

# ETUI Policy Brief

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### Reforming pensions: the limits of diversification

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## Policy recommendations

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The assumed benefits of diversification – reducing the reliance of individuals on one form of retirement insurance – currently inform policy advice on pension reforms. The diversification argument also often justifies reforms of old age pensions, including their privatization. However, the merits of diversification, particularly if pursued through privatization, are questionable. First, actual gains from diversification are limited. Private pension systems are not immune to regulatory risks, as often assumed. Moreover, diversification cannot protect against the macroeconomic shocks that represent the main challenges for pension systems. Secondly, the macroeconomic gains from private pillars are often overestimated in the policy debate. Finally, the costs of diversification through privatization are very high, despite the popular myth about reducing the implicit debt. In reality, retaining debt in its implicit form is the preferable option for public finances.

## Introduction

Much of current policy advice on reforming old age pension systems is informed by the assumption about the benefits of diversification (see, for example, OECD 2012). Accordingly, pension systems composed of both public pay-as-you-go (PAYG) and private funded defined-contributions (DC) schemes are superior to single-pillar systems, as the types of dominant risk in these pillars are different and not perfectly correlated (for example, Whitehouse, D'Addio and Reilly 2009). Hence, as in the basic theory of portfolio allocation, enrolment in both public and private schemes should lead to more secure pensions for current workers. The argument has also been used to justify pension privatization as pursued in Central and Eastern European countries (CEECs). However, what are the actual costs and benefits of pension reforms aimed at diversification? In order to address this question, this policy brief makes three points. The first refers to costs and is relevant primarily to CEECs that were attracted by pension privatization. The remaining two points adjudicate the benefits and apply also to the reforms pursued in Western Europe.

First, as shown by the experience of pension reforms in CEECs, the costs of diversification are very high if pursued through (partial) privatization of PAYG pillars. The move to private funded schemes thus comes at a large cost to the public purse and leads to

increasing public indebtedness. This has been underestimated due to the ill-informed argument that increases in (explicit) public debt can somehow be ignored when it replaces implicit debt.

Secondly, the macroeconomic benefits of private pillars are overestimated. Policymakers have often been too optimistic about the gains from possible higher returns in the private pillars in comparison with the implicit returns in the PAYG pillar.

Thirdly, the actual risk reduction through diversification is limited. Private pension systems are not immune to regulatory risks, as is often assumed. What is more, diversification cannot protect against the macroeconomic shocks that represent the main challenges for pension systems.

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Each of these points is addressed in the sections that follow. The first two sections discuss the experience of pension privatization in CEECs. In the late 1990s to mid-2000s, the majority of CEECs pursued pension privatization, reforming their PAYG pension systems by following the model laid out by the World Bank in 1994. The World Bank 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. The second pillar was to be created by diverting contributions from the first pillar (privatization).

### 1. Pension privatization is too costly

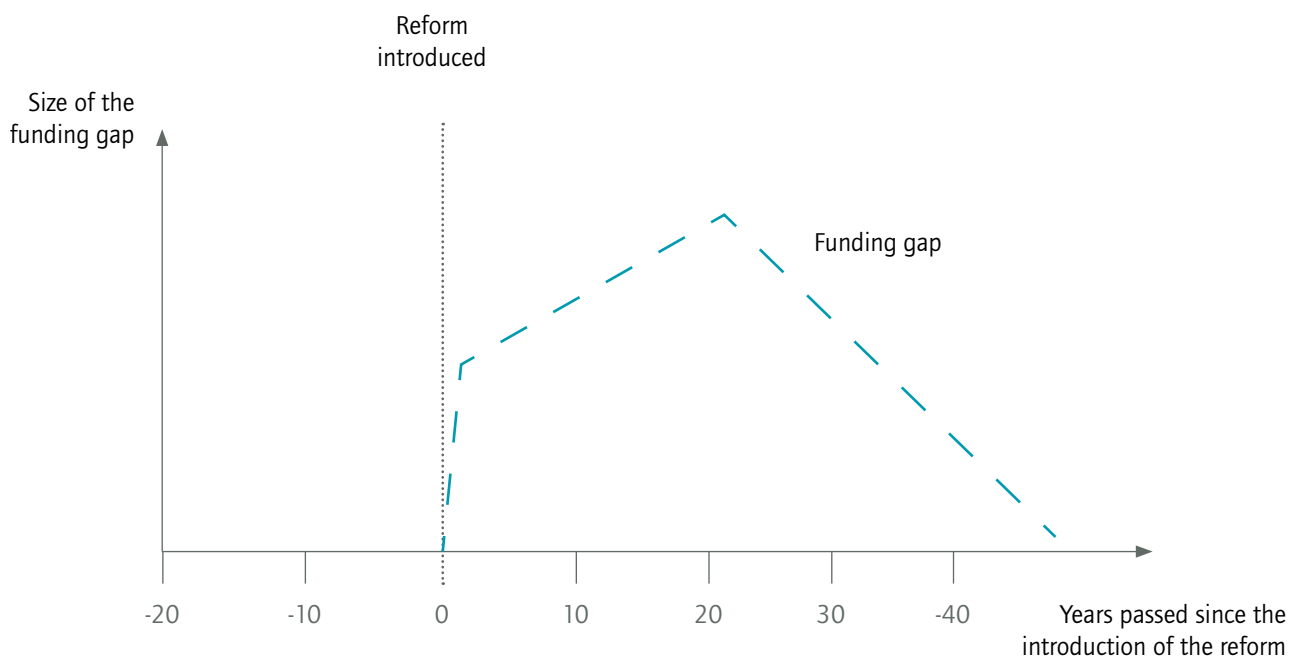
Pension privatization in CEECs was legislated in states that already had mature PAYG systems that cover pensions from present revenues. Pension privatization then diverted part of this revenue to the second pillar while the workers who could, in theory, reduce the burden on the state – by receiving part of their pension from the private pillar – were going to retire several decades after the reform has been introduced. This way, a funding gap has been created: 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. Moreover, 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 larger than the funding gap itself.

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 annual costs would have reached approximately 2.5 per cent of 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).

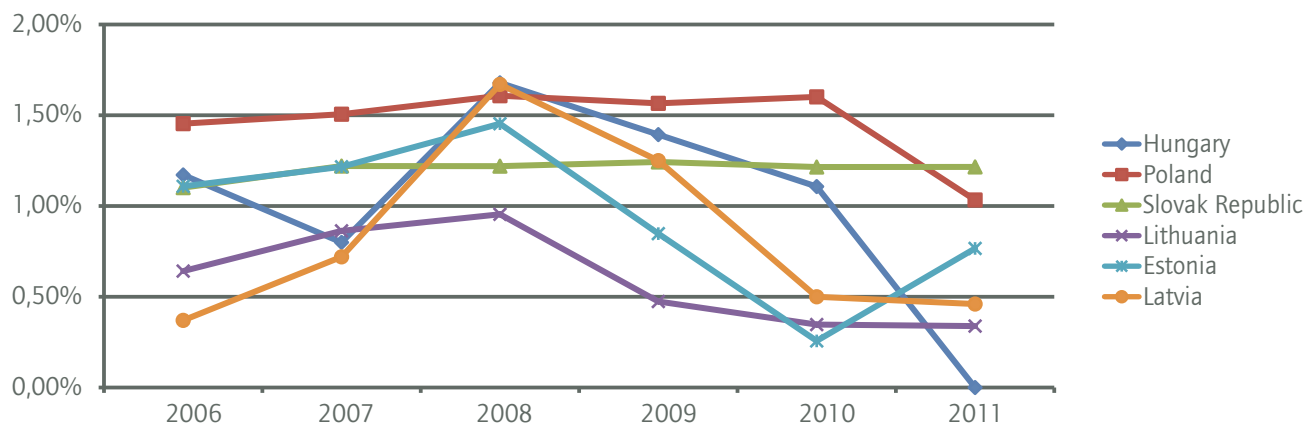
None of the early reformers provided a credible financing plan to cover the cash fallout until the World Bank-type pension system reaches maturity. The policies laid out to fund the transition costs were either politically unfeasible (that is, cutting pensions payable from the PAYG system in Poland) or insufficient to cover 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 reformers. In the context of a global economic recession that made debt financing less accessible, the CEECs saw a number of reform reversals (see Drahokoupil and Domonkos 2012). They reacted to growing credit scarcity on the international financial markets, as well as a ruling by EU authorities in 2010 that confirmed that public debt incurred by financing pension privatization cannot be exempted from the Maastricht criteria.

Figure 1 Development of the funding gap



Source: Based on Simonovits (2003, 156).

Figure 2 The funding gap: actual developments



Source: Drahekoupil and Domonkos (2014).

An overview of the funding gaps created by pension privatization in CEECs is provided in Figure 2. The reductions in the funding gap reflect the reform reversals. The funding gap hitherto experienced was only a fraction of the deficit that will occur once the baby boomer generation retires.

**Why was the funding gap ignored?**

The lack of realistic financing plans can be attributed to a poor understanding of the nature of the funding gap. In particular, the differences between the implicit debt, implicit financing and actual deficits were conflated. First, it was often ignored 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. Secondly, the reformers worked on the assumption that the debt resulting from financing the funding gap should be discounted from total debt levels because it was a result of making the implicit debt explicit. Some proponents of pension privatization indeed 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.

The implicit debt is a theoretical construct that refers to liabilities in the form of pensions due in the future. 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.

Both implicit debt and implicit financing are thus 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 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 transferred to individual accounts in the private scheme. A full privatization relieves the state of 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 financing 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.

Thus, in the context of the World Bank-type reform, the transition costs actually 'pay' only for transforming a mature PAYG system into a mixed system with a pre-funded pillar. The immense costs associated with this transition would have probably led to adjustments in the legislation of the CEECs' second pillars even in a more favourable global economic environment. Instead of being the root cause behind rolling back the private system, the current financial crisis merely worked as a catalyst in the process of reform reversals.

While pension privatization imposed a high immediate burden on the budget, it may not be superior to parametric changes. In some countries, such as Hungary (see Égert 2012), introducing a second pillar could have actually lowered the costs of the country's pension system in the long term, but this savings effect would be driven by the indirect effect of downsizing the first pillar characterized by a too generous replacement rate (that is, by lowering pensions). In principle, no pension privatization is needed to do that.

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, in theory, pension privatization is cost-neutral. 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. The outcome is thus a higher level of public indebtedness, but the operation of making the implicit debt explicit does not cost society and the public purse anything.

However, such a model is based on the unrealistic assumption of perfect rationality and information. This assumption enables the perception of implicit and explicit debts/savings as equivalent: an increase in the level of public indebtedness would thus have no implication for the ability of the state to borrow – and the newly created savings would have no implications for the savings behavior of households. In the real world, however, future liabilities of the state towards its citizens (that is, the implicit debt) are of a very different nature from 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. 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 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. Therefore, from the perspective of the state, retaining debt in its implicit form is the preferable option.

## 2. Private pillars fell short of expectations

The assessment of costs and benefits that informed early pension privatization reforms also erred on the benefit side. Policymakers were too optimistic about the gains from possible higher returns in the funded pillar (in comparison with the implicit returns in the PAYG pillar). First, a major benefit of pension privatization was the assumed higher rate of return in the pre-funded scheme. In practice, however, government bonds constituted a large part of pension fund portfolios, making privatization appear a pointless accounting exercise. Government bonds and bank deposits represented, on average, two-thirds of the total assets of the

pension funds in 2011 and reached almost 80 per cent in the Slovak Republic and Romania.

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 US stock market, which cannot be easily generalized outside the United States. One can find several countries where the long-term portfolio returns do not compare well with real wage increases. The experience of converging economies in CEECs also showed that returns in pension fund portfolios did not tend to perform well in comparison with wage growth (see Drahokoupil and Domonkos 2014).

Secondly, the comparison of returns in pre-funded and PAYG schemes cannot be disentangled from the transaction costs of 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 costs of running the system also put a question mark over the rationality of smaller second pillars introduced in the second wave of reforms. The experiences of the United Kingdom and Chile, which took a hands-off approach to regulating management fees, show that the fees represented a drag on investment returns, consuming about 20 per cent of pension savings. In CEECs, management fees varied widely between countries and investment products. While the overall tendency has been towards a gradual decline in the percentage share of fees on net asset value and contributions, there have also been countries in which fees remained relatively high. In 2007, annual administrative charges represented as much as 2 per cent of total assets in Hungary and 1.5 per cent 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 per cent 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 in reaction to owning shares in pension portfolios, savings accumulated on individual pension accounts cannot be allocated to 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 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. This was another rather optimistic and challenging assumption that proved unrealistic in the context of the CEECs. We are not aware of any empirical evidence that suggests an improvement of taxpayer discipline in the CEECs.

### 3. The limited benefits of diversification

The experience with pension privatization led to a better awareness of the actual costs of privatization and to more realistic expectations from the private pillars. Thus a diversification argument gained prominence. It provides the main justification for pension privatization and also informs other types of pension reform.

Diversification refers to the 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, the benefits of diversification as a risk-reducing mechanism are limited in the context of pension systems. 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 macroeconomic shocks, particularly those stemming from demographic aging.

Proponents of diversification appear to refer primarily to protection against regulatory risks – that is, reliance on the state in old-age insurance. The funded pillar is believed to decrease savers' exposure to the risk of future governments defaulting on pension liabilities by arbitrarily changing the benefit formula of a defined benefit (DB) scheme and thus lowering pensions, as pensions from the second pillar are to be based on standard actuarial calculations. These take 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 a second pillar that, from the citizen's point of view, owning explicit debt in the form of government bonds should be preferred to a mere promise from the government concerning future pensions.

In reality, any pension arrangement is vulnerable to bad government. While a complete default on liabilities toward pensioners relying on state-run PAYG systems is very unlikely even under extreme conditions, a partial default on government liabilities, both explicit and implicit, may easily take place through an inflation tax or changes in the taxation of interests from state securities. 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. Thus, fiscally stable states are of great importance for both public and private pension pillars.

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 is often based on scepticism regarding the ability of the state to pay adequate pensions in the future. The 'elephant in the room' here is resilience to the shock of demographic aging. The diversification argument seems to hide the old myth of pension privatization, namely that it allows insurance or hedging against demographic shocks. An 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 are 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 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 and Diamond 2008). 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 for the adverse consequences of this output shock for the living standards of the elderly. Only those measures will efficiently combat the adverse effect of demographic trends on GDP that address demographics directly (increasing labor participation, fertility, immigration or retirement age) or improve the productivity of the workforce (investment in education and new technologies).

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 reduce pensions. In 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 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, allow for investments in pension portfolios in economies not yet affected by adverse demographics, serving 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. In practice, this means investment in less-

developed and least-developed regions of the world. Nevertheless, such investment goes hand in hand with greater political risks. 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).

## Conclusions

It has been argued that the merits of the diversification argument are questionable in a number of respects. Most importantly, diversification does address the main challenges faced by retirement insurance in the twenty-first century. In fact, it appears that the actual rationale behind the diversification argument is the normative bias against collective insurance solutions and the state in general. Another possible rationale is the rent-seeking pressure from the financial industry.

In Eastern Europe, many of the problems of privatized schemes could be resolved by better 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. However, the main lesson from the privatization experiments concerns the nature of the costs involved in transitioning from the PAYG system to a mixed system. Still, a deep mistrust of the state, distaste for collective solutions and possible rents for partial interests may make pension privatization seem worth the price. Pension privatization is thus still on the agenda. 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 these reasons, we do not find the normative rationale for diversification through privatization a wholly credible one.

### Further details

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