Is the Egg Basket Worth its Price? The Fiscal Implications of Pension Privatization in Eastern Europe [1]

Jan Drahokoupil
University of Mannheim, MZES & European Trade Union Institute (ETUI), Brussels
jdrahokoupil@etui.org

Stefan Domonkos
University of Mannheim, MZES/CDSS
stefan.domonkos@mzes.uni-mannheim.de

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Introduction

Eastern European countries were among the pioneers of introducing mandatory private funded schemes into their pension systems. Their approach to pension privatization, however, changed significantly after 2008. In the context of a global economic recession, the region saw a number of pension 'reform reversals'.[2] Yet, the crisis was only one of the factors that contributed to the transformation of the political and economic context of pension reforms. Importantly, the first wave of reforms was also accompanied by a learning process about the nature of the transition costs of the reforms as well as their benefits.

The second wave of reforms, after 2008, produced a wide variety of outcomes.[3] At one extreme, Hungary, a pioneer of pension privatization, *de facto* nationalized its mandatory funded pension scheme. Poland and, eventually, also the Slovak Republic, reduced the size of their mandatory private schemes substantially by lowering the percentage of contributions diverted from their pay-as-you-go (PAYG) pillars. The Baltic States temporarily reduced or suspended contributions to their private schemes. In contrast, the Czech Republic actually implemented pension privatization in this period, albeit at a more modest level than was common in the first wave of reforms. Privatization is thus still on the agenda in this new economic and political context; however, the learning process has changed the rationale behind privatization, as presented by its proponents. A 'diversification-argument' has gained prominence, seemingly replacing the argument that the introduction of funded schemes can resolve the pressure of demographic ageing. Accordingly, the policymakers of the post-2008 era should follow the advice of Don Quixote's servant Sancho Panza that "it is the part of a wise man to keep himself today for tomorrow, and not venture all his eggs in one basket" (Whitehouse, D'Addio, and Reilly 2009, p. 10).

This paper discusses the policy lessons learned from the two waves of pension reforms in Eastern European EU member states. It focuses, in particular, on the changing approach to the fiscal implications of pension privatization. In the next section, we provide an overview of the two waves of pension reforms as well as the political and economic factors that conditioned the outcomes. Then, we focus on the problem of financing the funding gap related to the diversion of contributions from the public pension system to private schemes, a key issue that was sidestepped in the first wave of reforms, largely because of a lack of understanding of the problem. The funding gap was underestimated, mainly because of a mistaken argument that explicit debt can be ignored as it replaces implicit debt. The third section addresses the actual solutions to this problem, showing that it remained largely unresolved in the first wave of reform, despite the learning process that accompanied the implementation of pension privatization. The final section then discusses the new

[2] We use 'reform reversals' to refer to policy adjustments discussed in this paper as the term has become widespread after it was introduced by the World Bank. However, we use it as a policy description and do not wish to imply any possible value judgments that may be implicit in the term.

[3] By the late 2000s, the overwhelming majority of Central and Eastern European countries had a national pension system composed of three parallel schemes, also known as three pillars. In the three-pillar model, the publicly-run pay-as-you-go (PAYG) scheme is known as the first pillar. Mandatory private accounts allowing savers to partially opt out from the public system are known as the second pillar. Finally, voluntary private accounts are generally referred to as the third pillar of the pension system.

rationale that informs the second wave of reforms: the 'diversification argument'. Its growing importance in the policy debate indicates a learning process in which many of the myths that influenced the policy debates in the first wave of reforms were dispelled. However, the diversification argument itself can be seen as old wine in new bottles because its underlying rationale is largely based on one of the myths of the first wave of reforms—that is, the assumption that pre-funding can hedge against the macroeconomic shock induced by demographic ageing. Once this and other misunderstandings are put aside, what remains as a rationale for pension privatization in the second wave is not so much a positive-economics argument, but a mistrust of the state and collective provisions of social insurance. The comparison of the costs and benefits of diversification thus suggests that the second proverbial basket comes at a rather steep price.

1. The Eastern European Love Affair with Private Pensions: From Pension Privatization to Reform Reversals

In the late 1990s to mid-2000s, the majority of Eastern European countries pursued pension privatization, reforming their PAYG pension systems by following the model laid out by the World Bank (WB) in its influential 1994 report *Averting the Old-Age Crisis* (World Bank, 1994). The WB model was a three-pillar pension system comprising a publicly financed first pillar-based on the PAYG principle; a mandatory fully funded second pillar based on private individual accounts; and a voluntary fully funded third pillar.[4] The second pillar was to be created by diverting contributions from the first pillar (privatization). The second pillars created in the first wave of reforms were often not based on cross-party consensus, but in all cases they initially survived the incumbency of their opponents.[5] The Czech Republic and Slovenia were the only countries that did not implement the WB-style pension reform in this first wave. They pursued only parametric reforms in their state-run PAYG schemes. An overview of pension-reform trajectories in all Eastern EU member states can be found in Table 1.

<< Table 1 here >>

The economic crisis of 2008 marked a turning point in the evolution of pension systems in Eastern Europe. Public deficits and demands on state spending increased as revenues fell. Reduced fiscal space made financing of the missing revenue flowing into the second pillars particularly challenging. Most countries thus pursued some

[4] In the WB model, the first pillar was supposed to provide a flat subsistence pension, but none of the CEECs implemented the pure WB model. The implementation of pension privatization often went hand-in-hand with linking pensions from the public PAYG scheme to past covered income.

[5] In Hungary, the coalition, led by the conservative right-wing Fidesz, came to power in 1998 only six months after the three-pillar model had been introduced by the social democrats. The government stopped the planned increase in the second pillar contribution rates from 6 percent to 8 percent of gross wages, but it did not reverse the reform. In the Slovak Republic, when the opponent of pension privatization, the social-democratic party Smer, took power in 2006-2010, it implemented only minor changes in the regulation of the second pillar. In Poland, the government of the Democratic Left Alliance (SLD), a party that voted against privatization in 1999, did not reverse the reform when it took power in 2001, nor did the conservative-nationalist coalition government led by the Law and Justice Party (PiS) from 2005.

form of reform reversal[6], but the range of outcomes also indicated a commitment to privatized pillars. By the end of 2012, only Estonia returned to the full level of pre-crisis second-pillar contribution rates.[7]

Fiscal Constraint Effects

Variations in immediate policy responses can be linked to the differences in fiscal constraints. These varied as the crisis had very different impacts across Eastern Europe (see Myant and Drahokoupil, 2012). Early reformers with larger second pillars also faced higher financing needs to cover the gaps created by the reforms, as the number of those who entered the mandatory funded pillar had grown significantly since the initial introduction of the funded schemes. With the exception of Hungary, the levels of sovereign indebtedness in Eastern Europe were modest. The fiscal space in the Baltic States, however, was limited by large output contractions and their commitment to defending fixed exchange rates through "internal devaluation"−that is, cuts in (public sector) wages and public expenditure (Kattel and Raudla, 2013). These countries maintained their second pillars, but they had to temporarily lower contributions significantly to be able to face the fiscal consequences of the crisis.

Among the Central and Eastern European countries (CEECs),[8] Hungary was particularly vulnerable to the crisis due to its dependence on credit from abroad. The government thus experienced significant problems financing its debt after October 2008 and was compelled to seek funding from the IMF and the EU. These economic constraints led decisively to the de facto nationalization of the second pillar in 2010.[9] This move allowed the government to stabilize finances through revenue increases—the one-off transfer of accumulated assets amounted to 10 percent of GDP. The influx helped to balance the budget at a delicate time when the government had decided to terminate a Stand-By Agreement with the IMF.[10]

Other CEECs did not face such constraints, but they all chose to pursue austerity policies to address the growing deficits (Myant, Drahokoupil, and Lesay, 2013). The broad commitment to pension privatization had begun to unravel throughout the CEECs. Poland decided on a permanent reduction of second-pillar contributions

[6] Bulgaria and Croatia, which constituted the exceptions, apparently prioritized financing second rather that first pillars, as indicated by particularly low aggregate replacement ratios in their first pillars.

[7] Romania, another late reformer, continued with its initial plan of increasing contributions to the second pillar, following a break in 2009. The contributions should grow from 2 percent of covered earnings to 6 percent by 2016. Nevertheless, as of 2013, the country is still half a percentage point behind the original schedule, with contributions to the second pillar reaching 4 percent instead of the 4.5 percent initially planned.

[8] CEECs include Poland, Hungary, the Czech Republic, the Slovak Republic, and Slovenia.

[9] The savings accumulated in the private funds were automatically transferred to the state by June 2011. While savers had the option of staying in the private system, the conditions set by the new law were so unfavorable that only 3 percent chose to remain (Simonovits, 2011). As of January 2012, all pension contributions, including those paid by savers who remained in the second pillar, flow into the public PAYG system.

[10] Contrary to the initial plans, however, the pension wealth redirected to the state budget was not used exclusively for the repayment of government debt. Approximately 1200 billion forints (42 billion euros), which is 43 percent of the accumulated private-account pension wealth, were used for purposes other than servicing the debt of the Hungarian state. This included the acquisition of the country's biggest oil refinery and covering the revenue fallout due to a governmental tax-cut program.

largely because it was approaching the self-imposed constitutional debt ceiling of 55 percent of GDP. The Slovak Republic had more room for maneuver, given its low indebtedness and a quick return to growth, but the socialist government elected in 2012 decided to permanently reduce the second pillar in the context of a concerted attempt to balance the budget.[11] Finally, the Czech Republic stands out as a country that actually jumped on the bandwagon of pension privatization at a time when others were pursuing varying forms of reform reversals.[12] Nevertheless, a much more modest and voluntary second pillar was introduced here.

Other Effects on Reforms

The change in pension privatization policies cannot be fully attributed to the fiscal effects of the economic crisis. The crisis was one of several factors that contributed to the transformation of the political, economic, and ideational context shaping pension reforms. First, the initial wave of reforms stimulated a learning process in international policy-making networks and among experts in Eastern Europe. The information about the actual costs and benefits of these programs was poorly distributed in the first wave due to numerous reform "myths" (Barr 2000; Orszag and Stiglitz, 2001). The propositions of the *Averting the Old-Age Crisis* were subjected to a wide range of criticism (for example, Barr, 2000; Fultz and Ruck, 2000; Orszag and Stiglitz, 2001; Barr and Diamond, 2008). Pension privatization was then less often seen as a solution to demographic ageing. Nor was it assumed to have automatic growth-stimulating effects.

In Eastern Europe, the issues of first-pillar stabilization and pension privatization were finally seen as two separate problems, which had not often been the case in the first wave of reforms. The maturation of the first wave of reforms also contributed significantly to the learning process about the actual implications of pension privatization. New data made it possible to evaluate the performance of pension funds in terms of their rates of return, fees charged, and investment strategies. This maturation also exposed the problem of transition costs that had been poorly understood in the first wave of reforms and had been left largely unresolved. This problem could no longer be ignored, as significant austerity measures seemed necessary in order to continue financing these reforms.[13] Thus, in the Czech Republic, the ability to deal with transition costs was a major concern for the architects of pension privatization.

Secondly, the WB changed its view on pension privatization. The Bank's active promotion of pension privatization had a major influence on the first wave of reforms and constituted an important base of political support for reformers (Müller, 2001; Orenstein, 2008; Lesay, 2009), but the consensus on the issue within the Bank began

[11] The Slovak left-wing government in office since April 2012 decreased in September 2012 second-pillar contributions from 9 percent of covered income to 4 per cent. The Slovak reform reversal nevertheless foresees a gradual increase in the contribution rates to the second pillar. From 2017 onward, contributions should grow by a quarter of a percentage point until they reach 6 percent in 2024.

[12] The reform breakthrough was made possible by a right-wing coalition gaining an exceptional majority in May 2010.

[13] In this context, the circular transaction in which sovereign bonds issued to cover transition costs were bought by pension funds attracted attention in Poland and Hungary where it was particularly important (see for example, Cienski, 2011).

to unravel well before the crisis. By 2008, its pension privatization advocacy campaign was effectively over (Orenstein, 2011). The International Monetary Fund (IMF), which had had a more critical stance to private pensions, also did not promote privatized pensions in its assistance programs after 2008. The withdrawal of the WB from the privatization agenda made pension privatization essentially a domestic affair, with party politics significantly shaping the policy reactions. In this new economic and ideational context, pension privatization became the agenda of the liberal right (see Drahokoupil and Domonkos, 2012).[14]

Thirdly, requests by countries that had introduced second pillars to exempt the transition costs of private funded schemes from the Maastricht criteria were rejected by the EU several times in 2004–2005 and 2010.[15] The EU's Maastricht criteria obligated new member states to maintain their public deficit and public debt under 3 percent and 60 percent of GDP, respectively. This way, fiscal freedom had been significantly limited before the crisis. The narrower fiscal space, in combination with the growing transition costs, made financing through debt difficult. Therefore, dealing with the funding gap became a matter of distributing the costs in the short term.

In this context, the funding gap became a priority on the policy agenda. The actual solutions to dealing with transition costs in the first wave of reforms had often been fudged. In the new context, policymakers could no longer evade the question of transformation costs and their financing, as it was done before 2008.

2. The Funding Gap: Lessons about Implicit and Explicit Debt

Pension privatization in Eastern Europe was legislated in states that already had mature PAYG systems. The working-age population and current pensioners thus had already accumulated pension rights, representing future liabilities on state budgets. PAYG systems cover pensions from present revenues. Pension privatization then diverted part of this revenue to the second pillar. The subsequent funding gap in the first pillar was a result of the loss of resources previously designated to finance the pensions of those with accumulated pension rights. In the context of this paper, the term funding gap indicates the annual fallout of budget revenue due to the introduction of mandatory funded pillars minus the decrease in claims on the PAYG scheme, also due to the introduction of the second pillar. From a policy-making perspective, the transition costs of pension privatization include the funding gap and its financing costs—the actual transitions costs are thus likely to be significantly

[14] The change of party positions toward pension privatization can be attributed to the learning process about the actual implications of pension privatization and to a better understanding of the difference between implicit and explicit debt discussed in the next section (Drahokoupil and Domonkos, 2012).

[15] A formal request by countries which had introduced a second pillar (including Hungary, Poland, and Sweden) to exempt the transition costs of private-funded schemes from the criteria was rejected by EU institutions in 2004–2005 (see Eurostat, 2004). In 2005, the European Council allowed the transition costs to be exempted from the Maastricht debt criteria for a five-year transitory period and at a declining rate only (European Council, 2005, Art. 3.4). In 2010, the European Commission rejected another request of nine member states, most of them Eastern European countries. At the same, it allowed for some discretion in starting the procedure against countries violating the criteria, but no explicit promises or amendment of criteria were given (for details, see Kovacheva, 2010; Kovacheva and Marini, 2010; Economic and Financial Committee of the European Union, 2012).

larger than the funding gap. After introducing the second pillar, the number of people in the non-contributing workforce increases, while those who could, in theory, reduce the burden on the state—by receiving part of their pension from the second pillar—will, in fact, retire several decades after the reform has been introduced.[16]

A stylized depiction of the development of the annual funding gap can be seen in Figure 1. The funding gap in the Slovak Republic, which introduced its second pillar in 2005, was expected to peak by 2030, when the yearly costs would have reached approximately 2.5 percent of the country's GDP. After this point, the number of retired workers who rely on the second pillar would have started to grow, thus reducing the annual funding gap. Contributions lost and benefits spared due to the introduction of the second pillar were expected to even out around 2052 (Ódor and Novysedlák, 2005).

<<< Figure 1 here >>>

Some proponents of pension privatization question the relevance of the funding gap, claiming that these costs merely amount to the implicit debt of the PAYG system being transformed into explicit debt.[17] This indicates a misunderstanding of the difference between implicit and explicit (real) debt and/or a conflation of implicit debt and real deficits.

Implicit Debt

The implicit debt is a theoretical construct that refers to liabilities in the form of pensions due in the future (see Kane and Palacios, 1996; Holzmann, Palacios, and Zviniene, 2004). In a PAYG system, these liabilities are financed by current revenues. The expected revenue streams could thus be understood as implicit financing, an equivalent of the implicit debt. Real deficits can occur if current revenues do not match current liabilities. Over the long term, a PAYG system can therefore generate real deficits, or surpluses, if implicit debt and financing do not balance. A conflation of the above concepts has contributed to insufficient understanding of the fiscal implication of transitioning from PAYG to a funded system in the first wave of reforms. It was often ignored in the debate that, while pension privatization reduces implicit debt by transforming it into an explicit form with all related consequences, it also reduces the implicit financing by permanently lowering the public budget's revenue stream from social security contributions.

It is important to note in this context that both implicit debt and implicit financing are mere theoretical concepts based on predictions about an uncertain future. Both of them depend to a large extent on pension legislation, which provides the necessary tools for balancing state-run PAYG schemes through adjusting outlays and

[16] Let us assume an economy where, from a given year, the mature PAYG system has been entirely replaced by a fully funded system available for the younger part of the workforce. Once the last cohort relying purely on the PAYG pillar dies, the fully funded system becomes a mature pension scheme. In this hypothetical example, the pension reform would cease to produce a growing funding gap in the year when the first such cohort enters into a retirement that exclusively relies on the funded scheme for its pensions.

[17] This perspective was prominent also among policy-makers who were supportive of the second pillar and whom we interviewed in 2011–2012.

contributions. Instead of lowering implicit liabilities and/or increasing implicit financing in the PAYG system, the proponents of pension privatization advocate (a partial) replacement of an imbalanced public system with a privately-funded scheme. This change comes at the immediate cost of increased explicit indebtedness, as pension liabilities accrued up to the point of pension privatization have to be honored by the state, while the social security contributions are being transferred on individual accounts in the private scheme. A full privatization relieves the state from dealing with possible future imbalances in the pension system by transferring the management of pension insurance risks to individuals. At the same time, it also binds the state to finance the pensions of an entire generation of retirees through means other than social security contributions from working-age cohorts. The decrease of contributions due to pension privatization amounts to paying for the costs of a theoretical shock when no new generation is going to replace the current workers—a scenario that is not equivalent to ensuring against the actual demographic shock (discussed below). In the context of the WB-type reform, the transition costs actually "pay" only for transforming a mature PAYG system into a mixed system with a pre-funded pillar.

In the Eastern European context, simulation studies on second-pillar reforms and their reversals showed that the replacement rate (levels of pensions relative to salaries) is the key variable that influences the long-term sustainability of national pension systems (Égert, 2012). In the Hungarian case, introducing a second pillar could actually lower the costs of the country's pension system in the long term, but this savings effect is driven by the indirect effect of downsizing the first pillar characterized by a too generous replacement rate (that is, by lowering pensions). In principle, obviously, no pension privatization is needed to decrease first-pillar replacement rates.

Explicit and Implicit Debt

More informed understandings of transition costs were often based on the assumption that implicit and explicit debts are equivalent—and, correspondingly, that second-pillar pension savings are not newly created savings but only explicit valuations of implicit claims in the form of accumulated pension rights. (Explicit) Debt generated through financing of the funding gap thus should not count as new debt, as it is equivalent to the (implicit) debt corresponding to the pension rights accrued in the social security system. In terms of accounting, it is factually correct that the funding gap does not actually represent new costs, because it is produced by making the implicit debt (or part of it) explicit. Moreover, assuming an economy with a single interest rate and no transaction costs, pension privatization is cost-neutral—as explained in greater depth by Simonovits (2003) in his account of the no-pain-no-gain scenario (see also Kubíček, 2008). The level of public debt increases due to transition costs, but the costs of servicing that debt are equivalent to the returns on the second-pillar savings. In the no-pain-no-gain scenario, the outcome of privatization is a higher level of public indebtedness. At the same time, the operation of making the implicit debt explicit does not cost society and the public purse anything.

However, apart from ignoring transaction costs and assuming pension fund returns at least match the implicit returns of the PAYG system, the no-pain-no-gain model is

based on the unrealistic assumption of perfect rationality and information. Such an assumption allows perceiving implicit and explicit debts/savings as equivalent: an increase in the level of public indebtedness would thus have no implication on the ability of the state to borrow—and the newly created savings would have no implications on the savings behavior of households. The increase in the public-debt level would be discounted by the decrease in the level of implicit debt, the amount of which would be known due to the availability of the information on future changes in the first pillar (pension levels, retirement age, etc.). In other words, the negative reaction of the financial markets to higher public debt would be mitigated by a decrease in implicit debt. However, it is unlikely that the creditors on international financial markets would accept the long-term budget neutrality of the transformation of implicit debt into an explicit one (Simonovits, 2003). Financial market actors in the real world have proven not to conform to this assumption. The increase in explicit debt resulting from pension privatization had a negative impact on country risk ratings, while the assumed decreases in implicit debt did not lead to rating improvements (Cuevas and others, 2008). The refusal of the EU regulator to attribute perfect rationality to the market and thus to exempt the transition costs from the Maastricht criteria was thus correct from this point of view.

In the real world, future liabilities of the state toward its citizens (that is, the implicit debt) are of a very different nature than current accumulated debt. Implicit debt is largely dependent on the creditor's own legislation. Ultimately, the size of the implicit debt is subject to unilateral government decisions. Implicit liabilities are thus closer to a political pledge than an actual quantifiable financial category (Holzmann, Palacios, and Zviniene, 2004). By contrast, the funding gap translates into a current and real liability that is often accumulated against foreign entities (non-residents). Influencing the latter through national legislation might equal *de facto* sovereign default on debt. Experience has shown that the markets, indeed, have priced explicit and implicit debts very differently, with increased explicit debt levels being punished with little regard to a theoretical lowering of the sum of future obligations. The accumulation of explicit sovereign debt has thus involved the risk of increasing the dependency of CEECs on international financial markets, leading to worsening credit ratings and higher costs of debt servicing. Therefore, from the perspective of the state, retaining debt in its implicit form appears to be the preferable option.

Costs and benefits

The assessment of transition costs has to take into account the benefits and costs of pension privatization that are ignored in the simple no-pain-no-gain scenario. Unfortunately, the assessment that informed the first wave of reforms was not balanced and realistic. Policymakers at that time were too optimistic about the gains from possible higher returns in the funded pillar (in comparison with the implicit returns in the PAYG pillar). The simple no-pain-no-gain scenario assumes a single interest rate, but the average return on investment can in reality be assumed to be higher than the interest paid on public debt, provided that the pension funds do not invest in state bonds.[18] In practice, however, government bonds constituted a large part of pension fund portfolios, making privatization appear a pointless accounting

[18] It can be argued, however, that, in a closed economy, gains by a household from higher interest rates on their pension portfolios will equal losses from their non-pension portfolio that will (indirectly) include also government bonds (Kubíček, 2008).

exercise. As shown in Figure 2, government bonds and bank deposits represented, on average, two-thirds of the total assets of the pension funds in 2011 and reached almost 80 percent in the Slovak Republic and Romania. This obviously defeated the purpose of privatization in terms of the expectation of higher returns.

<<< Figure 2 here >>>

Furthermore, even when the circular transaction of pension funds buying government bonds is avoided, the assumptions that portfolio returns will be higher than the implicit returns in the PAYG system (that is, real wage growth) cannot be taken for granted. This assumption has been derived from a study of the long-term performance of the U.S. stock market (Kotlikoff, 1995), which cannot be easily generalized outside the United States. One can indeed find a number of countries where the long-term portfolio returns do not compare well with real wage increases (for example, Loužek, 2006). The experience of converging economies in Eastern Europe also showed that returns in pension fund portfolios did not tend to perform well in comparison with wage growth. A comparison of wage growth and average returns in the period before the 2008 crisis is provided in Figure 3. The returns were influenced by high wage inflation in the run-up to the crisis in the Baltic States, on the one hand, and, on the other, by initial high rates of return in Poland, the Slovak Republic, and Hungary due to an appreciation of the value of state debt in the initial period. In 2008, the portfolios of pension funds recorded substantial losses.[19] The period that followed was characterized by large year-on-year fluctuations.

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Secondly, the comparison of returns in pre-funded and PAYG schemes cannot be disentangled from the transaction costs in running a pre-funded pension system. These costs need to be discounted from the returns. Both PAYG and funded schemes incur management costs, but these are relatively low in the PAYG system. Large administrative costs represent an inherent problem in a system with individual accounts and individual choice of pension provider. The fixed administrative costs also put a question mark over the rationality of smaller second pillars that were introduced in the second wave of reforms in many countries. The experiences of the United Kingdom and Chile that took a hands off approach to regulating management fees show that the fees represented a drag on investment returns, consuming about 20 percent of the wealth accumulated over the savers' careers (Diamond, 1998; Murthi, Orszag, and Orszag, 2001). In Eastern Europe, management fees varied widely between countries and investment products.[20] While the overall tendency has been towards a gradual decline in the percentage share of fees on the net asset value and contributions, there have also been countries where fees remained relatively high.[21]

[19] The year-on-year losses as of October 15, 2008, amounted to 30.5 percent in Estonia, 35 percent in Hungary, 48.4 percent in Lithuania, and 12.4 percent in the Slovak Republic (World Bank, 2008).

[20] In 2005, administrative charges in Poland were estimated to about 18 percent of accumulated savings (World Bank, 2005). Polish regulation at the time was comparatively restrictive, but it was made even more restrictive in the later period.

[21] Management fees were adjusted to what seemed to be relatively moderate levels in the Czech Republic, Poland, and the Slovak Republic. In the recently established Czech second pillar, management fees vary greatly among the various types of funds, ranging from 0.3 percent of net asset value (NAV) annually in the government-bond fund to 0.6 percent of NAV and 10 percent of the annual return in the dynamic fund. The Slovak second pillar has relatively low management fees,

In 2007, yearly administrative charges represented as much as 2% of total assets in Hungary, and 1.5% of total assets in Slovakia and Poland (Tapia and Yermo, 2008). While it might be argued that this indicator significantly decreases with the maturation of the mandatory funded system, the Chilean experience shows that even after almost 30 years from the inception of the funded scheme, annual administrative charges still reached about 0.7% of total assets (Tapia and Yermo 2008).

Thirdly, arguments in favor of pension privatization in the first wave of reform included the assumption that the reform would spur output by increasing savings. The expectation was that capital would then be channeled into more productive segments of the national economy. However, even in theory, this expectation is based on rather exacting conditions, including the following: savers should not lower their other savings as a reaction to owning shares in pension portfolios,[22] savings accumulated on individual pension accounts cannot be allocated into newly issued national government bonds; and the funds should not be invested abroad or in commodities (Barr and Diamond, 2008). The Eastern European experience did not make these conditions appear more realistic.

Finally, private pillars were expected to increase fiscal revenues by motivating workers in the shadow economy to formalize their status because contributions paid would not be redistributed, but instead paid into workers' private accounts (Ferge, 1999; Müller, 2008). This was another rather optimistic and challenging assumption that proved unrealistic in the context of the CEECs. We are also not aware of any empirical evidence that would suggest that it would have been fulfilled in Eastern Europe.

3. Dealing with the Funding Gap

In theory, transition costs in the form of interest on new debt should be financed by a "solidarity tax" (Sinn, 2000) on the earnings of those who entered the second pillar, in order to meet the criteria of intergenerational justice (that is, those who will benefit from the second pillar should pay for transition).[23] In practice, however, intergenerational justice was a less important concern for reformers. Pension reform was thus largely financed from taxes on general income and consumption and from

reaching 0.3 percent of NAV annually. However, this is further increased by 1 percent of the annual contributions and 10 percent of portfolio returns. In Poland, asset-based management fees range from 0.023 percent per month to 0.045 percent per month, depending on the size of the fund, but they cannot exceed 15.5 million zloty per fund monthly. Furthermore, the management fee also has a contribution-based component that is maximized at 3.5 percent of yearly contributions. By contrast, second-pillar management fees in Estonia can amount to as much as 2 percent of NAV and 3 percent of contributions per year (World Bank, 2011).

[22] A perfectly rational household should treat their second-pillar portfolio as a mere explicit valuation of implicit PAYG claims that were lost due to privatization. As a consequence, it should not lower its other savings. If the assumption of perfect rationality is relaxed, then households might lower savings held outside the pension funds in reaction to the new policy as they are likely to consider pension portfolios as new savings (Kubíček, 2008).

[23] The theoretical no-pain-no-gain scenario implies that governments need to cover only interest on the new debt to deal with the transition costs in a sustainable way. In reality, for the reasons discussed above, there was little fiscal space and/or actual willingness to increase the level of public debt in order to finance pension privatization. In practice, however, the actual transition costs to be covered were much higher, as discussed above.

assets produced by present and retired workers. Moreover, transition costs included not just the interest on new debt but also the funding gap itself. Transition costs thus could have been covered through a variety of means: issuing state bonds, increasing taxes, cutting spending in the general budget and/or the PAYG scheme, or by using the exceptional revenues such as privatization receipts.

The full funding gap thus represented a real liability that states needed to face - in addition to the long-term costs of demographic aging and short-term fiscal challenges. The size of the funding gap often proved to be higher than originally expected by the first-wave reformers. The reformers underestimated the numbers of individuals entering the second pillar.[24] In addition, as discussed above, there was the expectation that pension privatization could be (partly) self-financing and even generate additional revenues by increasing output and formal employment. This has proven to be excessively optimistic. In several first-wave reformer countries, by the late 2000s the amount of contributions diverted from the first pillar reached more than 1 percent of GDP annually.[25] An overview of the funding gaps created by pension privatization in Eastern Europe is provided in Figure 4. The funding gap hitherto experienced was only a fraction of the deficit that would occur once the baby boomer generation retires.[26] Most of the pension expenditures associated with the retirement of the 1950s cohorts will have to be covered from the PAYG system. Yet the younger cohorts entering the labor market in the coming years will not only be smaller but will also have the possibility (or obligation) of opting out of the PAYG system.

<<< Figure 4 about here >>>

None of the first-wave reformers provided a credible financing plan to cover the cash fallout until the WB-type pension system reaches maturity. The policies laid out to fund the transition costs were either politically unfeasible (that is, cutting pensions payable from the PAYG system in Poland) or insufficient for covering the expenses of the several decades-long transition (that is, privatization in the Slovak Republic). As a consequence, debt financing proved to be a major implicit option among all the reformers. This was not an option of choice. At the same time, the reformers worked on the assumption that the debt resulting from financing the funding gap would be discounted from the total debt levels because it was a result of making the implicit debt explicit. Relying on debt financing became more problematic after 2008.

[24] This was a particularly important issue in Poland (see Égert, 2012). It was the case in many Eastern European countries that opting-out was chosen by a large number of middle-aged and elderly workers, although the reforms were primarily aimed at younger cohorts. For example, in the Slovak Republic, the compulsory saving period before accumulated pension wealth could be annuitized was set at 10 years and think tanks close to the right-wing reform government considered ages 45 to 50 the limit for when it is still sensible to enter the second pillar (SME, 2004). Nevertheless, as of June 30, 2006, there were almost 90,000 savers (approximately 6 percent percent of all savers) aged 45 and above enrolled in the second pillar.

[25] The size of the funding gap was especially large in Poland, which undertook a WB-type pension reform in the late 1990s and made joining the second pillar compulsory for new entrants into the labor market.

[26] In CEECs, the retirement of the 1950s cohorts is to take place mostly throughout the second half of the 2010s, but the retirement of the early baby-boomer cohorts has already started.

There appeared to be a gradual learning process among the region's reformers about the funding gap. This led to more consideration for financing the reform as well as for the overall size of the second pillar in the late-reformer nations.[27] In the case of early-reformer Hungary, the dominant argument was that the second pillar would be a self-financing reform, as the savings accumulated in the funds would increase the country's capital availability, which would, in turn, lead to higher economic growth. In addition, it was widely believed that the mandatory private scheme would be instrumental in combating the shadow economy, because pension contributions would be accumulated as savings on individual accounts (Ferge, 1999; Müller, 2008). Polish reformers expected that the funding gap would be covered by cuts in the first pillar and income from privatization, but none of these plans were fulfilled. The major reformer of the mid-2000s, the Slovak Republic, used income from the privatization of the national gas company, worth approximately 4.4 percent of the country's 2005 GDP, to cover the funding gap in the first five years following reform (Drahokoupil and Domonkos, 2012). The latest two reformers of the region, Romania and the Czech Republic, embarked on reforms that allow a considerably smaller opt-out (see Table 1). The ability to deal with the funding gap was a major concern for Czech reformers, who implemented reform in the context of austerity politics. The decrease in the cash flow of the Czech PAYG system was supposed to be covered from a value-added tax (VAT) increase.[28] The second pillar (operational since January 2013) has remained voluntary, with the requirement that those who opt for membership in the plan transfer an additional 2 percent of gross salary into their pension accounts.

In CEECs, the learning process seems to have created a consensus among pension privatization supporters that a financially sustainable second-pillar system should include an annual funding gap not exceeding 1 percent of GDP. This rule of thumb informed pension privatization in the Czech Republic and reform reversals elsewhere in CEECs.[29] Policymakers in the rest of the region seem to be ready to accept higher transition costs and finance them through current revenues. The next section takes a closer look at what benefits these costs actually pay for.

4. The Diversification Argument

The experience with pension privatization in the first wave of reforms has generated a learning process, dispelling some of the reform myths, and creating awareness of the funding-gap problem. As a consequence, one can observe a more careful

[27] In Slovenia, the funding-gap problem was a major reason the country did not pursue WB-type reform. The minister of finance thus joined the labor unions in opposing the failed 1998 pension privatization proposal.

[28] The lower bracket of the VAT rate rose from 10 percent to 14 percent effective January 2012. Nevertheless, it should be noted that the government did not establish a specific sub-account in the budget that would collect a portion of the revenue from VAT designated to cover the funding gap. Therefore, the border between general budget revenue and revenue collected with the declared purpose of financing the second-pillar reform is rather blurred. This was also admitted by the Czech deputy minister of finance in November 2012 (Urban, 2012).

[29] In Poland, the amount of social security contributions excluding interest transferred to the second pillar is estimated at approximately 0.5 percent of 2012 GDP. In the Slovak Republic, the argument that pension reform should not divert more than 1 percent of annual GDP to the second pillar was already present among reformers in the early 2000s (Záborský, 2003). In 2013, after the decrease in the second-pillar contribution rate from 9 percent of covered income to 4 percent, the social security contributions transferred to the second pillar will amount to approximately 0.5 percent of GDP.

evaluation of the immediate budgetary impact of the pension reforms and a shift in the use of pro-second pillar arguments. The idea that pension privatization protects against the fiscal shock caused by demographic aging became less frequent; instead, a diversification argument, emphasizing the weaknesses of the public PAYG system gained on prominence. Accordingly, the main advantage of the second pillar is that it diversifies the sources of pension income for individuals (for example, Bezděk and others, 2005; Burdová, 2010; Égert, 2012). The frequent use of a proverb from Cervantes's Sancho Panza about not venturing all one's eggs in one basket in the respective debates suggests the influence of OECD studies that included the Quixote-story (for example, Whitehouse, D'Addio, and Reilly, 2009; as pointed out by Vostatek, 2012).

Diversification refers to a technique of reducing risk by investing in a variety of assets with less than perfect correlation, thus reducing the risk associated with the performance of an investment portfolio. A multi-pillar system does indeed reduce the reliance of an individual on one form of retirement insurance and thus diversifies an individual saver's exposure to risks. However, as discussed in the previous section, this comes at a high price paid either in the form of increasing explicit debt or direct spending to cover the funding gap. The operation thus weakens the fiscal position of the state, effectively undermining not just public pension insurance, but potentially also other forms of social insurance an individual may rely on.

Moreover, in the context of pension systems, the benefits of diversification as a risk-reducing mechanism are limited. First, private pension pillars are not immune to regulatory risks, as often assumed. Secondly, and perhaps more importantly, diversification cannot protect against the main challenge faced by the pension systems, namely, the effects of macro-economic shocks, particularly that stemming from demographic aging.

Proponents of pension privatization, however, appear to refer primarily to protection against what could be called regulatory risks—that is, reliance on the state in providing old-age insurance. The introduction of a funded pillar is believed to decrease savers' exposure to the risk of any future government defaulting on its implicit pension liabilities by arbitrarily changing the benefit formula of a defined benefit (DB) PAYG system and thus lowering pensions, as pensions from the second pillar are provided by private entities based on a contractual obligation. Monthly pensions from the funded system are determined by standard actuarial calculations, taking into account life expectancy at the age of retirement and accumulated wealth on the individual account. Moreover, it is often argued by the advocates of second-pillar reforms (for example, Urban, 2012) that, from the citizen's point of view, owning explicit debt in the form of government bonds should be preferred over a mere promise from the government. Explicit liabilities stem from a legal relationship where the state does not have the prerogative to unilaterally change the size of the debt. By contrast, so it is claimed, governments can default rather flexibly on part of their implicit debt, for example by changing the benefit formula in a DB system.

The problem with this argument is that any pension arrangement is vulnerable to bad government. While a complete default on liabilities toward pensioners relying on the PAYG system is very unlikely even under extreme conditions, a partial default on government liabilities may easily take place, both in the case of explicit and implicit

liabilities. A good example for this is inflation tax or changes in the taxation of interests from state securities (Holzmann, Palacios, and Zviniene, 2004). Therefore, while the introduction of the second pillar limits the degree to which governments can alter their pension liabilities by amending social security legislation, members of the funded pillar are exposed to (partial) default of the state through other mechanisms—even when pension portfolios are not exposed to government bonds, a condition that was not fulfilled in Eastern Europe (see Table 3 and above). Taking this into account, it can be concluded that fiscally stable states are of great importance for both public and private pension pillars.

Old Wine in New Bottles?

Turning to the second point, diversification as an investment strategy applies to the individual level when the goal is to eliminate unique risk. Nevertheless, both the first and second pillars are exposed to similar macro-level challenges. As macroeconomic shocks are essentially systemic risks, the technique of portfolio-diversification is not a useful remedy against them. In fact, the way the diversification argument is employed in Eastern Europe is based on a scepticism regarding the ability of the state to pay adequate pension in the future. The 'elephant in the room' here is the resilience to the shock of demographic aging. The diversification argument thus appears to hide one of the old myths of pension privatization, namely that it allows insurance or hedging against the demographic shock. However, a possible output-shock caused by demographic ageing will hit the economy as a whole, and therefore represents a threat to the standard of living of pensioners regardless of the type of scheme they have been enrolled in (Barr, 2012). If demographic ageing leads to a decrease in aggregate output, both the implicit return in the public PAYG pillar and the explicit returns gained by pension funds investing in financial markets are likely to suffer.

The essential problem of demographic ageing from the perspective of economic theory is not insufficient budget revenue, but a decreasing aggregate output (Barr, 1979; Eatwell, 1999; Barr and Diamond, 2006).If the aggregate output produced by a small workforce is not enough to sustain aggregate consumption at a desired level, then a shift to the second pillar cannot in itself be a remedy to the adverse consequences of this output shock on the living standards of the elderly (Barr, 2012). Therefore, a mere outsourcing of pension insurance to private entities cannot solve the problem. Only those measures will efficiently combat the adverse effect of demographic trends on GDP that address demographics directly (for example, increasing labor participation, fertility, immigration, or retirement age) or improve the productivity of the diminished workforce (for example, investment in education and new technologies).

Future pensioners cannot avoid the impact of a decline in aggregate output resulting from a demographic shock by merely joining the second pillar. While it is true that a pre-funded pillar is not dependent on current budget revenue, it is not resistant to the adverse effect of demographic ageing on the economy. The pre-funded system will be also affected by the aging shock, yet the mechanism will be different from the one that acts in a PAYG system. If a country runs a PAYG system, then decreasing aggregate output will lead to a decline in the aggregate wage bill and pension

contributions. In order to maintain the balance of the PAYG system, the state will have to decrease pensions.

In fully funded pension systems, the retirement of a generation larger than the next generation causes either inflationary pressure - because the consumption of pensioners exceeds the desired savings of the workers - or a reduction in asset prices, as the supply of assets by the retiring generation exceeds the demand for assets by workers. The two mechanisms outlined would negatively affect the second-pillar pensions by lowering either their real or nominal levels. Nevertheless, if aggregate output does not decrease despite demographic aging, then growing aggregate demand for goods by pensioners will be matched with aggregate supply of goods of an equal size. Similarly, growing aggregate supply on the assets market will be matched with the growing aggregate demand for assets by workers earning more than they had in the past (Barr, 2000).

The centrality-of-output argument (Barr, 2000; Barr and Diamond, 2006) explains why pension privatization in itself cannot serve as a solution to demographic shocks in a closed economy. However, the second pillar could, in principle, permit investments in pension portfolios in economies not yet affected by adverse demographics. It could thus serve as a device to allow the population of aging countries to prepare for the consequences of a demographic shock by purchasing assets in "young" nations.[30] This means investment in less-developed and least-developed regions of the world.[31] However, such investment goes hand in hand with greater political risks.[32] At least in our era, favorable demographic development and political risks - including political instability, sovereign risk, the weak rule of law, inadequate shareholder rights, and restrictions on profit repatriation - are positively correlated. Empirically, investment in emerging markets might lead to higher returns, but it also entails a higher volatility of investment outcomes (Bebczuk and Musalem, 2009).[33]

Conclusion

Pension privatization in Eastern Europe has generated a learning process on the actual implications of privatization and the problems entailed in running privatized pension pillars based on individual accounts. Many of the problems of second pillars, as they were designed in the first wave of reforms, could be resolved by better

[30] It should be added that, until now, fund managers in CEECs' second pillars demonstrated considerable home bias, and investments outside the home country were normally allocated in OECD member states.

[31] According to the United Nations (2006), in less-developed and least-developed countries, the share of children ages 14 and younger is expected to remain above 20 percent, while the share of people ages 60 and older will stay below 20 percent until the 2050s. By contrast, in more-developed nations, the share of those ages 14 and younger on the total population will reach 15.5 percent, while the elderly (age 60+) will constitute 33.5 percent of the population.

[32] We use the term "sovereign risk" to include more than just the risk of sovereign default. This term also covers the risk that a sovereign would introduce foreign-currency regulations or a lower standard of shareholder rights, threatening the profitability of investments.

[33] A demographic diversification may also involve exposure to a possible exchange-rate shock at the time of retirement (Barr, 2000). If dissaving pensioners need to exchange the currency of the country in which second-pillar funds were invested, then this may lead to depreciation in the exchange rate of such currency and a decrease in the real value of their pensions.

regulation. That could, for instance, reduce the managing costs of running individual accounts. Furthermore, policy makers can use regulation to avoid the circular transaction through which second-pillar savings are invested in state bonds that actually finance the second pillar. The main lesson from the first wave of reforms, however, seems to be about the nature of the costs involved in transitioning from the PAYG system to a mixed system. Because the difference between explicit and implicit debt matters a great deal in the real world, the consequences of transitioning between the two systems are much more severe than assumed in many theoretical models that informed the first wave of pension privatization. Policymakers have become well aware of these costs. In the longer term, policy towards the second pillar has been conditional on the calculation of the long-term benefits that privatization brings along with its concomitant costs. Arguments about the costs and benefits have become more balanced, as many used in the first wave of reforms transpired to be myths.

This is not to say that the reform outcomes of the second wave appear optimal. In Hungary, nationalized pension savings were not used exclusively for the repayment of government debt. The new consensus on the desirability of the smaller second pillars—that thus appear more sustainable—is problematic given the large fixed administrative costs of running individual accounts with individual choice of pension provider.

Moreover, the prominence of the diversification argument in the recent discussion on reforms suggests that there are still lessons to be learned. As argued above, the merits of the diversification argument are questionable in a number of respects. What is more, the argument, as typically used in the region, often starts from the assumption of addressing future fiscal challenges for public budgets due to the aging process. It is thus based on the great myth of the first wave of reforms, that privatization can address the problem of aging. More generally, diversification as an insurance tool does not apply to the main challenges faced by retirement insurance in the twenty-first century.

In fact, it appears that the other rationale behind the diversification argument is beyond the analytical apparatus of positive economics or the social sciences: it is the normative bias against collective insurance solutions and the state in general. A deep mistrust of the state and distaste for collective solutions may make pension privatization seem worth the price (see also Vostatek, 2012, on the Czech policy discourse). Paradoxically, pension privatization as an ideological quest to reduce the reliance on the state, is likely to be a self-fulfilling prophecy: it produces unnecessary fiscal pressures that are likely to reduce the capacity of the state to deliver social insurance and compensate for market failures. For this reason, we do not find the normative rationale for diversification a wholly credible one.

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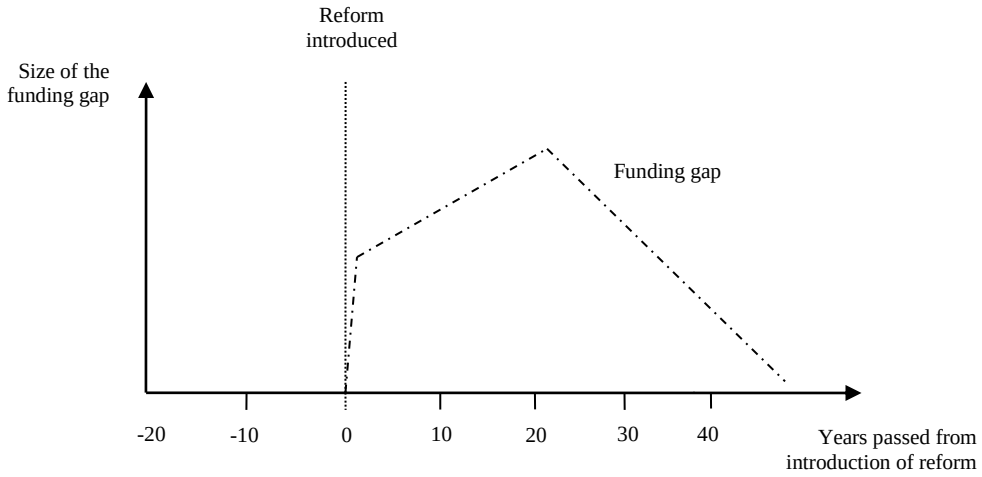
Table 1: Pension Reforms in Eastern European Countries

Country (year second pillar was launched)	Pension system in 2008 (total pensions contributions as % of wage, contributions to the second pillar); type of public first pillar	Main reform tendency during the economic crisis
Bulgaria (2002)	Three-pillar pension system (22% for regular employees, 5% + up to 1% of accumulated savings in second pillar as management fee); conventional defined benefit.	**No changes in contribution rates, but part of private occupational pension funds nationalized**; 1.8 percentage point increase in overall contribution rate.
Croatia [EU member as of July 1, 2013] (2002)	Three-pillar system (20%, 5%); point system.	**No changes in contribution rates**; those born between January 1, 1952, and January 1, 1962, who voluntarily joined the second pillar in the past can opt to move back to being full members of the first pillar only.
Czech Republic (2013)	PAYG system (28%, 20% of which are for old-age pensions only) complemented by third pillar; conventional defined benefit.	**Introduction of a voluntary second pillar** as of January 1, 2013, with 3 percentage point transfer from statutory social security contributions + 2 percentage points additional contributions by savers.
Estonia (2002)	Three-pillar system (22%, 6%); conventional defined benefit.	**Contributions returned to 6% after temporary lowering between 2009 and 2011**.
Hungary (1998)	Three-pillar system (33.5%, 8%); conventional defined benefit.	***De facto* nationalization of the second pillar and transfer of assets accumulated on second-pillar accounts to the state in a one-off transfer in 2011**; those who chose to stay in the second pillar can make voluntary payments to their pension accounts, but no statutory social security contributions are transferred into second-pillar accounts.
Latvia (2001)	Three-pillar system (20%, 8%); notional defined contribution.	**Contributions to second pillar set temporarily at 2% of covered income**, increased to 4% from

		January 2013.
Lithuania (2004)	Three-pillar system (26.35%, 5.5%); conventional defined benefit.	**Contributions to second pillar set at 2% of covered income**, with further decrease in 2012 (1.5%); an increase to 2.5% took place in 2013.
Poland (1999)	Three-pillar system (19.52% for retirement insurance only, 7.3%); notional defined contribution.	**Contributions to second pillar set to 2.3%**; increasing to 2.8% from January 2013; contribution rate to second pillar should stabilize at 3.5% of covered income by 2017.
Romania (2008)	Three-pillar system (29%, 2%); point system.	After a **temporary freezing of second-pillar contribution rates**, these reached 3.5% in 2012, increasing to 4% as of 2013.
Slovak Republic (2005)	Three-pillar system (18% for old-age insurance only, 9%); point system.	**Contribution rates decrease from 9% of covered income to 4%** from September 1, 2012; joining the second pillar is made optional with default option being not to join.

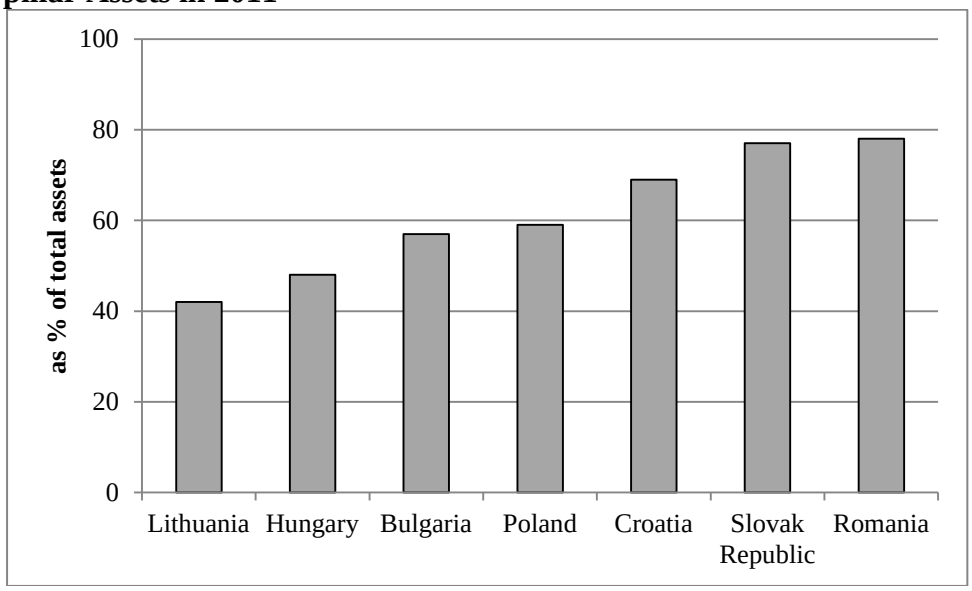
Source: Authors.

Figure 1: Development of the Funding Gap



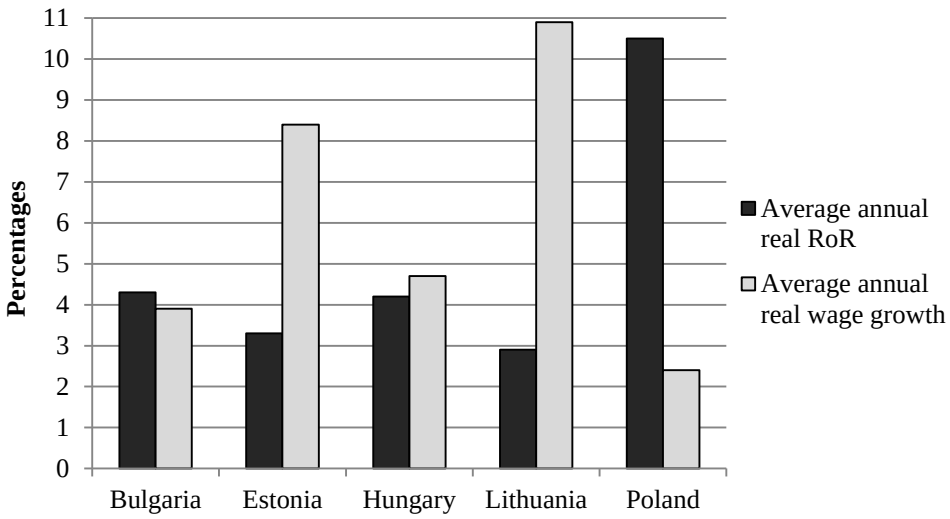
Source: Based on Simonovits (2003, 156).

Figure 2: Share of Government Securities and Bank Deposits on Total Second-pillar Assets in 2011



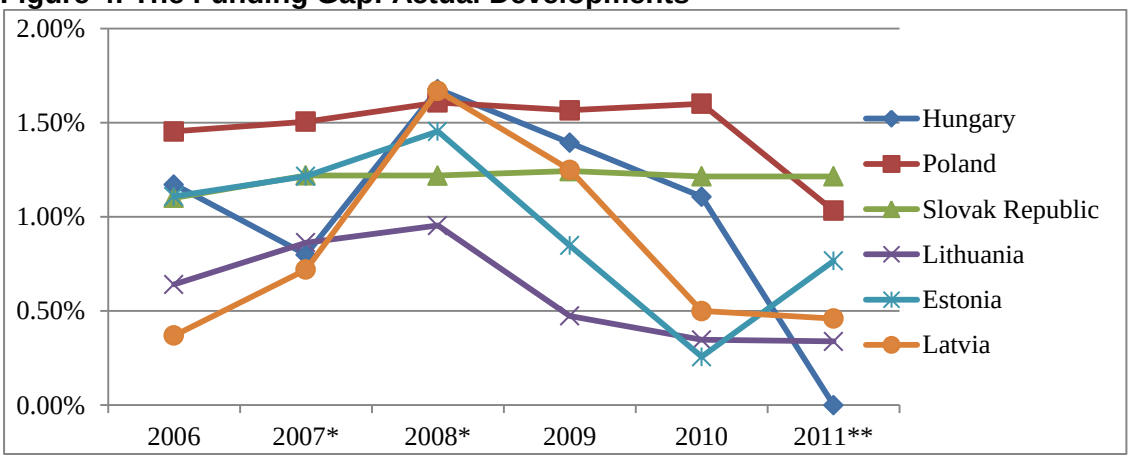
Source: Data provided by WB staff.

Figure 3: Average Real Wage Growth and Real Rate of Returns (RoR) in the Second Pillar, 2002 Inception [or 2002] to 2007



Source: Data provided by WB staff.

Figure 4: The Funding Gap: Actual Developments



Sources: Estonia: www.pensionikeskus.ee and World Development Indicators of the World Bank (WDI-WB); Hungary: Hungarian Central Administration of National Pension Insurance and Central Statistical Office; Latvia: Latvian Financial and Capital Market Commission and WDI-WB; Lithuania: personal communication with Prof. Teodoras Medaiskis and WDI-WB; Poland: Epstein and Velculescu (2011); Slovak Republic: Slovak Social Insurance Agency, Ministry of Finance of the Slovak Republic, and Bureau of Statistics of the Slovak Republic.
*the fluctuation of the funding gap in Hungary is influenced by changes in financial reporting between 2007 and 2008;
**Hungary's funding gap decreases to zero following the quasi-nationalization of the second pillar.