabilities up-front. Governments face constant pressure to pass those liabilities on to future generations to alleviate current fiscal pressures. The severity of the crisis (highlighted in chapter 1), the excessive debt financing of the transitional deficit, accounting issues, and weak political support for the reforms played important roles in the partial and total unwinding of these reforms.

\(^{13}\) Household savings created by the mandatory funded scheme are offset by public sector deficits.
3.2.1 Financing of the transitional deficit

While the benefits of multi-pillar pension reforms are seen in the long term, the fiscal costs of the reform can be sizable in the first two decades. Transitional pension deficits are created when part of the social security contributions are diverted to individual funded schemes. Those contributions, which were used to pay pensions of the current generation of retirees, create a fiscal gap that does not always have an explicit financing mechanism. As a consequence of the crisis, the incentives tilted toward short-term objectives. This issue depends on the “diversion” of social security contributions from the first pillar to the second. In cases where the second pillar does not redirect revenue from the government budget, the issue is less acute.  

The financing of the transitional deficit plays an important role in the sustainability of the funded pillars. Funded schemes are more vulnerable to reversals in the case of debt-financed strategies because, as the government’s financing burden increases, tax increases may be difficult to implement, and government begins to look for budget cuts in all the government expenditure items. In the case of tax-financed transitional deficits, such an adjustment is not necessary, as there is an explicit financing mechanism. In the case of a debt-financed transition, it is more likely that shifting contributions from the second to the first pillar will emerge as a quick fix for the deficit.

Tax financing could be more effective if revenues were earmarked for the pension reform. As with many issues, the politics may need careful handling. In the Czech Republic, a value added tax (VAT) increase was linked to the creation of the second pillar, providing an identifiable source of funding that does not rely on contributions linked to wages. So this provided a dedicated source of funding that avoids an increase in the tax wedge on labor and hence supports labor market efficiency. However, the preannounced “VAT for pensions” policy was not universally popular.

In other countries, including Hungary and Estonia, parametric reforms in theory opened the fiscal space for financing the transitional deficit for a certain period of time. This worked in Estonia, but not in Hungary for a number of reasons. While the original pension reform in Hungary included a sizable component of tax financing in the first years of the reform, subsequent modifications of the original plan used debt to finance the costs of transition. The parametric reforms that took place simultaneously with creation of the second pillar were expected to create fiscal space for financing the deficit in the first decade; in the second decade after the reform, some debt financing was going to be necessary.

Figure 3.1, taken from Rocha and Vittas (2002), describes the pension deficits projected at the time of the reform. As expected, the diversion of part of the workers’ contributions into the second pillar was expected to cause an immediate revenue loss to the PAYG system. The revenue losses were expected to increase rapidly to about 0.8 percent of GDP in the first four to five years of the reform. They would then increase at a more gradual pace and reach 1.4 percent of GDP in the third decade, when most of the active population was expected to be enrolled in the new system. According to these projections, the PAYG deficit would have increased at the same pace, but the savings from parametric reforms would have been more than sufficient to offset the revenue loss. This would have allowed a reduction in the pension deficit. The initial reform was projected to generate small surpluses at the end of the first decade, even considering the revenue losses, but to return to deficits again in the second decade, with the retirement of the baby boom generation.

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14 This will be the case of Armenia, which is launching the second-pillar pension reform in 2014 and where the existing pension system only provides social assistance.
Figure 3.1 Pension Balances with Multi-pillar Pension Reform as a Share of GDP, 1997–2069


However, contrary to the projections, subsequent governments used the fiscal space created by the parametric reforms to increase the pension expenditures of the PAYG system. As shown in figure 3.2, between 2000 and 2008, public pension expenditure in Hungary increased by 2 percent of GDP. These increases in benefits to pensioners included generous indexation and the addition of a 13th-month pension (Palacios and Rocha 1998; Rocha and Vittas 2005).

Figure 3.2 Old-Age Fiscal Expenditure as a Share of GDP in Hungary, 2000–08

Source: World Bank staff calculations.
In some countries, the initial commitments for financing the transitional deficits were not followed or were not concrete enough to earmark the fiscal cost of creating the funded pillar. The sources of funding for the transitional deficits were less clear. In Poland and Slovakia, the governments expected to finance the transitional deficits with privatization revenues. As shown in figure 3.3, privatization revenues in Poland were in line with contributions to the second pillar between 1999 and 2004 but were much lower in 2005–09. Since privatization revenues were not earmarked for pension reform, in practice the transitional deficit was financed by debt, not taxes.

Figure 3.3 Privatization Revenues as a Share of GDP in Poland, 1999–2010

Source: World Bank staff calculations.
In Lithuania, social security (SODRA) was supposed to finance half of the pension deficit coming from the second pillar. Unfortunately, the projections did not consider the evolution of SODRA’s future deficits, and the financial crisis worsened SODRA’s revenues further. Faced by borrowing constraints, maintaining the second-pillar contribution rate would have implied severe cuts in first-pillar pensions that the government was not willing to support. While it is possible to argue that the second pillar in Lithuania has served as a source of financing for the social security deficit, the original problem was the lack of an explicit mechanism for financing the transitional deficit.

Since privatization revenues are not a reliable source of financing for the transitional deficit, they should be considered a complementary source of funding at the most. At least three elements play against the idea of having privatization revenues as the main source of financing for the transitional deficit: (a) they do not have the long horizon of the transitional deficit, (b) the amount of privatization is highly dependent on political conditions, and (c) governments tend to time the privatization to market conditions. These elements make revenues relatively unpredictable and make it difficult to earmark annual privatization revenues with additional expenditures. As they follow a more regular and predictable pattern over the years, tax increases and parametric changes are better sources of income for offsetting the loss in revenues derived from creation of a second pillar.

In the absence of a more permanent source of revenues for the transitional deficit, in 2011 the Polish government argued that the cost of diverting 7.3 percentage points of wages into the second pillar was fiscally unsustainable and decided to switch part of the contribution rate to the first pillar. A proper mechanism of financing would have helped to alleviate the pressure for downsizing the second pillar. As the demographics in Poland will worsen in the years to come, the replacement rates will move from approximately 50 percent to less than 30 percent in the next 20 years and to 20 percent in 60 years (see figure 3.4). These replacement rates assume a contribution rate of 19.3 percent of wages.
In countries with revenues from oil or other natural resources, there is obvious scope for using these “temporary” revenues to build up the resources for long-term liabilities such as pensions and health care that will hit government and citizens at a time when revenues from natural resources may already be declining. However, hypothecating or earmarking taxes can be controversial and potentially suboptimal. The trade-off is between retaining full budget flexibility and the great difficulties faced by ensuring that funding is set aside today to pay for otherwise unsustainable liabilities in the future. This debate mirrors the one on intergenerational equity: how can the government ensure that the current generation is not over-consuming and over-borrowing at the expense of future generations (or the other way round)?

### 3.2.2 Implicit and explicit government debt and the Stability and Growth Pact

An asymmetry between implicit and explicit debt is one of the major vulnerabilities of funded schemes. PAYG systems may hide pension liabilities in “implicit” debt. Countries with funded schemes need to find ways to finance the transitional deficit with real transfers into privately funded pensions (as opposed to legal but unfunded or notional claims on future state income). In many cases, this implies the issuance of debt, which can increase the vulnerability of these countries. The perception of implicit and explicit debt by different stakeholders may bias governments toward keeping explicit liabilities under control, while increasing implicit obligations that they will have to renegotiate at some point in the future. The perverse incentives related to the implicit debt are associated with three factors: (a) methodological problems, (b) conflicts of interest, and (c) valuation. This association makes determining the actual versus the expected level of intergenerational transfers difficult. But it is a crucial issue to examine (Barr and Diamond 2006).

In the absence of a common methodology for calculating implicit liabilities or transparency in explicit debt measures, governments may hide future commitments. Since it is based on defined contracts with defined parameters, the value of the explicit debt is relatively straightforward to measure. But there is no common methodology for calculating implicit liabilities, such as pension debt. In addition, models are highly sensitive to changes in discount rates and other demographic parameters. For this reason, implicit debt is always subject to some interpretation and the potential for creative accounting.

Governments face an important conflict of interest. They are both issuers and buyers of implicit debt obligations. Governments take the contributions of current workers in exchange for assurances that future pensions will be paid. The contributors, represented by the government, “buy” these commitments for a future stream of payment. In a sense, the government acts simultaneously as the bond issuer and the representative of the bondholders. In a bond market, these two functions operate separately: on the one hand, the government issues bonds, and, on the other hand, entities other than the government buy these instruments. Valuation problems can arise if the objectives in selling and purchasing these obligations are not separated.

The conflict is aggravated by the fact that governments may have incentives to transfer these obligations to future elected governments. By transferring these obligations to future generations, governments may find additional funding to benefit current generations (of voters). However, future elected governments may find that the implicit obligations contracted in the past might not be honored.

In the absence of a market value for the implicit debt, and in the presence of a conflict of interest faced by elected authorities, governments might be tempted to issue excessive implicit debt. In most of the countries with first pillars, pensions are typically earnings related. For simplicity, these pension
obligations can be compared to a bond: governments make a commitment to pay pension benefits with a certain indexation formula when individuals reach the statutory retirement age. While these future obligations have a probability of default, the government (representing future contributors) sells these pension obligations at par value (independently of the stock of implicit liabilities). In this framework, the system becomes vulnerable to government incentives to overcommit on their implicit obligations. Not all governments publish their estimates of implicit debt. But external studies of European countries find that implicit pension debt can be sizable. As shown in figure 3.5, most of the European countries have implicit pension debt above 200 percent of GDP.

Figure 3.5 Implicit and Explicit Debt Liabilities as a Share of GDP in European Countries, 2006 and 2011

![Implicit and Explicit Debt Liabilities Chart]

Source: Müller, Raffelhüschen, and Weddige 2009.

The asymmetries between implicit and explicit debt are notable. On the one hand, the explicit debt contracted by governments (in the form of government bonds) has multiple market watchers that evaluate the default probability of their bonds on a regular basis (including bondholders, rating agencies, investment banks, and traders). These agents impose a different price for taking the debt, depending on multiple factors, including size of the liabilities. On the other hand, in the implicit pension debt market usually nobody plays a market watcher function, and therefore governments can often take additional implicit debt at par value.15

While in some countries elected authorities concerned about future generations might be able to design a sustainable pension system, more transparency in the intertemporal budget constraint would help. The presence of an independent budget agency or the periodic publication of independent reports demonstrating how the government expects to fulfill the implicit commitments may help to increase

15 This argument is not about the actuarial fairness of the system, but about the default probability of these commitments.
awareness about sustainability of the implicit debt. The Orange Report in Sweden and the Intergenerational Report in Australia are good examples to consider.¹⁶

Assuming a purely debt-financed pension reform, countries with mandatory funded schemes have to report higher deficits for two or three decades after the reform. Consequently, they report higher explicit debt ratios. Assuming that the internal rate of return of the PAYG system is equivalent to that of government bonds and that the pension funds invest 100 percent of the portfolio in government securities, the main result of this “reform” is to make an implicit commitment explicit and transparent. The creation of a funded scheme, even in this generic form, is welfare improving for future pensioners because it increases the government’s cost of defaulting on pension obligations. It helps to ensure intergenerational fairness by preventing the current generation of workers from contributing to the pensions of current pensioners but then seeing their own pensions reduced by changes in state policy in the face of unsustainable budgetary pressures in the future. While these implications are theoretically plausible, debt-financed transitional deficits increase the risk of reversal and reductions of the reform, as demonstrated in Hungary and Poland, respectively.

Some governments tend to take action on implicit liabilities when their maturities turn short and conflict with the cost of funding the explicit debt. In Italy, the newly appointed technocratic government in 2011 was able to calm market pressure and reduce the elevated cost of government funding by taking drastic parametric measures. These included sharp increases in the retirement age. In other words, in order to avoid a default on the explicit debt, the government defaulted on the implicit one. If the implicit pension debt in the European countries is in the range of the one in figure 3.6, most of the countries will have to restructure their implicit debt at some point (assuming that no country wants to default on the explicit one). The sooner the implicit liabilities are restructured, the easier it will be for countries to put in place sustainable pension systems. The problem with putting off the decision is that the adjustments become larger, more likely to be chaotic, and more likely to be unfair to either the younger or the older generation.

Funded pension schemes, which provide a source of retirement income that is not related directly to the availability of future fiscal resources, find it difficult to compete politically when PAYG systems operate with low levels of transparency and have an unknown default probability.

While funded pension schemes bring more transparency on intertemporal obligations, the current accounting system favors greater opacity and may create perverse incentives in the treatment of explicit and implicit debt. The nationalization of the United Kingdom’s Royal Mail’s pension fund in 2012 illustrates a structure of incentives that is permissible under current Eurostat/EU accounting conventions.

As a way of facilitating privatization of the company, the U.K. government nationalized the Royal Mail pension. The U.K. Treasury estimated the value of the assets at approximately £28 billion and the value of the liabilities at approximately £37.5 billion (Office of Budget Responsibility 2012). The government saw an opportunity to use these pension assets to reduce the stock of government debt and to benefit from the lower cost of financing associated with lower debt. In the framework of this agreement, the pensions of current and future pensioners of Royal Mail will be paid from the government budget (with priority claim), subject to the availability of government resources in the future. Given the asymmetric treatment of implicit and explicit debt and to preserve the priority claim of current and future

¹⁶ Soto, Clements, and Eich (2011) suggest that government finances should be monitored using a “pensions-adjusted” budget balance, which takes into account the short-run and long-run impacts of the pension reforms.
pensioners of the nationalized company on the accumulated assets, a reasonable approach would have been to preserve and manage the pension assets and to pay the unfunded liabilities over time.\textsuperscript{17} There may be good reasons to move companies between the public and private sectors, but asymmetries in the accounting treatment of implicit and explicit debt should not play a part when choosing between funded and unfunded pension systems.\textsuperscript{18}

The key rules in the original Stability and Growth Pact were the 3 percent budget deficit rule and the 60 percent level of (explicit) debt to GDP with no allowance for issue of implicit versus explicit debt. Thus unless governments expect to finance the transitional deficits of pension reforms entirely through taxes, the SGP imposes a disadvantage compared to countries retaining implicit pension liabilities. These negative consequences were not perceived in the initial pension reforms in the region. Palacios and Rocha (1998), documenting the Hungarian pension reform, saw the SGP as a mechanism of fiscal discipline that was going to be a source of strength. The debate in the following years highlighted the implications for social security systems and the need for better longer-term measures of fiscal sustainability at the core of EU fiscal rules (see, for example, Razin and Sadka 2002; Pisani-Ferry 2002).

The trade-off for a country is the potential to gain general benefits from accessing the Euro Area (as Estonia did in 2011) and the specific problem the rules create for adequately tackling long-term funding issues like pensions. In Estonia the temporary downsizing of the second pillar allowed the government to fulfill the SGP parameters and access the Euro Area in 2011. Access to the Euro Area mitigated market concerns about currency risk and put the country onto a growth track. Crucially, and unusually, Estonia’s reduction in contributions to the second pillar occurred in the context of a future path to make up for the lost contributions. A policy that accepts short-term difficulties but ensures no long-run impact is clearly far-sighted and holds important lessons for other countries.

Most ECA countries face the dilemma between Euro Area membership and the impact on long-run pension policy. Accessing a common currency, among other benefits, would facilitate further capital transfers from Western Europe and mitigate the incentives for the financial sector to deleverage in the region. Unfortunately countries would have a better chance of fulfilling the SGP requirement by not creating multi-pillar pension systems.

A series of recent agreements and guidelines by the European Commission have affected but not solved this dilemma. Changes known as the “Six Pack” and the guidelines of the Economic and Financial Committee (EFC) of the European Union produced in September 2012 may have an effect on the future stability of funded pension schemes.\textsuperscript{19} The EFC report discusses multi-pillar pension reforms and highlights that the formula for setting the medium-term budgetary objective (MTO) for each member

\textsuperscript{17} Alternatively, the government may capitalize the scheme by issuing debt equal to the pension deficit. To see the risks of this approach more clearly, note that the total current assets of U.K. funded pension funds (of which the Royal Mail was one) are £1 trillion. Total liabilities are £1.3 trillion. So the aggregate deficit is £300 billion. If the U.K. government took the same approach to all funded plans as it did to the Royal Mail, it could reduce the national debt by £1 trillion (all assets in funded pension plans), cutting it from 80 percent to 20 percent of GDP. But this improvement in explicit debt would come at the cost of increasing implicit liabilities by £1.3 trillion.

\textsuperscript{18} In the current EU debate about using a Solvency II framework for funded occupational pensions, significant criticism has been voiced that the proposed rules would add up to £350 billion in funding requirements for corporate sponsors of funded pensions. The example of Royal Mail shows that the government could protect the sponsors from these increased funding requirements by taking the pension funds onto the public balance sheet and then levying its own actuarially determined charge on employers.

\textsuperscript{19} European Commission (2011). See also European Commission (2012b), which provides a link to the relevant opinion of the Economic and Financial Committee of the European Union.
state explicitly includes a fraction of the adjustment needed to cover the present value of the future increase in age-related government expenditure.

The EFC report further states that multi-pillar reforms that include the transfer of contribution revenue previously recorded as government revenue to pension funds classified outside the general government sector are reasons for temporary deviations from the MTO or can alter the speed of adjustment to the MTO. Page 7 of the EFC guidelines states, “In this special case, the allowed deviation from the adjustment path to the MTO or the objective [MTO] itself should reflect the amount of the direct incremental impact of the reform on the general government balance, provided that an appropriate safety margin with respect to the deficit reference value is preserved.” The safety margin is with respect to the 3 percent GDP deficit reference value. For Euro Area member states the safety margin is taken to be a deficit not exceeding 1 percent of GDP. However, the temporary deviations from the normal adjustment path to the MTO should be no more than four years.

The process for launching an excessive deficit procedure can also take into account both multi-pillar pension reforms and the implicit debts relating to the costs of aging. The procedures will only be abrogated in the case of a multi-pillar pension reform if the general government deficit has declined substantially and continually and has reached a level that comes close to the reference value (EFC guidelines, p. 12). In addition the EFC report includes a very useful requirement that Stability and Convergence Programme reports include the long-term costs of aging—including pensions—for years up to 2060. These changes have been followed by further developments in EU economic and political governance.

The key issue for funded pension systems is whether the changes to the fiscal rules outlined above will still have the effect of getting countries to abandon, reverse, or reduce funded second-pillar pensions in favor of increasing liabilities in unfunded or only partly funded first-pillar pensions. First, while the costs of aging are reflected in the MTO, it is not clear that the new guidelines make governments indifferent between implicit or explicit debt. Second, the four-year transition period for taking account of multi-pillar reforms in the EFC report contrasts with the three to four decades for the transitional deficit of a funded system. Third, the maximum 1 percent safety margin will effectively impose a cap on the level of contributions that will be transferred into the mandatory funded schemes. This will mean that second pillars will be smaller than needed. Fourth, the timing of the EFC guidelines came at the time when most of the Central and Eastern European countries had already taken bold policy decisions about their funded pension schemes.

While the direction of EFC guidelines is welcome, the measures are likely to be insufficient to ensure the stability of mandatory funded schemes in countries with multi-pillar pension systems. Given that governments are taking potentially damaging long-term decisions, this is clearly an area that needs to receive further consideration to determine how to ensure that governments do face the right incentives. This would clearly meet the aim of a more balanced multi-pillar pension system set out in the European Commission’s White Paper on aging (European Commission 2012c).

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20 The European Commission has set out potential long-run indicators of fiscal sustainability to illustrate the impact of aging, which formed part of the discussion for its 2012 White Paper (see European Commission 2009, 2012c). Country-specific and cross-cutting work by the IMF has reinforced the call for long-term measures of fiscal sustainability to take a bigger role in policy making compared to the short-term measures currently in the SGP (Epstein and Velculescu 2011; Velculescu 2010).

21 In November 2012 the European Commission published “A Blueprint for a Deep and Genuine Economic and Monetary Union.” This set out for debate a range of measures to provide “a vision for a strong and stable architecture in the financial, fiscal, economic, and political domains” (European Commission 2012a).
Comparing implicit debt across countries is challenging (Holzmann, Palacios, and Zviiene 2004). The Eurostat initiative to mandate the publication of figures on implicit pension debt by 2017 is welcome. The publication of these figures, using a common methodology, may start to bring greater attention to the importance of these commitments, which can subsequently inform a discussion on how governments expect to pay those liabilities.

The field of pensions has seen much detailed work to improve the measurement of key variables at the regional and national levels (European Commission 2008a; ECB 2008; Levy 2012). But the political conversation about the fairest way to tackle demographic challenges is perhaps the most important gap that needs to be filled.

### 3.2.3 Weak political consensus on the reforms

Despite long debates on pension reform, multi-pillar schemes were not approved with broad political consensus in most of the Central European countries. The political agreements proved to be fragile. This was true at the time of the reform in certain cases and in subsequent years, as the need to finance the transition and develop the pension industry continued.

In some cases, the debate on the overall pension system was sparked by the crisis and was narrowly focused on the social security deficit. The combination of crisis-driven and pension reform factors, together with incomplete understanding by policy makers of the long-term commitments associated with the reform, resulted in reductions and reversals of the pension reforms during the crisis.

However, in some ECA countries, the discussion of the relative role of the second pillar in the pension system has been a constant topic of discussion, even after the approval of pension reforms. Many of the disagreements at the time of approving the initial reforms became evident when the parties opposed to the reform entered government. The cases of Hungary and Slovakia illustrate these problems.

In the 2005 initial reform in Slovakia, contributors were allowed to decide whether to contribute to the PAYG system only or to split their contributions between the PAYG system and the funded scheme. Participation in the funded scheme was defined as the default option (opt-out system). When the opposition at the time of the reform was elected, the default option was switched to the PAYG system only (opt-in system). In 2009, to support the financing of the social security deficits, contributors to the funded scheme were also allowed to return to the state-funded scheme. Right after that change, the new government coalition elected in 2010 switched back to an opt-out system. More recently, the government elected in 2012 returned to an opt-in system. In between, pension fund management companies (PFMCs) lost any interest in developing a welfare-improving business for the contributors.

In Hungary, the change of the government coalition in the months following the pension reforms brought increases in benefits from the first pillar (which consumed the tax-financing component of the initial reform) and opened opportunities for second-pillar contributors to switch back to the PAYG system. This was a way of supporting the current social security deficit. Pension expenditures in Hungary increased by 2 percentage points of GDP between 2000 and 2008. The government coalition that nationalized the second pillar in 2010 is the same one that opposed the pension reform in 1997.

Transitional deficits created for the introduction of pension reform are not only sizable, but also expected to last for at least three decades. As shown in figure 3.6, depending on the contribution rate and coverage of the pension system, annual second-pillar contributions in the region typically range
between 0.6 and 1.5 percent of GDP. Without a broad political consensus about the importance of pension reform, during periods of fiscal weakness, governments might be tempted to downsize the funded schemes to reduce short-term fiscal deficits. Broad political consensus requires a clear political commitment to the need for fiscal space to finance the transitional deficit.

Figure 3.6 Average Second-Pillar Contributions as a Share of GDP in ECA Countries, 2002–10

![Average 2nd Pillar Contributions 2002-2010 (% of GDP)](chart)

Source: World Bank staff calculations.

3.3 Incomplete reforms

Enabling conditions play an important role in the success of pension reforms. They include fiscal sustainability, financial infrastructure (legal, institutional framework, and availability of financial instruments), and the presence of a sound regulatory and supervisory framework. While some of these conditions were present at the time of the reforms, others became weaker and lost momentum in their aftermath (for documentation on some of these problems, see Holzmann 2009; Golias 2005). The financial crisis exposed these problems more starkly, making them more difficult to address.

Large pension reforms are not supposed to be static; they should trigger periodic improvements in the system with the objective of ensuring sustainability and adequate benefits for future retirees. Well-respected systems such as those in Chile, Australia, and the Netherlands have all had to walk this path, allowing their systems to stabilize but also needing to enhance reforms to ensure that they remain effective in the face of changing realities.
3.3.1 Fiscal discipline in the post-reform period

Some of the countries that downsized their second pillar in the aftermath of the crisis had a poor track record of fiscal behavior.\(^{22}\) As shown in figures 3.7 and 3.8, for most of the past decade fiscal deficits in Poland and Hungary were above the 3 percent limit of the Stability and Growth Pact. The lack of fiscal discipline was an important impediment for sustainability of the funded systems on various fronts. In Hungary, fiscal deficits would have been above 3 percent even if the second-pillar contributions had been considered part of the social security revenues.

Figure 3.7 Fiscal Balance of Hungary, 2001–10

![Fiscal Balance of Hungary](image)

Sources: PSZAF (Hungary’s financial market regulator); IMF.

\(^{22}\) At the time of the reform, various ECA countries underestimated the costs of the transitional deficits. This was because more people than expected switched from the state system to the new private sector mandatory pension pillar. See, for example, Disney, Palacios, and Whitehouse (1999).
Figure 3.8 Fiscal Balance of Poland, 2001–10

![Fiscal Balance of Poland chart](image)

**Source:** Polish Financial Supervision Commission; IMF.

Large fiscal deficits during the pre-crisis period resulted in unsustainable stocks of government debt that triggered concern when the crisis hit the region. At the time of the reversal, Polish and Hungarian government debt was close to 55 and 80 percent of GDP, respectively. By netting the debt held by pension funds, nationalization of the second pillar in Hungary implied a reduction in the debt stock of approximately US$8 billion.23

In addition, private pension savings were offset by excessive fiscal deficits in most of the ECA countries. The lack of additional savings did not create the conditions to foster higher long-term economic growth. As shown in figure 3.9, national savings did not show any clear pattern in the period that followed pension reforms in this subset of countries. While savings rose in the period after the crisis, it would be hard to argue that higher savings were motivated by the pension reform.

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23 It is difficult to separate the impact of the pension fund nationalization from the other elements that affected the cost of funding of the Hungarian government. While the nationalization reduced the stock of government debt, it did not reduce the cost of funding for the government. In the period right after nationalization, the spread on government debt increased by 125 basis points, but further reductions followed, which might be a consequence of multiple regional and idiosyncratic factors. Further research is needed to clarify this point.
Future retirees will bear the cost of the recent reversals. OECD (2012a) estimates that contributors will bear the main costs through lower than expected pensions in retirement. Public finances will see a short-term improvement in cash flows through higher contributions, with the payouts in pensions happening over the longer term. OECD (2012a, ch. 3) concludes, “Overall, however, it is projected that the extra revenues [from redirecting contributions from the second to the first pillar] would exceed the extra expenditure, except in the case of Slovakia. This reflects a problem with the detailed design in the initial reforms, which tended to over-compensate people for choosing the private pension option.” However, these conclusions depend on key assumptions.²⁴

### 3.3.2 The capital market agenda and the abundance of bank financing

The impact of pension reform on capital markets has been mixed. Most of the reforming countries (excluding the Baltic countries) made progress in developing their interest rate yield curve. However, pension portfolios remained heavily invested in government securities. Although domestic interest rates were higher in the ECA region than in Western Europe in the period before the crisis, the argument of public sector crowding out did not seem plausible, as domestic companies received abundant bank financing for their projects. The relative abundance of bank financing in the pre-crisis period left little room (or need) for alternative sources of capital market financing. The operations of Western banks in the ECA countries were

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²⁴ Égert (2012) suggests that under other (plausible but less likely) scenarios the impact on public debt may also be negative in the very long run if the government ends up spending more in taxation exemptions for voluntary (third-pillar) pensions and has to pay more in minimum pensions.
leveraged with funding from their headquarters. While EU directives have played an important role in standardizing the capital market regulations, challenges remain in the areas of supervision, transparency, and protection of minority shareholders. In some countries, the investment regulation of pension funds was affected by shocking cases of fraud as a consequence of pyramid schemes implemented in the 1990s.

In an environment of high financial liquidity and foreign funding channeled through the banking sector for domestic operations, the role of nonbank financial institutions, including pension funds, in the provision of domestic financing may not have been considered important. But as the banking sector deleverages its operations, the role of pension funds might become more prominent in the financing of economic growth (see figure 3.10). As the reliance on local financing increases, pension funds will play a significant role in the wholesale funding of banks.

Figure 3.10 Credit and Deposit Growth Rates in the ECA Region, 2006–12

![Graph showing CEE Credit and Deposit Growth Rates]

Source: Unicredit.

Poland is probably the only ECA country that has been able to develop the capital market significantly. The pension funds invest approximately one-third of their portfolio in domestic equities. The development of the domestic capital market has been fostered by the relatively large size of the Polish market, sound economic policies, and the home bias of pension regulations. Lithuania and Estonia did not make the same attempt to use pension reforms to develop the domestic capital markets. Until the crisis hit the region, pension funds remained heavily invested abroad, in both fixed-income and equity instruments. Their approach shows that international diversification is not insurance against short-term risk or volatility, but a way in which, over the long term, citizens of the country can have access to wider sources of return that do not rely only on the domestic economy. But this strategy needs to work over the long term; it is not the same as a collection of (cautious) short-term strategies.

Pension funds in Poland are allowed to invest up to 5 percent of the portfolio abroad. Most of the second-pillar Polish pension funds do not have investments abroad. The European Commission has requested that Poland lift this regulation and accept the EU borders as the national borders.
Governments may try to use pension funds to foster the development of domestic capital markets. Some initial overinvestment in government securities in the first years after the reform might be expected. Government securities are essential for developing other private debt markets and other securities as well. By the end of the first decade of the funded schemes, it is expected that pension funds will have diversified into other asset classes. Pension funds in transition countries did benefit from investing in government securities, as they were able to take advantage of lower interest rates, which increased the profits for pension funds. But this effect cannot be repeated decade after decade. The implications are discussed below when looking at asset allocation.

Government debt management offices need to act in coordination with the pension fund management industry. From the strategic allocation perspective, pension funds should be interested in investing in long-term inflation-linked government bonds. These instruments are able to replicate the risk-free asset for a long-term investor. The instruments protect contributors against reinvestment risk (the real interest is not constant) and inflation risk, which can be sizable for long periods of time. Unfortunately, the lack of coordination between the supply of and demand for government securities has moved the equilibrium of government instruments into much shorter-term securities denominated in nominal currency.

As argued below, the migration to a regulatory framework based on benchmark portfolios would allow pension funds to target the duration of their asset portfolio more clearly and the debt management office to create instruments aligned with the long-term interests of the contributors.

3.4 Institutional and market design issues affecting costs and investment

The mandatory funded systems in the ECA region were designed with an “industrial organization” in which suppliers compete for the business of individuals, who drive competition by switching between firms. Increasingly it has become apparent that this form of industrial organization is flawed. It has created unnecessarily costly platforms and unfocused asset allocations (see Impavido, Lasagabaster, and Garcia-Huixtron 2010), weakening the credibility of funded schemes. The design of the pension fund industry in ECA countries followed the model that Chile implemented in 1981. But as highlighted above, the Chilean authorities have not stood still; for example, they are increasingly using bulk auctions as one approach to addressing costs in their system.

3.4.1 High administrative fees

While fees as a percentage of total assets have been declining over time in the region, these figures do not compare favorably to fees charged by more efficient pension funds in a range of markets. Examples operating below 50 basis points include the Swedish Premium Pensions Authority (PPM), Danish Labor Market Supplementary Pension (ATP), Employees Provident Fund (EPF) in Malaysia, Thrift Savings Plan (TSP) in the United States, National Employment Savings Trust (NEST) in the United Kingdom, and major employer-sponsored plans in the Netherlands, United Kingdom, and United States. These institutions share a combination of scale, expertise, and a governance structure focused on the member. But they have different organizational structures: some use a provident fund model, some use not-for-profit trusts, some use large employer-based trusts, and some use single, arm’s-length, quasi-government institutions. Many are able to choose the mix of in-house and private provision they use to deliver services to the member. They provide a strong “demand” side to the market, which allows effective
competition with the supply side. But the models in the ECA and Latin American reforms adopted a “many buyers to many sellers” model relying heavily on individual choice to drive competition. In these models it is difficult for the demand side to exercise a strong competitive effect, as it is based on individuals making poorly understood choices in complex, long-term financial markets.

As shown in figure 3.11, PFMCs that manage mandatory pension funds have been charging fees in the range of 100 to 200 basis points, following very high initial set-up costs seen in many “young” systems. Figure 3.12 shows this more clearly for the ECA region alone.

Figure 3.11 Fees as a Share of Assets from Inception of the New System, by Region

<table>
<thead>
<tr>
<th>Year</th>
<th>ECA 2000+</th>
<th>ECA 2000-</th>
<th>LAC 2000+</th>
<th>LAC 2000-</th>
</tr>
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<tbody>
<tr>
<td>1</td>
<td>12.0%</td>
<td>11.0%</td>
<td>10.0%</td>
<td>9.0%</td>
</tr>
<tr>
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<td>10.0%</td>
<td>9.0%</td>
<td>8.0%</td>
<td>7.0%</td>
</tr>
<tr>
<td>3</td>
<td>8.0%</td>
<td>7.0%</td>
<td>6.0%</td>
<td>5.0%</td>
</tr>
<tr>
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<td>6.0%</td>
<td>5.0%</td>
<td>4.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>5</td>
<td>4.0%</td>
<td>3.0%</td>
<td>2.0%</td>
<td>1.0%</td>
</tr>
<tr>
<td>6</td>
<td>2.0%</td>
<td>1.0%</td>
<td>0.0%</td>
<td>0.0%</td>
</tr>
</tbody>
</table>

Sources: Pension fund supervision agencies of respective countries; World Bank staff calculations.

Figure 3.12 Fees as a Share of Total Assets in Mandatory Funded Systems in ECA Countries, 2006 and 2011

Note: Data on Russia refer to the structure of management fees of Vneshekonomban, the largest second-pillar asset manager in Russia (more than 70 percent of total assets in 2011). Russian nongovernment pension funds charged much higher fees, close to 1 percent of total assets in 2011.
In the presence of inelastic demand for pension fund management services from the contributors, the industrial organization of pension fund management favors the creation of oligopoly structures and expensive marketing and distribution systems that result in high fees.

PFMCs are basically a hybrid of the distribution and account management functions and portfolio management functions. The account management business includes recordkeeping, where scale economies are present. The portfolio management business is basically asset allocation, where scale economies are significant but tend to shrink when funds are above a certain level. By combining the two business areas, larger pension funds are able to operate at lower costs than smaller ones.

In addition, the regulatory framework creates the conditions for PFMCs to build entry barriers and to generate excessive profits for their shareholders. As market shares become defined in the initial stages of creation of the system, PFMCs overspend to recruit contributors. The size of the sales force and the physical infrastructure impose an entry barrier for new companies interested in participating in the business. Switching by members is correlated with the size of the sales force, not any underlying benefit from switching (Berstein and Cabrita 2007). These entry barriers allow PFMCs to charge higher fees than could be derived in a competitive equilibrium. This oligopoly structure is facilitated by the direct connection between asset managers and the final clients.

Most of the reforms in ECA countries had costly launches with very high spending on marketing and a large sales force. The excessive emphasis of these reforms on the individual selection of PFMCs came at a high cost, which contributors are paying in the subsequent periods. This emphasis on individual selection could have been justified, if the average contributor had understood the selection that he or she was making. This was a strong assumption to make in countries with low levels of financial literacy. Even in countries more accustomed to private financial products, financial literacy is low.

In some countries, the pension fund management industry has reacted to severe cuts in fees by reducing costs in the core area of business. The imposition of tight caps on fees in Slovakia and Romania, after lavish expenditures on launching the reforms, has had a negative effect on the asset allocation of pension funds. Pension portfolios have focused mostly on assets that do not require major expenses, including Treasury bills and bank deposits. The objective of low fees is the right one. Well-designed fee caps can be an answer but are most effective as part of a comprehensive set of reforms that include changes in the market structure.

Poland has banned the use of a sales force for acquiring contributors —and has achieved relatively low fees for the region partly as a result. In the context of reductions in contribution rates and uncertainty about the future stability of the funded system, it is unlikely that new PFMCs would be interested in entering the Polish market. However, this scheme gives breathing space to incumbent companies, as they do not need to spend sizable resources on a sales force and yet may keep their market share. The net effect of lower revenue (for PFMCs as a consequence of lower fees) and lower expenditures (as a consequence of reductions in sales force) might even be positive for some companies. A similar situation occurred in Mexico during the last decade. After a long period of high fees, there have been significant reductions in recent years as part of a concerted regulatory campaign, including changes that only allow fees on assets under management to improve comparability.

The industrial organization of the pension fund management industry is an important impediment for further reductions in the fee structure. Therefore, governments need to consider more efficient market structures that can bring fees to lower equilibrium levels seen in other countries, while also mitigating
the distortionary effects on asset allocation. Moreover, there needs to be very clear information on fees so that they are a good measure of the full costs of the system. International fee comparison exercises must constantly grapple with how to ensure that published fees represent total fees and can be compared across countries (Hernandez and Stewart 2008).

3.4.2 Inefficient asset allocation

A central argument for the benefits of funded pensions in the multi-pillar framework is that they allow sources of retirement income and consumption to be diversified. There is no single “right” answer regarding what the investment portfolios of a private system should look like. But they should be developed as part of a rigorous process of investment governance and strategy focused on the best long-term interests of the members. This means ensuring that members can benefit from the potential for a better risk-return trade-off over the long term when diversifying across asset classes and across countries and regions. In this way, as highlighted in chapter 2, the different sources of retirement income ultimately do not depend on funding from the government or the rate of growth of a single (often small) economy.

In some countries, the regulatory framework did not leave much room to invest in instruments other than government securities. For example, in Slovakia and Romania, the investment regulations created incentives to invest in short-term fixed-income securities. In Russia, the investment regulation for the default (opt-out) portfolio allowed almost only investments in government securities. Policy makers in some of these countries designed investment regulations with little room for risk taking and portfolio diversification. Given the very long time frame for pension accumulation and de-accumulation, diversification provides a way to reduce the risks to members. Diversification across asset classes and globally can help to avoid a situation in which all sources of retirement income and consumption—from the state, labor, housing, and capital markets—are exposed to a single country risk. While a strategy for capital protection alone might be reasonable under certain circumstances, in general it is suboptimal from the perspective of the objectives of a mandatory funded scheme, especially for young individuals.

Pension fund portfolios in the ECA region are poorly diversified. As shown in figure 3.13, for a representative group of countries in the region, government bonds and bank deposits represent approximately two-thirds of the total assets of the pension funds. The high participation of government bonds in pension portfolios defeats the purpose of risk diversification of retirement income. To the extent that future pensions depend on the default probability of the government—the same as in the first pillar—the diversification justification of funded schemes is less compelling because the practical implementation goes against the intended design.

The political discussion about the possibility of investing pension funds abroad needs to be balanced with the capacity of the typically small domestic capital markets to absorb growing demand for assets. Investing pension fund resources outside the country is often politically contentious, but in countries with shallow capital markets pension funds tend to outgrow the size of the domestic market, and restricting investments abroad may contribute to artificially inflated domestic asset prices. The asset allocation of private pension funds must be guided by the objective of the best long-term interests of the members of these funds. In others words, the regulatory and supervisory framework should ensure

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26 Some Latin American countries have found it necessary to allow investment of pension funds abroad as a mechanism to reduce the pressure on currency appreciation.
that those responsible for making investment decisions have the scale, expertise, and member focus to ensure a robust long-term investment strategy.

Figure 3.13 Portfolio Diversification of Pension Funds as a Share of Total Assets in ECA Countries, 2012

![II Pillar Pension Fund Asset Allocation, ECA 2012](chart.png)

Source: World Bank staff calculations.

In the absence of a developed capital market in the initial stages of reform, it is expected that pension funds will hold a high percentage of domestic securities. As the system matures, pension funds need to diversify into other financial instruments, including equity and international securities. Countries like Poland and Hungary that reformed their pension system in the 1990s were able to obtain initial high rates of return and to take advantage of the appreciation of the value of the debt (see figure 3.14). While this allowed them to earn high initial returns, the movement toward more diversified portfolios, including equities and international securities, took longer than expected.
The lack of portfolio diversification raises questions about the legitimacy of funded pension systems, creating tensions on various fronts (see box 3.1). First, policy makers found it increasingly difficult to justify paying relatively high fees to a business that invests in government securities. As the cost of funding for the government increased—for example, as a consequence of the crisis—the opportunity to nationalize pension fund assets and therefore reduce the explicit national debt became attractive. Second, if contributors do not gain diversification benefits, they may be indifferent to attempts to nationalize the industry. Support for the funded schemes in Chile became stronger when the population saw that pension fund investments, such as public-private partnership projects in infrastructure (highways and airports) and utilities, had a positive impact on their lives.

In Slovakia, the investment regulatory framework is such that pension funds are incentivized to invest in short-term government bonds and term deposits. Despite the existence of a multiple-portfolio system, Slovak pension funds are poorly diversified, with practically no equity and with the fixed-income portfolio invested in short-term securities. Poorly designed low caps on fees and penalties for short-term negative returns have reduced the attractiveness of pursuing more elaborate investment strategies, although asset diversification through passive index funds can be achieved at very low cost. This suggests that the incentives and governance of managers rather than simply fee levels are having an impact, with a tendency for “herding” in investment behavior. In Russia, Vnesheconombank manages the default portfolio of the second pillar and has assets that are approximately 73 percent of the total assets of the second pillar. They are governed by a conservative regulation that does not allow equities, corporate bonds, or international securities in the portfolios. It is interesting to notice that as a
justification for downsizing the second pillar, the government argued that the returns of the second pillar were too low.\footnote{In November 2012, the Duma approved a law that would reduce the second-pillar contribution rate from 6 to 2 percent for workers who do not explicitly select a pension fund (outside the default fund).}

**Box 3.1 Government Bond Market and Policy Reversals: The Case of Government Securities in Hungarian Pension Portfolios**

Multi-funds were introduced in Hungary right before the financial crisis. While the government was desperately trying to issue debt, pension funds were no longer buying government securities, as they were diversifying into other assets (see figure B3.1.1). The unwillingness of the pension funds to support further issuance of government debt was an additional factor triggering the reversal of the second pillar.

**Figure B3.1.1 Government Securities as a Share of Total Assets in Hungarian Pension Portfolios, 2002–10**

As bond yields in emerging economies continue converging to international levels, portfolio strategies need to migrate to more diversified portfolios. The investment regulatory framework should avoid forcing investments into conservative domestic strategies and instead should incentivize the creation of benchmarks that are aligned with the long-term interests of the contributors.

While restrictions on investing in risky assets avoid volatility in returns, low returns are a powerful argument for future nationalization of the funded pillars. Romanian pension funds have outperformed other pension funds in the region. Despite the high returns, there has still been political discussion about the possibility of decreasing the cost of funding for government debt by downsizing the second pillar and therefore avoiding the reliance on explicit debt.
3.4.3 Investment strategy and benchmarks

Creating an investment strategy focused on delivering the best long-term outcomes for the members is one of the central aims of a pension system. As highlighted above, different types of institutional arrangements can deliver the scale, expertise, and member focus needed to develop the right investment approach. If a country does not have such institutions, an alternative to create member-focused investment strategies is to use a committee of experts to develop investment benchmarks around which private pension fund management companies could compete.\textsuperscript{28} In either case, the benchmark investment strategy will need to consider issues such as the following (Hinz and others 2010):

- Other sources of retirement income, including income from public retirement schemes
- The age of individuals
- The rate of contributions
- The target replacement rate and its downside tolerance
- Correlations between labor income and equity returns (and potentially other financial assets)
- The expected density of contributions for different categories of workers
- The type of retirement income in the payout phase, in particular, the risk tolerance of pensioners in the payout phase (for example, real fixed annuities, variable annuities, and phased withdrawals).

Sound and transparent investment processes must be put in place to ensure open and prudent management of plan funds. The ability to understand the process of generating returns and what is and is not worth paying external managers to do is important (Ilmanen 2011). Since this is not a simple task, the benchmark for measuring performance needs to be determined exogenously with the objective of optimizing the expected replacement rate of the contributors. Understanding the members and their aims and behavioral responses is an important step in building an investment strategy. Since the strategic asset allocation is based on a long-term objective, excessive emphasis on short-term returns can be detrimental to the future pensions of individuals (see box 3.2). The strategic asset allocation should be defined as a benchmark portfolio based on market indexes that can be tracked by the market.

The strategic asset allocation is driven largely by the presence of a risk-free rate (long-term inflation-indexed bond) and equities that are able to provide a premium in the long term. Since the work of Fama and French (1988), Mehra and Prescott (1985), and Shiller (1989), there is relative consensus about the presence of an equity premium. While the last two decades offer rich debate on the amount of equity premium, there is consensus that investments in equities typically bring a high level of volatility (see, for example, Dimson, Marsh, and Staunton 2011). This volatility can be difficult to deal with from a political

\textsuperscript{28} Benchmarks were suggested early in the debate on “herding” of investment behavior in Poland (see Stanko 2003).
and regulatory perspective (Antolin and Stewart 2009). Those deciding the investment strategy need to be able to explain the long-term nature of the strategy and its rationale.  

As highlighted in chapter 2, the use of guarantees may also be considered if this is seen as necessary to ensure public and political commitment to the privately funded pension system—particularly if it is thought that guarantees will ensure higher contributions into the system. As suggested by Viceira and Rudolph (2012), in order to avoid distortions in asset allocation, guarantees could be structured in a way that protects the (nominal/real) value of the contributions only at retirement age and should be priced fairly. Asset managers are expected to pay a premium for these services. The governance of the provider of the guarantee should ensure solvency and independence (both from the government and from the asset manager).

Box 3.2 Is the Short-Term Rate of Return the Right Metric?

Most of the funded pension schemes implemented in the region have assumed that competition among pension fund management companies would bring pension portfolios to their optimal levels. As discussed by Bazak and Makarov (2008) and Castañeda and Rudolph (2010), the outcome of competition among asset managers is unlikely to bring pension portfolios into long-term equilibrium. In the absence of restrictions, multiple equilibria might be reached. In the presence of relative measures of performance, such as the minimum return guarantees applied in most countries in the region, short-term, focused portfolio allocations might be created.

In the presence of inelastic and uninformed demand (contributors), portfolio allocation is determined largely by asset managers. Nothing in the design of the system guarantees that portfolio allocation of pension funds would converge to optimal levels. If individuals do not have the capacity to assess continually the portfolio that maximizes their future pension, and if compensation to pension fund management companies is not related to a long-term objective (for example, achieving a certain replacement rate), the achievement of an optimal portfolio will only happen by chance.

The performance of pension funds is at the core of the sustainability of the second pillar. The regulatory framework needs to do more to ensure that pension fund management companies are acting in the long-term interests of their clients. If they are not aligned with a long-term objective, short-term rates of return are not a good measure of performance for pension funds. In fact they create incentives for excessive short-termism in asset allocation. The emphasis should be placed on ensuring a proper asset allocation in the default portfolio, in a way that might be consistent with the long-term objectives of the contributors. Pension fund portfolios should measure their relative performance against these benchmarks (that is, tracking error).

*Source*: For more elaboration, see Rudolph and others 2010.

Investment strategies should also ensure that those least able to recover from volatility, such as those facing retirement, are protected. The recommended approach is to have an age-related investment strategy that starts investing more in riskier but potentially higher-reward assets like equities and progressively moves into safer investments as the person reaches retirement. This change should occur automatically, either by transitioning between different funds (moving from riskier to more conservative

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29 See, for example, the annual reports of ATP (Denmark) and PPM (Sweden), which include detailed descriptions and explanations of their strategy.
strategies) or by rebalancing the asset allocation of a fund.\textsuperscript{30} Life-cycle strategies should ensure that, in the case of full annuitization (for example, to an inflation-indexed annuity), the assets of the portfolio of the pension fund are similar to the underlying portfolio of an annuity in such a way that individuals are immunized against changes in market prices at retirement age.

In addition to the question of how to allocate assets between different securities is the question of how much to invest abroad. The precise answer for a country should be determined after modeling the correlation of returns to different assets, currencies, and countries. The expectation is that a relatively high share should go into regional and international assets if the local market is small and unable to sustain a large increase in investment funds or is already providing negative yields on some assets. The extent of currency hedging that is most efficient will depend on the size of the international investments in the total portfolio as well as the correlations between currencies and equity prices (see Rajkumar and Dorfman 2010). Campbell, Serfaty-de Medeiros, and Viceira (2010) find that currencies traditionally considered as reserve currencies by international investors, such as the U.S. dollar, the euro, and the Swiss franc, tend to be negatively correlated with global stock markets. These currencies tend to appreciate when global stock markets fall and tend to depreciate when global stock markets rise. An immediate implication of this finding is that investors seeking to minimize the currency risk of their portfolios should not hedge their exposure to those currencies in global equity portfolios.

Once the objective and allocation of assets have been determined, asset management style is critical—essentially whether to have active or passive management and whether to have in-house or third-party investment management. While there are different views about this issue, there is consensus that passive strategies have much lower operational costs than active ones. Effectiveness with regard to long-term returns is an empirical matter. The area is controversial, but international benchmarking by CEM Benchmarking and some world leading funds such as those in Sweden (PPM) and Denmark (ATP) suggests an approach that uses passive index funds in liquid markets where outperformance is unlikely or almost impossible to predict and uses active management (including in-house) in markets that are less liquid and less studied and where investigation may yield gains. Hence the scope for active asset management might be more relevant in markets with greater information imperfections and less liquidity. Individuals who opt for pension funds offering active asset management should be willing to pay higher fees.

Crucially both the pension fund management companies and the supervisor should be able to track the performance of the pension fund against the benchmarks. This requires good data that can break down differences between asset selection and asset investment style as well as all of the fixed and variable fees levied along the value chain from member contribution to member payout.

\textbf{3.5 Diversification, correlations, and the accumulation and payout phase}

The importance of a diversified multi-pillar system was at the heart of some of the original reforms in Eastern Europe. This contrasted with the initial design of the 1981 Chilean and 1997 Mexican reforms, where the new funded pillars were intended to replace the state’s first pillar for many or all workers in the future. Indeed an analysis of the reforms in Poland made the diversification argument precisely because of the great uncertainties in all forms of returns and the lack of complete correlation between

\textsuperscript{30} The outcome should be exactly the same if the rules on transitioning from one asset to another are the same. However, there are large differences in how long a transition between funds or asset classes takes, occurring in a month in some countries to the (preferable) gradual phasing in over a period of years.
market returns and returns from the first pillar (Chlon, Góra, and Rutkowski 1999). The Swedish Pension Agency (2011) also makes this argument. This section looks at the challenges created by deciding who should be in the transitional generation, offers some (limited) new evidence on correlations, and briefly highlights the importance of continued (and automatic) increases in the retirement age in line with longevity as part of a general need to create a clear payout phase for pensions.

3.5.1 Relative rates of return and correlations

The performance of pension funds can be measured in terms of their capacity to achieve a certain replacement rate. Fifteen years of accumulation or less, even with high returns, may be insufficient to ensure sizable pensions when compared to generous social security systems. The first generation of retirees who shift part of their contribution to the second pillar and retire in less than two decades may end with lower pensions than those who did not shift if there is a major investment shock in the middle of the period in question. Funded schemes require longer maturities in order to show the value added, especially compared to generous PAYG systems.

Allowing contributors over 40 to switch part of their contributions to the funded scheme has generated unnecessary controversy over the performance of pension funds. A cutoff date for second-pillar contributors around age 40 with an expected working life of 20 to 25 years would help to avoid the risk that the first generation of second-pillar retirees will have pensions below expectations. While age-based restrictions encountered legal controversy in Hungary at the time of the reforms, many other countries passed their pension laws with the restrictions. Basing the default choice on age and associated communications with regard to the risks may work without the need for legal provisions.

In addition, at the time of the reforms, most of the simulations assumed that rates of return would be between 1.5 to 2 percent above wage growth. These scenarios would have encouraged elder workers to split part of their contributions between the first and second pillars. As shown in figure 3.15, with the exception of Poland, real returns have been below wage growth. Strong wage growth has been partly due to the catching up of ECA countries with Western Europe. At some point wages will have to converge to lower levels of growth. However, rates of return are likely to remain low in the years ahead as a consequence of the crisis.
Figure 3.15 Wage Growth and Real Returns in Select ECA Countries, Inception (or 2002) to 2007

Source: World Bank staff calculations.

Note: Averages for Poland and Hungary are from 2000 to 2007.

The argument for diversification of the sources of retirement income at the heart of the multi-pillar pension system remains even when real returns are below real wages on average. While real returns below wage growth are an argument for not allowing contributors aged 40 and above to start contributing to the funded scheme, they have no implications for the need to have some funded schemes in general. As already highlighted, a key element is the lack of complete correlation between the different elements of the pension system, with a range of evidence presented as part of the original wave of reforms (Disney 1999). For example, Palacios (1998) found little evidence of covariance between the returns on assets that would determine payouts in the private pillars and the productivity growth that would be a key driver of returns in the state system. As the correlation between real wage growth and real returns is low and often negative, contributors benefit from diversifying their sources of retirement income. As shown in table 3.1, correlations between real returns and real wages have been negative in many countries in the region.
Table 3.1 Annual Correlation of Real Wages and Real Returns in ECA Countries, Various Years, 2000–12

<table>
<thead>
<tr>
<th>Country</th>
<th>Period</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estonia</td>
<td>2002-2012</td>
<td>-0.25</td>
</tr>
<tr>
<td>Latvia</td>
<td>2004-2012</td>
<td>-0.69</td>
</tr>
<tr>
<td>Poland</td>
<td>2000-2012</td>
<td>-0.46</td>
</tr>
<tr>
<td>Slovak R.</td>
<td>2005-2012</td>
<td>0.10</td>
</tr>
<tr>
<td>Romania</td>
<td>2008-2012</td>
<td>-0.46</td>
</tr>
<tr>
<td>Bulgaria</td>
<td>2002-2012</td>
<td>-0.81</td>
</tr>
<tr>
<td>Croatia</td>
<td>2002-2012</td>
<td>-0.04</td>
</tr>
<tr>
<td>Russia</td>
<td>2004-2011</td>
<td>-0.45</td>
</tr>
<tr>
<td>Kazakhstan</td>
<td>2006-2012</td>
<td>-0.04</td>
</tr>
</tbody>
</table>

Source: World Bank staff calculations.

Unsustainable increases in first-pillar pensions have also made second-pillar returns less attractive. As described above, the increases in public pension spending during the boom years in the region created the impression that first pillars were superior to other retirement alternatives under all scenarios. Unfortunately, these increases were not sustainable in periods of recession or crisis. In Latvia, the automatic parameters of the notional defined contribution system offered two-digit notional rates on their accounts in the years before the crisis, which needed to be compensated with bold negative notional rates in the period after the crisis.

In the context of the crisis, the discussion about adjusting the relative size of the first and second pillars is a fair one. It is important to find the correct balance between pre-funding and no funding. Governments should avoid making overly generous promises in their unfunded schemes, which may end up in the future with additional cuts in pensions that could have been prevented by pre-funding these pensions.

3.5.2 Retirement ages and the payout phase

In chapter 2 we saw that some governments have increased their retirement age to reduce the costs of public pension promises. Ideally these changes would be phased in gradually, and fairly, so that there is some intergenerational equity in who is bearing the burden of adjustment to longer working lives. Even though some changes can be unpopular, especially if they involve contributing more or receiving less than expected, there is some hope that individuals will accept the need for and the benefits of working longer (TNS Opinion and Social 2012).

More generally, a fully specified “payout” phase needs to be legislated and implemented. This topic has already received considerable attention and is not repeated in detail here (Rocha, Vittas, and Rudolph 2011). But there is an urgent need to ensure that the accumulation of assets can lead to proper security in retirement. The same emphasis on efficiency and effective investment strategies is needed whether
by insurance companies backing annuity portfolios or by individuals experimenting with phased withdrawals. Table 3.2 sets out a range of possible products that are available.

In addition to the choice of products, there is an important choice regarding which institutions should make the payouts. This choice is not reviewed in detail here, but it includes options from traditional insurance companies, payouts by the pension accumulation plan, and use of state or arm’s-length institutions to set the annuity payments and potentially to vary the underlying annuity factor in response to changing market and mortality risks.

Table 3.2 Risk Characteristics of Retirement Products

<table>
<thead>
<tr>
<th>Retirement product</th>
<th>Protection offered</th>
<th>Benefits provided</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Longevity risk</td>
<td>Investment risk</td>
</tr>
<tr>
<td>Fixed real life annuities</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Fixed nominal life annuities</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Escalating real life annuities</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Escalating nominal life annuities</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Variable life annuities, guaranteed benefits</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Variable life annuities, bonus payments</td>
<td>Shared</td>
<td>Shared</td>
</tr>
<tr>
<td>Variable life annuities, unit linked</td>
<td>Shared</td>
<td>No</td>
</tr>
<tr>
<td>Lifetime phased withdrawals</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Term annuities outliving</td>
<td>No</td>
<td>Possible</td>
</tr>
<tr>
<td>Lump sum</td>
<td>No</td>
<td>Possible</td>
</tr>
<tr>
<td>Self-annuitization</td>
<td>No</td>
<td>Possible</td>
</tr>
</tbody>
</table>

3.6 Conclusion

This chapter has reviewed some of the causes of the reversals and reductions seen in pension funds in the ECA region as a result of the financial crisis. It has also reviewed elements that have led to dissatisfaction with the performance of funded systems. These include tension between short- and long-term objectives that affect financing and politics, incomplete reforms or lack of implementation, and issues related to institutional and market design, particularly those affecting costs and investment allocation. Even for countries that have not reversed or reduced their second pillars, these issues should be addressed. This is true not just for private pensions in the ECA region but also for private pensions globally. Chapter 4 now brings together the key elements of the first three chapters to provide conclusions and areas for future work.
Chapter 4. Lessons, Actions, and Further Work

4.1 Introduction

Reforms that create multi-pillar pension schemes provide the potential, but not the certainty, for sustainability. Continued attention is needed to the enabling conditions for pension reform, which include (a) commitment of the government, (b) fiscal sustainability, (c) financial infrastructure, and (d) a proper regulatory and supervisory framework. In the absence of these conditions, the potential impact of the reforms will be lower. The government needs to ensure the proper enabling conditions for the reforms to succeed. This is clearly not a simple task.

By creating a diversified source of retirement income, multi-pillar pension systems are still a blueprint for pension reform in most countries. But they are a blueprint with many different specifications. The precise mix will differ in each country. While the relative size of each pillar needs to be adjusted properly for each country, the sources of retirement income for contributors should be diversified. Unfortunately, the recent permanent reversals and reductions of second pillars in the region are likely to reduce the expected pensions for individuals and increase the concentration risk of relying on the state to meet all pension promises.

The future of mandatory funded systems continues to be a source of controversy in many countries in the region. Political debate is likely to continue unless a firm and sustainable commitment is reached with regard to the financing of transitional deficit, which is expected to last two or three decades.

4.2 Lessons and Recommended Actions

Countries with mandatory pension schemes need to focus on the following critical areas.

4.2.1 Tax not debt financing of the transitional pension deficit

Financing the transitional pension deficit through taxes makes the reform sustainable. The crisis suggests that tax financing is the only credible alternative for financing the bulk of the transitional deficit. Approaches include tax increases, expenditure reductions, or simply parametric reforms that may create the fiscal space for financing the transitional deficit. Tax increases should avoid affecting the cost of labor and be as neutral as possible with regard to the decisions of individuals about their consumption and savings as well as their participation in the labor force. The financing should remain firmly linked to the spending item (or even hypothecated) over the business cycle. If it is not, then any tax increase at the time of the reforms will become part of the general budget revenue and be forgotten, making the gross cost of pension reforms appear excessively high.

4.2.2 The Stability and Growth Pact and funded pensions

The Stability and Growth Pact should unambiguously reward, not penalize, governments for creating diversified multi-pillar pension systems. The current crisis has clearly shown the importance of prudent debt management given the potential for severe economic impacts from financial crises. Therefore,
fiscal rules that set ceilings on current budget deficits and the ratio of explicit debt to GDP are important. But a solution must be found to ensure that SGP rules do not penalize countries seeking to improve the long-term funding and resilience of their pension system relative to countries hiding significant future liabilities in implicit debt on the government’s balance sheet. Most of the recommendations in this report are inevitably directed to national authorities. But further reform of the SGP requires the involvement of the European authorities. They have introduced a wide range of reforms since 2010 that have improved the strength of the SGP. The ambition that multi-pillar pension reforms are not discouraged (and by extension that reversals and reductions are not precipitated) by the SGP is explicitly recognized. There are attempts to provide some flexibility for countries with funded second pillars and to increase the focus on the costs of aging on the government balance sheet for countries “hiding” the liabilities in implicit debt. But from the evidence in this report, the changes so far do not appear to be preventing significant stress on funded second-pillar pensions due to the treatment of both the stock of pension liabilities and the flow of contributions to fund these liabilities. This is acting against achieving the long-term vision of a more diversified multi-pillar pension system in Europe. Hence further attention to this issue is recommended.

4.2.3 Estimates of implicit debt

Improving the estimates of implicit debt would support changes in the fiscal rules and build on the EU’s planned publication of debt figures in 2017. A common methodology is needed for calculating implicit pension debt and reporting these data on a regular basis as well as for improving the understanding of intergenerational transfers. Ahead of further changes to the SGP, it is important to reach a consensus on the methodologies for calculating implicit pension liabilities. The diversity of methodologies makes the figures for implicit pension debt neither comparable nor necessarily reliable. Implicit pension liabilities need to be highlighted and reported together with the figures for the SGP. Governments should also assess the mechanisms that they will put in place to honor their long-term implicit commitments. The Eurostat/EU requirement for countries to present public estimates of their implicit pension debt by 2017 is very welcome in this respect.

4.2.4 Cost reductions

Significant reductions in costs are needed, such as reforms to alter the “industrial organization” of pension fund management companies and to ensure scale, expertise, and governance. Costs have fallen in some of the ECA countries, but they must fall further. They should not be the only focus of a regulator or supervisor, but lower costs have a real impact on improving adequacy for a given level of contributions. They also have a direct impact on the political and public acceptability of the private pension system. Global best practice in outcomes shows that workers in a range of countries and market settings can have access to the capital markets for invested defined contribution accounts at costs of between 10 and 50 basis points (0.1–0.5 percent) compared to costs of between 100 and 200 basis points in ECA countries. Countries around the world are using different methods to deal with the issue, so different solutions can be tailored to the circumstances of each country.

The industrial organization of mandatory funded pillars in ECA countries, which is similar to that in Latin American countries, contributes to the high costs. The regulatory framework should be improved in order to move toward more cost-efficient mechanisms for managing pension funds. This basically includes significant changes in the industrial organization of pension fund management companies.
Some best-practice examples include separating the account management and distribution function from the portfolio management function. Given the presence of scale economies, the account management functions could be centralized in a regulated provider, which has all of the contact with the clients and hence eliminates the costs of marketing and customer acquisition in a system of vertically integrated providers. The account manager would do the recordkeeping of the pension activities and would keep the database of clients. The pension fund management companies would manage the portfolio of assets; they would have no role in distribution or any contact with clients. This model would reduce both distribution costs and incentives for building entry barriers. The use of a centralized asset manager might be complicated in economies with weak governance, as these institutions become subject to political risk.\textsuperscript{31}

While there are different ways to achieve these outcomes,\textsuperscript{32} common elements combine governance focused on the interests of members, asset management scale, low distribution costs, low asset management costs, and a well-defined asset “style” (for example, active versus passive, high versus low turnover). The introduction of a default fund or a benchmark fund would help to align the portfolio with the long-term objectives of the contributors—particularly if the authorities use performance against the long-term benchmark to allocate workers who do not make a choice of pension fund when they enter the system.\textsuperscript{33} But even with all these elements, price intervention may well be needed—for example, as seen in Sweden (see below).

\subsection*{4.2.5 Price regulation}

Some price regulation might be needed to keep costs low.\textsuperscript{34} The combination of a regulated, centralized account manager with a fully transparent cost structure and asset managers with well-defined functions would clarify the cost structure of the PFMC business. Regulators could also consider price regulations for both account and asset managers, which should be based on the cost structure of these businesses. The use of arbitrary caps on fees should be avoided, as they can be captured by the political cycle. The development of tariff models for pension funds would allow convergence to fees that are aligned with market returns for the managers’ shareholders.

\subsection*{4.2.6 Portfolio benchmarks}

Investment allocation should be focused on the long-term interests of members. Benchmarks can help to align PFMC portfolios with the long-term interests of the clients. Pension portfolios need to move to exogenously defined benchmarks. Without scale, expertise, and member-focused governance on the demand side, the market by itself will not reach the optimal portfolio allocation. One option is to have

\textsuperscript{31} In Russia, the investment decisions of the pension portfolio managed by Vnesheconombank have been subject to political interference.

\textsuperscript{32} In TSP in the United States and NEST in the United Kingdom, the trustees of the scheme run competitions to select the best asset manager, taking into consideration the cost structure, with a major share of investments being passive (which for the TSP is legally required).

\textsuperscript{33} Mexico uses this approach and has seen the average duration of investments in the PFMCs increase significantly over time.

\textsuperscript{34} In Sweden the system generates most of its cost reduction in asset management through discounts on average of 0.5 percent (50 basis points) over the normal retail commission. The price reductions are linked to the size of assets under management and are imposed directly on the fund managers as a condition for entry into the system.
experts create benchmarks. These benchmarks need to be common to the whole industry. Part of the responsibilities of a centralized agency could include the creation of a benchmark portfolio. Good governance of the agency is essential for ensuring the convergence to optimal portfolios. If the system does not include a central provider, an exogenous party should define the default portfolio. This could be done, for example, with the support of a commission of experts. The portfolio allocation that comes out of the benchmark is as important as the process for defining it. A benchmark will be legitimate if it is technically appropriate and if the governance and the process for achieving such an outcome are considered valid by the society.

The default portfolio needs to be defined as a life-cycle portfolio, such that asset allocations change automatically as individuals approach retirement age. Portfolios for younger individuals should have a greater component of equity, and portfolios for elder workers should have a greater proportion of long-term inflation-indexed bonds. Individuals should be free to choose the portfolio that best accommodates their risk-return preferences. But the default allocation for each individual should be based on an assessment of the alternative that best adjusts to the individual’s expected needs. Volatility needs to be taken into account if members are allowed to opt out of the pension system.

The portfolio benchmarks should make explicit the sort of market indexes and weights that define the strategic asset allocation. In this model, portfolio managers decide not on the strategic asset allocation, but on the tactical one, and their performance is measured against the benchmark portfolio, for example, through a tracking error system. In order to minimize administrative costs, portfolio managers should emphasize investments in low-cost structures such as index funds or low-cost UCITS (undertakings for collective investment in transferable securities) funds. In developed markets, there is little evidence in favor of active management in deep and liquid markets, unlike in specialized market segments.

As part of reviewing the most appropriate investment allocation, some home bias might also help to bring legitimacy to the funded schemes. Contributors during their active phase might appreciate the benefits from the investments of their pension funds. But the investments must first be driven by sound project and investment appraisal. While pension funds might help to jump-start the capital market, they are expected to diversify into other investment strategies within the first decade. The development of the domestic capital market is also in the interest of the pension funds, which need fixed-income instruments to build their portfolios.

Finally, government debt management strategies should consider the needs of the pension funds. The issuance of long-term, inflation-indexed instrument is essential, for example, and should be emphasized in the portfolio benchmarks discussed above.

4.2.7 Guarantees

Guarantees on the value of the contributions at retirement age can increase the tolerance of contributors to short-term volatility. But they have a cost. Investments in risky assets are essential for ensuring higher returns over the long term. In order to facilitate investment portfolios aimed at optimizing the expected pension at retirement age, regulations could introduce the use of specific types of guarantees that only trigger at retirement age; guarantees could cover the real or nominal value of the contributions—if there is a clear cost-benefit analysis in favor. In the presence of risk-averse individuals, the use of guarantees could be welfare improving, but would need to be priced properly.
The “writer” of the guarantees would have to be an institution independent from the portfolio manager (see Viceira and Rudolph 2012).

4.2.8 Quasi-mandatory coverage

Improving coverage in quasi-mandatory ways should be explored. There is an important agenda in relation to the development of voluntary systems. Since purely tax-incentivized individual pension schemes have not created broad coverage and additional savings, other options need to be explored. The experience shows that tax-incentivized voluntary savings tend to benefit only higher-income workers. The experience with matching fund contributions is still relatively limited. While there is no strong body of evidence that matching contributions affects individuals with low propensity to save, this is an important area for further consideration, research, and pilots (see Hinz and others 2013). Default funds seem even more promising. If properly structured, auto-enrollment and opt-out systems might be more effective in capturing contributors. Both cases have a well-defined default option, which helps to guide the expectations of contributors.

4.2.9 Retirement age and payout phase

Retirement ages must continue to change, and the payout phase must change as well. Governments need to build fair and stable payout phases for their funded schemes. The number of options should depend, among other things, on other sources of retirement income for individuals. If individuals do not have other sources of retirement income, regulations for private pension payouts should avoid paying lump sums, as individuals are likely to spend them quickly and then have to rely on government payments or fall back into poverty (see Rocha, Vittas, and Rudolph 2011). With the rapid increases in retirement age, funded schemes should explore mechanisms to embed longevity risk sharing in the annuities to avoid all the rising longevity risk combing back to the state. Moreover, working lives and retirement ages need to adapt continually to longer longevity. Automatic adjustments to the retirement age can make adaptation more gradual and politically less challenging.

4.3 Next Steps

This report aims to engage further in a dialogue with client governments and international partners. The aim is to achieve a closer understanding of the policy issues affecting funded pension systems in the region. The ultimate goal is to develop a shared reform agenda to improve pension systems so that they are efficient, sustainable, and secure and also deliver inclusive coverage of adequate pensions for current and future generations.
References


