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THE 2022 GREEK PENSION REFORM REBIRTH OF CARVE-OUT PRIVATIZATION IN EASTERN EUROPE

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The 2022 Greek pension reform – Rebirth of carve-out privatization in Eastern Europe

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Abstract: *Greece was forced to implement unprecedented austerity measures over the 2010-2020 period in order to consolidate the public pension system and make up for the lack of appropriate entitlement reforms during the past decades. Despite financial stabilization being mostly achieved by 2020, the newly elected government opted to abruptly change the course of pension consolidation and implement the controversial carve-out pension funding in 2022. Although inspired by the World Bank (1994) pension privatization blueprint, the Greek 2022 reform features a novelty element of entrusting the management of pension savings to a dedicated government body in order to try to remedy inherent market failures in private pension provision. Similar to earlier reforms in Eastern Europe, the multi-decade transition costs of carve-out funding have been vastly underestimated in Greece which will give rise to fiscal distress in the coming years. The fiscally imprudent aspects of the 2022 reform will likely be brought to the fore when favourable international financing terms start to change. Unless firm political commitment is established to implement the missing austerity measures needed to finance the transition costs, Greece might end up resorting to reform reversals similar to the ones already implemented across Eastern Europe.*

Keywords: pension privatization, carve-out financing, transition costs

1. Introduction

The 2008 global financial crisis brought to light the unsustainable fiscal positions of many European countries, foremost Portugal, Italy, Greece and Spain – which were at the time derogatorily labelled as PIGS. With public pensions being the major expenditure item in Europe, fiscal problems in these countries were dominantly driven by unsustainable pension outlays due to the lack of appropriate reforms over the years. Pension problems were especially severe in Greece, where the overly generous public system was not only fiscally unsustainable but was also next to impossible to manage due to pronounced fragmentation caused by different interest groups, separate schemes and decentralized management. In order to avoid bankruptcy, Greece was forced to implement harsh pension austerity measures over the 2010-2020 period which often changed from year to year due to Court rulings and changes in political circumstances, thus testing inter- and intra-generational equity considerations and severely undermining the credibility and trust in the public pension system.

After much pain and suffering, the structure of the Greek public pension system was (mostly) consolidated by 2020 and was on its way to achieving fiscal sustainability. In particular, the public pension system was reformed to consist of a government-financed universal old-age benefit, earnings-related defined-benefit (DB) pillar financed with a 20% contribution rate and a notional defined-contribution (NDC) pillar financed with a 6% contribution rate. However, after right-wing parties won the 2019 elections, the new government abruptly changed the course of pension consolidation and opted for the controversial carve-out pension funding – by legislating the transformation of the 6% NDC pillar into a fully-funded defined-contribution (DC) system from January 2022.

The 2022 pension funding reform closely resembles the carve-out pension privatization blueprint that was put forward by the World Bank (1994) and implemented earlier in many Eastern European countries. The Greek reform, however, features a major innovation with respect to the original privatization blueprint – to account for market failures inherent in the private pension provision, and inspired by the impressive performance of government managed schemes in several OECD countries, the management of pension savings is to be entrusted to a dedicated government institution.

We show that, similar to earlier privatizations in Eastern Europe, the Greek government has vastly underestimated the transition costs during the reform planning stage and has relied on an old pension privatization "myth" (Barr, 2000; Orszag and Stiglitz, 2001; Beattie and McGillivray, 1995) of economic growth acceleration in order to justify this sudden change in the course of pension consolidation. However, more than 25 years of extensive experience in Eastern Europe has thoroughly debunked the privatization myths that had been initially put forward by the World Bank (1994). The failure to meet these unrealistic reform expectations led to a wave of reform reversals – ranging from outright dismantling of mandatory private pension funds in Hungary and Poland (Simonovits, 2011; Fultz, 2012), their scaling-down in Latvia, Slovakia or Romania, to the elimination of carve-out financing in Lithuania and Estonia (Altiparmakov and Nedeljković, 2021). Coincidentally, Greece became the first old-EU

member state to join the carve-out pension funding wagon – which was being abandoned by its Eastern European counterparts.[1]

This article argues that Greek policy makers failed to recognize a major lesson from Eastern Europe and avoid the carve-out approach to pension funding. While pension funding is traditionally organized in a supplemental manner in Western Europe and North America, the carve-out financing in Eastern Europe proved to be inherently unstable and introduced fiscal and economic tension between the Pay-As-You-Go system and the funded pension pillar. We also argue that there is no evidence to suggest that the Greek carve-out pension funding would result in any tangible acceleration of economic growth, as this macro-economic improvement eluded earlier reformers in Eastern Europe and Latin America. Finally, we note that government management, if implemented properly, could be a promising alternative to avoid the drawbacks of private pension provision, but this approach will introduce additional political risks on top of fiscal risks inherent in the carve-out financing which, if left unaddressed, could lead to reform reversals in the future.

This paper is structured as follows: the second section describes the painful and unorderly manner in which pension austerity was implemented over the 2010-2020 period, while the third section explains how privatization initiatives came about. The fourth section argues that the reformers' hopes for increased national savings and growth acceleration are misplaced and unfounded. The fifth section shows that government estimates are vastly underestimating the actual transition cost that will emerge over the next 50 years. The sixth section explains that the government management of pension savings might be a promising alternative to market failures inherent in private pension provision, but will be accompanied by significant political risk. The seventh section identifies the carve-out financing approach as the root cause of reform reversals in Eastern Europe and suggests similar outcomes could be seen in Greece unless firm political commitment is made to implement the missing austerity measures. The last section concludes.

2. Consolidation of the Greek public pension system

In order to function credibly, public Pay-As-You-Go pension systems require regular actuarial reviews so that changes in demographic and economic trends can be identified early and accommodated with relatively modest adjustments, instead of allowing financial imbalances to progress to the point where they require radical parametric changes that could undermine participants' trust in the system. To this end, the governance of United States Social Security system, a contemporary of the Greek public pension system, has been driven by regular actuarial reviews. First such report of the Social Security Board of Trustees was published in 1941 and concluded that due to "the cumulative growth of the disbursements, any long-term deficiency in the finances of the program would be apparent well in advance, and,

[1] We use the terms "carve-out pension privatization" and "carve-out pension funding" interchangeably in this article to refer to pension funding efforts financed by a diversion of existing PAYG contributions, thus creating a transition deficit in the public PAYG system. We also use "reform reversals" in this article, since this term has become widespread after being introduced by the World Bank, but we make use of this term without imputing any implicit negative value judgements.

therefore, could be met without serious shock or disturbance, by moderate changes in the financial provisions" (Hines and Taylor, 2005). However, pension governance in South-East Europe, including Greece, had not been driven by actuarial reviews during most of the twentieth century.

Public earnings-related pension system in Greece was founded in 1934. Over the decades, separate schemes for different occupations and different sectors of the economy emerged, giving rise to different benefits rules being applied to different employees, with influential groups securing privileges in terms of higher benefits and early retirement options. The system thus became increasingly fragmented, across cohorts and pension tranches, weakening the contribution-benefit link and the social-insurance design of the original system. Consequently, after the 1980s, pension expenditures were almost decoupled from system revenues, with growing deficits financed by ad-hoc government transfers, without an effective brake on expenditure growth. Appropriate entitlement reforms (retirement age, benefit structure, privileged groups) were constantly postponed, which precluded longer-lasting financial stabilization (Nektarios and Tinios, 2019). Despite the acceleration of demographic aging in the 2000s, Greek entry into the Eurozone in 2001 led to the reduction in interest rates and the cost of government borrowing, which all but eliminated fiscal incentives to implement the long overdue entitlement reforms.[2]

Pension spending thus grew from 11% of GDP in 2000 (below the EU average) to 14.8% of GDP by 2010 (second largest after Italy). Pension contributions covered less than half of pension spending in 2010, with the pension deficit of 7.3% of GDP accounting for more than two thirds of the overall fiscal deficit. Despite being on an obviously unsustainable trajectory, favourable financing conditions allowed the pension system to continue operating with large deficits and growing public debt, until borrowing conditions sharply deteriorated with the emergence of the Global Financial Crisis. Global crisis brought the unsustainable public finances to the fore, effectively shutting Greece out of the financial markets and forcing it to approach the supra-national creditors (IMF, ECB and EC – The Troika) for assistance in order to avoid bankruptcy. Pension reform was, rightfully, at the top of the comprehensive fiscal consolidation agenda put forward by the Troika.

In 2010 Greece resorted to a long overdue "standard set" of parametric reforms to tighten the eligibility and generosity of pension benefits for future retirees. In particular, the early and statutory retirement age was set at 60 and 65 years of age, the number of contributing years for full pension were increased from 35 to 40 and early retirement penalties were introduced at the rate of 6% per year. Furthermore, the reform introduced a unified benefit rule for all beneficiaries by increasing the pensionable earnings from the best five of the last ten years to the entire lifetime earning history and reducing the overly generous accrual rates of 2% to 3% per year to 0.8% - 1.5% of earnings per year. However, reform provisions included extensive grandfathering, especially related to early retirement, which enabled many eligible workers to retire early in order to avoid radical deterioration of pension benefits under the new system. In turn, massive inflow of early retirees increased pension outlays, thus undermining the deficit reduction targets previously agreed with the Troika.

[2] The remainder of this section draws heavily on Kangur et al (2021) which provide a detailed description of pension consolidation efforts over the 2010-2020 period.

By 2012 it became apparent that stabilization attempts based on "standard" parametric reforms aimed only at future retirees would not suffice due to the high level of existing pension benefits (resulting from overly generous past legal provisions). The comparisons in Table 1 reveal that the level of public pension benefits in Greece was not synchronized with its economic productivity and fiscal capacities. In particular, the ratio of average pension to average wage of 68% in Greece was much higher than in Germany (41%), with Greek pensioners also retiring five years earlier than their German counterparts and with significantly shorter contribution periods. In fact, a worker earning an average wage and retiring at 65 years of age with 45 years of contribution payments would be receiving a virtually identical pension in nominal terms (~1200 Euros per month) in both countries, despite the fact that productivity and wages in Greece are less than half of those in Germany.

Table 1 – Comparison of Greek and German public PAYG systems, monthly amounts in Euros

	Germany	Greece
GDP per capita (2015)	3108	1358
Average wage (2015)	3131	1429
Average pension (2015)	1285	971
Ratio of average pension to average wage	*41%*	*68%*
Effective retirement age (new old age pension)	64	59
Average contributory years (new pensions, 2010)	36.3	29.3
Standard full-career pension (2014)	1287	1152
Ratio of standard pension to average wage	*41%*	*81%*

Source: Kangur et al (2021).
Note: Standard full-career pension corresponds to a benefit earned by a worker with average wage retiring at the age of 65 with 45 years of insurance.

Austerity measures were thus expanded in 2012 to include existing retirees – pensions in payment were frozen (initially until 2016, but eventually prolonged to 2022) while Christmas and Easter bonuses for pensioners (13th and 14th payments) were eliminated. Furthermore, a progressive cut of existing pensions above a certain limit was legislated. Lastly, the retirement eligibility was further tightened by increasing the early and statutory retirement age by two years, to 62 and 67, respectively. However, in 2015 the Court of State ruled that the progressive cut in existing pensions, which was planned to yield budget savings of more than 2% of GDP - was unconstitutional. This setback undermined pension stabilization efforts yet again.

In 2016, Greece implemented a comprehensive reform package to deal with previous shortcomings. Extensive grandfathering provisions from earlier reforms were contained by legislating new eligibility criteria (early and statutory retirement ages of 62 and 67 years, 40 years of pensionable service) to become fully effective by 2022, with retirement ages increasing in line with life expectancy afterwards. Early retirement penalties were increased from 6% to 16% per year. Finally, and most importantly, the unified benefit formula from 2010 (pensionable earnings based on lifetime earning history, reduced accrual rates in the 0.8% to 1.5% range) was legislated to apply not only to new retirees but also to existing ones. This meant that pension benefits for about two million of existing pensioners were recalculated according to the new benefit rules which implied a lower benefit for 1.4 million of them.

However, it was decided that existing pensioners would not have their actual benefits reduced and a transitional arrangement was introduced. The surplus of existing benefits over the ones suggested by the reformed benefit formula was to be treated as a notional personal difference that would be offset against future pension indexation. Thus, the 1.4 million pensioners in this category would not see their benefits increased for regular pension indexation in future years until notional personal difference is fully amortized, which might take 10 years or more, depending on individual circumstances.[3]

The 2016 reform thus (mostly) managed to consolidate the structure of the Greek pension system in three complementary tiers:

I) government financed universal benefits for old-age (360 Euros per month),

II) main contributory earnings-related DB tier with a 20% contribution rate and accrual rates in the vicinity of 1% and

III) auxiliary NDC tier with a 6% contribution rate.

By 2019, the gross pension spending in Greece stood at 15.7% of GDP, still being the largest in EU, together with Italy. However, it should be noted that this result was partly driven by the negative GDP dynamics which contracted by 25% compared to the pre-crisis level. The Aging Working Group (AWG) projections indicate that pension spending is to decline to 13.8% of GDP by 2030 and roughly stay at that level over the 2030-2050 period (AWG, 2021). Thus, if the 2016 reform trajectory is successfully maintained over the years, it should be able to stabilize the Greek pension system in the medium-to-long term.

In 2017 another pension reform bill was adopted but this time, contrary to previous measures, it was not austerity driven. Instead, after a decade of consolidation and GDP contraction, economic growth had become a top social priority. To this end, the 2017 law was a part of a larger reform package to stimulate growth and employment. In particular, the 2017 law was supposed to eliminate the transitional arrangements of the 2016 reform and immediately apply the new benefit formula, thus reducing pensions for 1.4 million of existing retirees (with reductions capped at 18%). This would produce budget savings of 1% of GDP to be used to finance pro-growth reforms, such as income tax cuts, active labour market policies and targeted social spending. This budget-neutral rebalancing of the fiscal policy mix was expected to improve intra-generational equity since high-income retirees with shorter years of contributions would experience larger cuts, while benefits for lower-end pensioners with higher years of contributions would be slightly increased. Furthermore, reducing the overly generous benefits of existing retirees in order to finance pro-growth policies would also improve inter-generational equity, since future retirees will be subject to far less generous pension provisions. However, due to the lack of political commitment, the 2017 reform bill was abolished a few days before it was to become effective in 2019.

[3] For existing pensioners where new benefit formula implied a higher pension, it was legislated that the corresponding pension increase will be implemented in five equal annual steps over the 2019-2024 period.

3. The change of course in pension reforms

The auxiliary pension provision began forming in Greece in the 1930s, based on the legislation of the main earnings-related system which was established in 1934. The employees of many different professions and companies founded several auxiliary funds and this process kept growing over the decades. As of 1983, the auxiliary pension has been extended to the majority of employees. The 1992 reform introduced a unified pension formula for all auxiliary funds, which had been previously operating according to their own provisions. Over the course of recent pension consolidation, the 2012 reform unified all previously separate funds and legislated the unified auxiliary pension fund to operate on a NDC PAYG basis from 2014. Pension rights accumulated before 2014 were credited with a 0.45% annual accrual rate.

While the auxiliary pension provision is operating in parallel with the main earning-related scheme, it is financed separately with a 6% contribution rate (3% employee, 3% employer, without any state contribution). In order to maintain financial stability, a balancing mechanism is being applied to freeze pension indexation whenever the system is in deficit. Out of the total pension spending of 15.7% of GDP in 2019, auxiliary pension spending accounted for 1.9% of GDP and was completely covered by auxiliary contributions of 1.9% of GDP. Independent financing mechanism provided (some) ground for treating auxiliary pensions separately, and with a higher level of protection, during the 2010-2016 consolidation efforts. In doing so, the zero-deficit balancing rule was reinforced to preclude the possibility of government subsidies to auxiliary pensions in the future.

Auxiliary pension benefits are expected to become more modest in the future and AWG (2021) projections indicate the effective accrual rate to go down from 0.45% for those retiring in 2020 to 0.37% for those retiring in 2040. This is a natural consequence for a system based on PAYG financing with a fixed contribution rate in the face of demographic aging and scheme maturation (auxiliary system is not as mature as the main pension system). This benefit decline makes auxiliary pensions an easy target for pension privatization proponents to argue that this system is a poor deal for young workers to participate in. One obvious reform option could have been to merge auxiliary pensions with the main DB pensions and to consolidate the two earnings-related tiers. In doing so, one could potentially envisage a development of a supplementary funded pillar to complement future public benefits. In fact, the Committee of Experts formed by the government in 2015 suggested the integration of auxiliary pension into the main pension scheme, but the proposal was overruled (Nektarios and Tinios, 2019).

After winning the 2019 elections, right-wing parties formed the government and presented a comprehensive growth-enhancing package featuring pension funding reform very similar to the carve-out pension privatizations implemented in many Eastern European countries around the turn of the millennium. The law was adopted in August 2021 and legislated the transformation of NDC auxiliary pensions into a fully-funded DC pillar as of January 2022. Funded DC pillar will be mandatory for all new entrants into the labour force, while workers younger than 35 will be able to voluntarily opt-in until the end of 2023. The government will guarantee future members of the funded system to receive at retirement at least the amount of paid contributions, indexed for inflation (Athina984, 2021a). The key difference with respect to earlier pension privatizations is that in order to avoid the poor performance of competitive private pension provision in Eastern Europe, Greece decided to

entrust the management of private pensions savings to a dedicated and professional government body – the Hellenic Auxiliary Pensions Defined Contributions Fund (TEKA).

Notwithstanding the novelty element of government managed savings, Greek officials have been mostly relying on pension privatization arguments put forward by the World Bank (1994), namely the expectations of accelerated economic growth and higher benefits for future pensioners, when promoting the virtues of the 2022 funding reform (Athina984, 2021b). The reasoning behind pension privatization initiatives in Greece is summarized in a World Bank Discussion Paper by Nektarios and Tinios (2019) who argue that the existing PAYG system, even after a successful fiscal consolidation, would continue to undermine economic growth due to its inability to support the much-needed increase in national savings and investment that would in turn accelerate the existing anaemic growth rates. This line of reasoning, which was also used to promote earlier pension privatization reforms, was however labelled as a myth by leading pension scholars (Barr, 2000; Orszag and Stiglitz, 2001) and seems to have been thoroughly refuted by the actual empirical evidence.

4. The Myth of Pension Privatization Growth Acceleration

The World Bank (1994) puts forward several possible avenues through which pension privatization could lead to higher economic growth. The most prominent avenue in the literature, and the one most relevant for Greece, is the national savings channel whereby privatization increases savings, which are then channelled into productive private investment, thus accelerating economic growth. However, it should be stressed that carve-out pension privatization *per se* does not influence national savings at all.

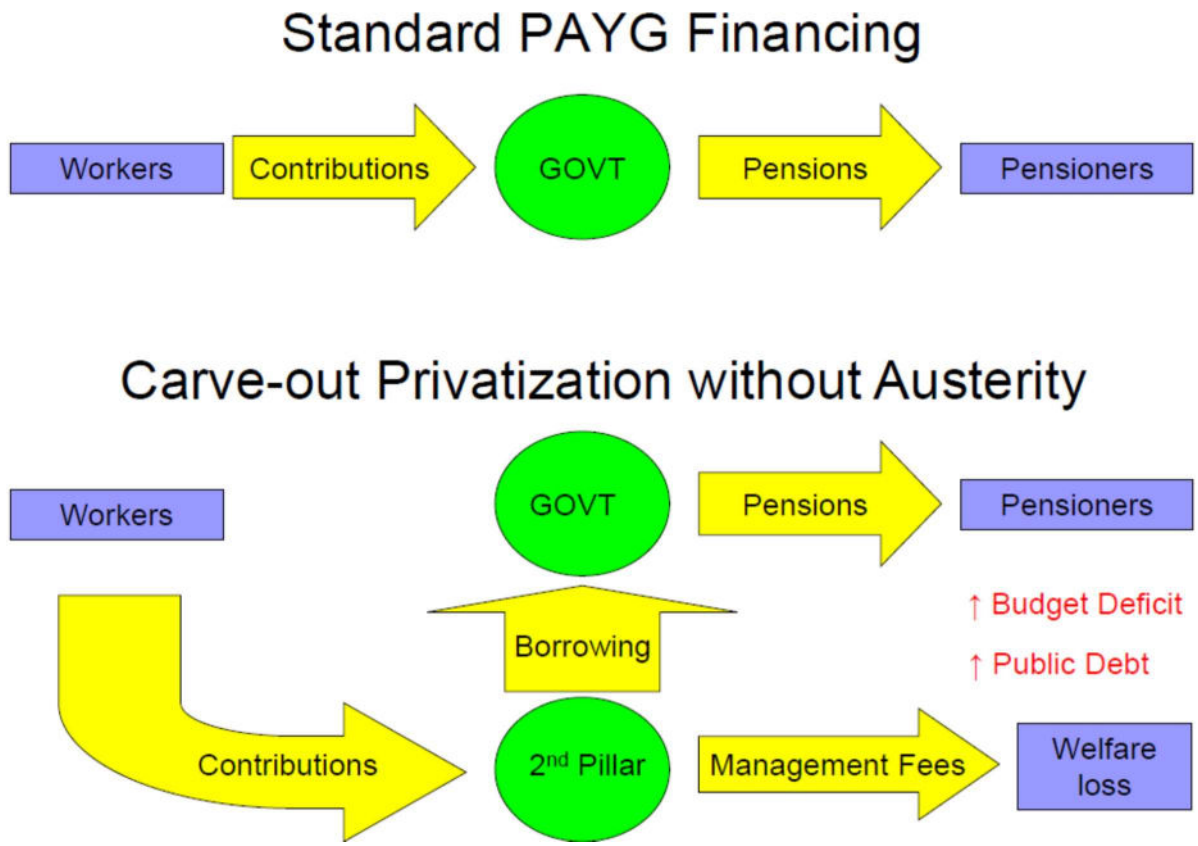
The carve-out privatization diverts (a part of) existing PAYG contributions into private pension funds, thus formally increasing private savings, but at the same time reducing public savings by the exact same amount – thus leaving the overall national (public + private) savings unchanged. This is a basic macroeconomic identity. It is the reaction of government and households to pension privatization that determines the actual outcome on national savings. If the households trust the privatization reform and treat newly founded pension funds as genuine retirement savings, they may partially substitute their existing forms of savings with private pension fund accumulations, thus increasing their consumption and leading to an actual decrease in national savings. Therefore, the reaction of the government is crucial in achieving any increase in national savings during the carve-out pension privatization.

It is up to the government to implement credible and long-lasting austerity measures to cover the multi-decade revenue short-fall from the diversion of existing PAYG contributions into the private pension funds. Naturally, this kind of austerity requires strong political commitment and broad support. The iconoclastic complete pension privatization in Chile in 1981 enjoyed the support of the Pinochet regime that implemented drastic austerity measures to produce surpluses equal to 8% of GDP in the non-pension part of the budget for several decades (Arenas de Mesa and Mesa-Lago, 2006). However, political determination and social support for adequate austerity measures have mostly been absent in Eastern Europe, with the World Bank authors (Schwarz and Arias, 2014) acknowledging the general lack of positive effects on national savings. In turn, econometric analysis indicates that, controlling for relevant growth covariates, pension privatization failed to produce any statistically significant growth

acceleration in Latin America or Eastern Europe (Altiparmakov and Nedeljković, 2018). It is thus no surprise that the World Bank Independent Evaluations Group (2006) concluded that the „empirical evidence suggests that the secondary objectives of privately funded pension plans to increase savings, develop capital markets, and increase worker participation in the pension system have remained largely unmet".

Implementing a carve-out privatization without the accompanying austerity measures gives rise to a suboptimal PAYG mechanism in disguise, as depicted in Graph 1. After existing PAYG contributions are diverted to private funds the government faces insufficient financing for existing PAYG pensions. It is thus forced to borrow in the bond market, with the lenders most often being the very same, cash-rich, pensions funds since they face a scarce supply of domestic financial products and/or limitations to investment abroad. Indeed, domestic government bonds had been a dominant pension asset in many reforming countries, including Hungary, Poland, Croatia, Romania or North Macedonia. These outcomes are obviously suboptimal not only due to hefty management fees charged by private funds, but also due to the increase in budget deficit and public debt these transactions create (Altiparmakov, 2018a).[4] Thus, the Polish reform-reversal in 2014 was aimed exactly at eliminating this disguised-PAYG mechanism by replacing it with traditional public NDC PAYG financing.

Graph 1 – The disguised-PAYG financing mechanism



Source: Altiparmakov and Nedeljković (2021).

[4] While some privatization proponents look favourably at this transformation of the implicit pension debt into explicit public debt, the fact is that financial markets and rating agencies treat public debt less favourably than the implicit pension debt (Cuevas et al, 2008).

Given the negative experiences from Eastern European counterparts, how likely is it to expect a firm political commitment to long-lasting austerity measures need to finance the carve-out transition costs in Greece? Judging by the recent history – not very likely, as it was exactly the persistent lack of political commitment to fiscal prudence that was the root cause of the 2010 Greek fiscal crisis. The abolishment of the 2017 reform package is a very telling example in this case, as this fiscally sound pro-growth reform lacked political support despite having positive effects on inter- and intra-generational equity. In addition, the extent of austerity that would have been introduced by the 2017 pension bill was actually more modest and shorter-lived than the extent of austerity measures that will be needed to finance the multi-decade transition costs of the 2022 carve-out reform, as we elaborate in the next section.

5. Transition costs

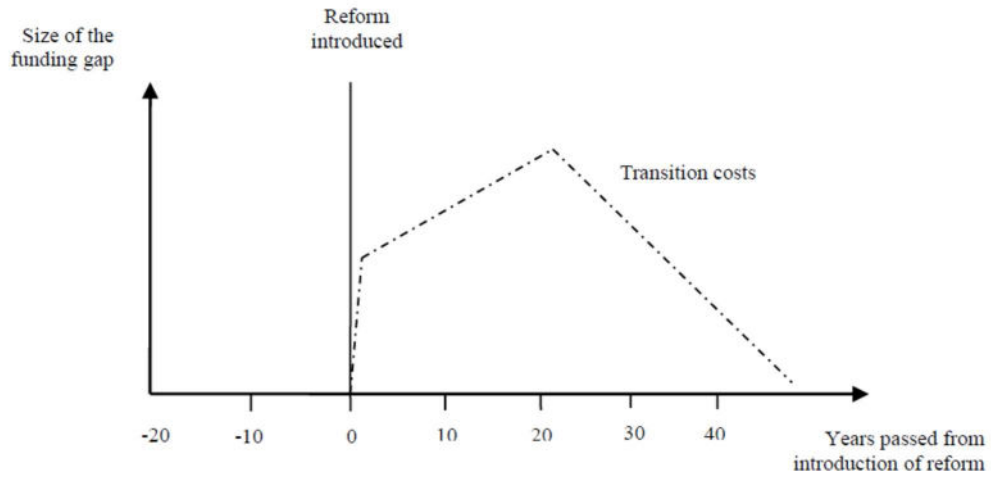
For any society considering pension privatization, the most demanding task is the one of deciding how to finance the multi-decade transition costs, or the so called *double-burden problem* where existing generations of workers have to not only pay for the PAYG pensions of existing retirees but to also pre-fund their own private pensions. This decision involves making huge intra- and inter-generational redistributions, which can prove to be a political nightmare, if not an impossible task.

From a technical point of view, projecting transition costs is a straightforward task as carve-out transition dynamics follow the generic trajectory depicted in Graph 2. For simplicity, assume a uniform labour force covering ages 25 to 65. In the inception year, only workers younger than 35 years of age are allowed to switch to private funds, so that revenue losses in the PAYG system are only for the contributions of a quarter of the labour force aged 25-35. Every year, a new cohort of young workers joins the private system which correspondingly increases the annual transition cost until, after 30 years, the entire labour force has joined the private system and annual transition costs have peaked. After the 30th year, oldest cohorts participating in the private system start to retire and corresponding payments from private funds start reducing the annual transition burden. However, it takes another 20 years or so until outflows from the private system surpass inflows into it and the transition costs cease to exist.

In the case of Greece, auxiliary pension contributions amounted to 1.9% of GDP in 2020 and are projected to decline to 1.7% of GDP over the next 40 years. If most of the eligible workers younger than 35 years decide to switch to the new funded system, transition costs in the inception year will likely be about 0.4% of GDP.[5] They will constantly grow year after year until annual transition burden peeks at 1.7% of GDP in about 30 to 35 years. Afterwards, the annual transition burden will start to decline, but it will take another 20 years or so until it is fully eliminated.

[5] If younger workers predominantly decide not to switch to the private system, this would change the transition trajectory but leave the overall cumulative transition costs unchanged - annual transition burden would be lower in the early years, but this would be compensated by prolonging the initial transition period by 10 years.

Figure 2 – Typical transition cost dynamics



Source: Simmonovits (2003:156).

Despite being a straightforward technical task, significant cases of transition cost underestimation and associated controversies have been witnessed in earlier cases of pension privatization. Drahokoupil and Domonkos (2012) identify the underestimation and outright neglect of transition costs as one of the root causes of the first wave of reform reversals in Eastern Europe. In Hungary, the transition cost financing did not seem to have entered into the public policy debate in the mid-nineties, and the social-democratic government implementing the privatization was assuming that the reform would bring accelerated growth and increased employment which would, on their own, take care of the transitional deficit in the PAYG system. Later privatizers took more notice of transition costs but most of them did not implement credible austerity measures to provide long-term financing. Some of them, like Slovakia, relied on the proceeds from the privatization of state-owned enterprise, but this type of financing could last for a few years at most and was not suitable for covering multi-decade costs. Credible financing mechanism in the form of a permanent increase in taxes, like income or value added taxes, was not used in any of the privatizing countries.[6]

Reform packages in many privatizing countries, including Poland and Croatia, relied on severe PAYG parametric reforms to provide austerity in the public system to finance the transition costs. However, many of those severe parametric reforms proved to be politically unfeasible and were soon reversed, leaving transition costs unfinanced and forcing governments to resort to debt financing. In fact, public debates in several countries were not even informed of the true extent of privatization transition costs, but only about the remaining transition costs after accounting for the envisioned savings that the (drastic) parametric PAYG reforms were supposed to deliver. A classic example of this is the World Bank Discussion Paper by Anusic et al (2003, pages 69-72) which estimated the transition costs for Croatia to

[6] The only exception is Estonia which relied on additional 2% add-on contributions to finance the privatization. Czechia also relied on additional 2% contributions and was planning to increase the VAT rate in order to finance transition costs, but due to a lack of political support, mandatory private pension system was dismantled only one year after being introduced in 2013.

last less than 15 years and cost less than 10% of GDP. Needless to say, these optimistic projections did not materialize, with cumulative transition costs over the 2002-2020 period being about 24% of GDP and still going strong at the annual level of 1.3% of GDP in 2020.[7]

The transition cost controversy was very much present during the reform planning stage in Greece as well. The National Actuarial Authority of Greece projected that transition costs of replacing auxiliary NDC pensions with fully-funded DC pensions would be around 50 to 70 billion Euros over the next 50 years, or about 1.2 billion Euros per year on average (SSA, 2021). Having in mind that the Greek GDP is currently about 200 billion Euros, this estimate is, both in terms of size and duration, broadly in line with our simplified estimation procedure presented earlier in Figure 2. However, official government estimates state that the overall transition cost over the 2022-2070 period would amount to only 6 billion Euros, with average annual costs not surpassing 120 million Euros (Ekathimerini, 2021). This tenfold difference is due to the fact that official government estimates are based on a macroeconomic model which implies significant growth acceleration and increased investment, employment and wages, notwithstanding the lack of empirical evidence of any statistically significant growth acceleration in earlier pension privatizations in Eastern Europe.

While Drahokoupil and Domonkos (2012) argue that the neglect and underestimation of transition costs in the case of Hungary 25 years ago can be, to some extent, explained by the lack of relevant information on pension privatization drawbacks at the time, such an excuse can hardly be made in the case of Greece. Resorting to miraculous growth effects to supposedly take care of the 90% of anticipated transition costs (Athina984, 2021b) ignores the available empirical evidence that suggests their absence in earlier pension privatizations in Eastern Europe. It is thus discomforting to realize that after an unprecedented consolidation and austerity efforts over the 2010-2020 period, that were caused by imprudent pension policies in earlier decades, the Greek official estimates are again featuring obvious underestimation of costs of the ongoing pension policies.

6. The novelty feature of Government-managed pension savings

Carve-out approach to financing pension privatization is controversial because austerity measures that would finance the multi-decade transition costs require firm political commitment that is hard to secure in many democracies. In fact, all the most well-known examples of private funded pension systems, such as those in North America, Western Europe or Australia - have been developed in an add-on manner, so that private pension benefits do not replace, but supplement, existing PAYG benefits in these countries.

The only rational motivation for the carve-out approach is to credibly expect the rate of return of private funds to significantly outperform the rate of return of the PAYG system, which can be approximated with GDP growth for all practical purposes. If this is the case, after several decades of bearing the transition costs, the future retirees would be receiving higher pension benefits. This indeed was the original motivation since empirical evidence had been suggesting that the rates of return on (well diversified) capital are, in general, tangibly higher than GDP growth (Abel et al, 1989). Thus, before privatization was implemented in Eastern Europe,

[7] Authors calculations based on official data for annual contributions and payments from the 2nd funded pension pillar in Croatia, available at: https://www.hanfa.hr/publikacije/godisnje-izvjesce/

World Bank expected private funds to achieve rates of return 1.5% to 2% higher than GDP growth (Price and Rudolph, 2013). The actual outcomes were not in line with expectations, as we can see in Table 2.

Table 2– Performance of mandatory private pension funds in Eastern Europe

Country	Inception	Since inception until end-2020			Standard Deviation	
		Real Returns	**GDP Growth**	Difference	Funded pillar	GDP Growth
Hungary*	Jan 1998	1.6	2.5	-0.9	9.3	3.2
Poland	Jan 1999	3.8	3.5	0.3	9.0	2.1
Latvia	July 2001	-0.2	3.1	-3.3	7.3	6.2
Bulgaria	Apr 2002	1.4	3.1	-1.7	7.6	3.3
Croatia	May 2002	3.6	1.3	2.4	6.0	4.0
Estonia	July 2002	0.7	3.0	-2.3	9.1	5.8
Lithuania	June 2004	2.0	3.0	-1.1	9.8	5.4
Slovakia	Apr 2005	0.0	3.1	-3.0	3.4	4.2
N. Macedonia	Feb 2006	3.6	2.5	1.2	6.3	2.7
Romania	May 2008	5.0	2.1	2.9	3.9	4.4
AVERAGE		2.2	2.7	-0.6	7.2	4.1

Source: Authors' calculations based on official national statistics for nominal rates of return and IMF WEO data for inflation and GDP growth.
* Data for Hungary concludes with the end of 2010 as the second pillar was dismantled.

Actual rates of return in Poland, Croatia, North Macedonia and Romania were higher than GDP growth and, at first glance, look decent at around 4% in real terms. However, it should be stressed that the operation of private pension funds in all these countries is plagued with disguised-PAYG financing depicted in Graph 1, with domestic government bonds accounting for 60% or more of investment portfolios. In this case it is not very meaningful to look at the formally realized rates of return since they do not represent actual returns to capital but instead reflect the (inverse of) country creditworthiness. For example, government bonds accounted for 60% of portfolios in both Hungary and Poland, but Impavido and Rocha (2006) show that formally higher returns in Poland compared to Hungary were driven by the lower Polish credit rating at the time, and correspondingly higher interest rates on Polish bonds.

Despite the challenges of this political-economy task, Estonia, Bulgaria, Slovakia, Latvia and Lithuania had successfully implemented austerity measures to support privatization. These countries were thus able to properly diversify private pension portfolios not to be dominated by local government bonds. However, contrary to the initial expectations, the actual rates of return in these countries have been disappointingly low – up to 2% in Lithuania and Bulgaria, close to zero in Estonia and Slovakia, with Latvia posting negative real rates of return. With returns in all these countries significantly lower than GDP growth, private pension funds are being dynamically inefficient (Samuelson, 1958; Aaron, 1966) and yielding inferior performance compared to the PAYG systems they were intended to replace and improve.

Although a detailed analysis of the poor rates of return in Eastern Europe is beyond the scope of this paper, it should be noticed that it was, at least in part, driven by the market failures

inherent in private pension provision, such as the excessive operating and marketing costs, unproductive active asset management, irrational consumer behaviour and alike. Similar instances of disappointing private pension outcomes have been documented in other countries, including Latin America (Gill et al, 2005), United Kingdom (Zalewska, 2018) or Australia (Vidler, 201). Being aware of these disappointing outcomes, Greek policymakers opted to look up to successful examples of government managed pension savings. In particular, as we can see in Table 3, government managed schemes in several OECD countries have been very successful over the last couple of decades and have produced impressive rates of return, both in terms relative to GDP growth and also relative to private funds in Eastern Europe.

Table 3 – Performance of government managed schemes in selected OECD countries, in %

Country	Data starts from	Performance until end-2020		
		Real Returns	**GDP Growth**	Difference
Norway - Global Fund	1998	4.4	1.6	2.8
Canada - CPPIB	1999	6.1	1.9	4.2
Sweden - AP1,2,3,4	2001	4.7	1.9	2.8
Sweden - AP7	2001	5.6	1.9	3.7
Denmark – ATP*	2001	6.9	1.1	5.8
New Zealand	2004	5.0	2.3	2.7
AVERAGE		5.5	1.8	3.7

Source: Authors' calculations based on official national statistics and IMF WEO for inflation and GDP.
*Data on Denmark ATP is based on Danish Financial Supervisory Authority which includes proceeds from interest rate hedging, which were considerably positive over the 2001-2020 period.
Note: Care was taken to report all returns data in Tables 2 and 3 on a comparable basis, after taxes, but not all jurisdictions provide fully comparable data on this account.

Impressive performance of government managed schemes in Table 3 is in contradiction with the notion of private pension management premia (Iglesias and Palacios, 2000), which underlined the World Bank (1994) privatization agenda. The evidence from developed OECD countries seems to suggest that countries with good public governance can successfully fulfill pension management fiduciary duties and deliver good investment performance. From the point of view of financial economics, there is no reason why this would not be the case since the efficient market hypothesis suggests that active investors cannot outperform the market in the long run.[8] Thus, the competition among the private pension providers can hardly produce any value added over the passive index funds, and could likely produce inferior performance due to substantial sales and marketing costs.

Case studies of Australia and Sweden are illuminating examples in this context. Pension market in Australia is very competitive with several hundred management agencies organized in two significantly different manners: traditional for-profit management companies organized

[8] For example, the S&P-500 market index outperforms 60% of investment funds over the course of one year, 72% of funds over the course of five years, 85% of funds during a 10-year period and 92% of funds during a 15-year period. For more details, see https://www.spglobal.com/spdji/en/research-insights/spiva/

by financial institutions and not-for-profit companies that evolved from industry occupational schemes which existed for decades before the pension market liberalization in the 2000's. The not-for-profit industry funds have been delivering vastly superior performance over the years, with real returns slightly over 4% per annum over the 1997-2020 period, compared to only 2.3% real rate of return delivered by for-profit pension companies.[9] Despite their inferior performance, the for-profit companies have been successful in maintaining their 40% market share over the years, mostly due to effective advertising campaigns and poor investment decisions on the behalf of contributors (Altiparmakov, 2018b).

Pension market in Sweden is also very competitive, with several hundred alternative asset managers. In contrast with pension privatizations in Eastern Europe, Sweden organized a government administered fund, the AP-7, to compete with private providers and to represent a default fund for workers which do not actively choose a private fund themselves. With real returns of 6.1% over the 2001-2020 period, the AP-7 fund has vastly outperformed private counterparts which produced an average real rate of return of only 3.3% over the same period. This provides yet more evidence to question the merits of competitive, private pension provision in countries with a high quality of public governance that can be utilized to successfully organize government management of pensions savings.

While the government intervention seems warranted from the economic point of view, it will no doubt introduce significant political risk and test whether the quality of public governance in Greece is in line with those of developed OECD countries in Table 3. Ignoring the possibility of outright mismanagement of pension funds, political risk will likely emerge with respect to the possibility of disguised-PAYG financing in Graph 1. Namely, the transitional deficits have been evidently vastly underestimated, which will lead to higher financing needs and the government might be tempted to satisfy them by borrowing from the funded pension pillar, as was the case with many Eastern European reformers. If this were to happen to any significant extent, it would defeat the purpose of the pension funding reform, since replacing NDC auxiliary pensions with a funded pillar plagued with disguised-PAYG financing will obviously not improve the members' welfare.

In fact, the optimal life-cycle investing approach suggests that, for younger workers, basically none of the savings should be invested in any kind of bonds but in (international) equities. The Swedish AP-7 fund, for example, invests savings exclusively into equities for all members below 55 years of age, at which point it starts to slowly switch to bond investments until, at the age of 75, bonds account for two thirds and equities for one third of members' pension portfolios. If Greece were to follow this approach, all pension savings over the next two decades should be invested exclusively in equities since the cut-off age for participating in the funded pension pillar has been set at 35 years in 2022.

If political risks are successfully addressed and pension savings properly diversified and invested with low management fees, the funded pension pillar could become a meaningful source of retirement income for future generations of Greek pensioners. But, in order for this to happen, the issue of carve-out financing has to be resolved.

[9] Authors' calculations based on the annual rate of return statistics from Australian Prudential Regulatory Agency available at www.apra.gov.au and IMF WEO data on inflation.

7. Carve-out financing policy lessons

Previous episodes of pension privatization reversals in Eastern Europe differed in their characteristics, magnitudes and driving forces, but the root cause in all instances can be traced back to the initial carve-out financing approach. Private pension funding is traditionally organized in a supplementary manner in Western Europe or North America whereby new pension contributions are added on top of existing ones, thus securing a sustainable financing source. This is not always a popular approach among the workers as it reduces their disposable income and (likely) lowers their current consumption. But this is unavoidable since pension funding, from macroeconomic point of view, is exactly the reduction of current consumption of workers in order to increase their future consumption, after they retire.

Table 4 – Pension privatization reform reversals in Eastern Europe

Country	Pension privatization	Reform reversal
Hungary	1998	Dismantling, 2010
Poland	1999	Dismantling 2014, 2019
Latvia	2001	Scale-down, 2009
Bulgaria	2002	Scale-down & Back-to-PAYG Option, 2011
Croatia	2002	Back-to-PAYG Option 2011, 2019
Estonia	2002	Scale-down & Voluntary participation 2020
Lithuania	2004	Scale-down 2009, Carve-out eliminated in 2019
Slovakia	2005	Scale-down & Back-to-PAYG Option, 2009
N. Macedonia	2006	Scale-down 2014, Back-to-PAYG Option 2019
Romania	2008	Scale-down & Voluntary participation 2018
Czech Republic	2013	Dismantling, 2014

Source: Altiparmakov and Nedeljković (2021).

By diverting the existing PAYG contributions to the funded pension pillar, carve-out financing creates a transitional deficit in the public system. Thus, carve-out privatization is not pension funding in the macroeconomic sense unless it is accompanied by appropriate austerity measures to cover the transitional deficits so that the overall level of national saving is increased. However, most reforming governments have either vastly underestimated the transition costs or relied on unsustainable and unfeasible austerity measures to finance them, which gave rise to fiscal distresses that escalated during the Global Financial Crisis and triggered the first wave of reform reversals in countries like Hungary, Poland, Slovakia, Latvia or Bulgaria (Bielawska et al, 2016; Altiparmakov, 2018a).

However, carve-out financing also creates economic tension by promising to contributors the superior performance of the new funded pillar over the pre-existing PAYG financing. The failure of funded pillars to outperform PAYG financing in Table 2 resulted in suboptimal pension outcomes and created political incentives for the second wave of reform reversals, irrespective of the fiscal stance. The case in point is Estonia that, despite its impeccable fiscal track record, decided to dismantle the mandatory private pension system in 2020 due to its low rates of return. Similarly, Lithuania in 2019 used its strong fiscal position to switch from carve-out financing to traditional supplementary financing to remove the

inherent tension between the PAYG system and the funded pillar caused by the poor performance of private pension funds (Altiparmakov and Nedeljković, 2021).[10]

Orenstein (2011) believed that the first wave of reform reversals would not be the end of the pension privatization trend and that a rebirth of privatization initiatives in an another, more fiscally prudent form, would be likely. Drahokoupil and Domonkos (2012) further concluded that the political reality and appetite for austerity measures needed to finance the transitional deficits allows only more modest carve-out plans to be considered in Eastern Europe, with at most 3 p.p. of existing PAYG contributions being diverted to funded pillars on a sustainable basis. The rebirth of pension privatization in Greece, however, is going in the other direction – with 6 p.p. of PAYG contributions being diverted to the funded pillar, the extent of carve-out financing is not more modest compared to earlier reformers. The novelty feature of the Greek reform is not fiscal prudence but a switch from private to public management of pension savings.

With transition costs vastly underestimated and without any credible financing source secured to cover them, the 2022 pension funding reform is bound to cause fiscal distress in Greece similar to what has been observed in most Eastern European counterparts. In the existing international financing conditions, marked with historically low interest rates, imprudent fiscal practices cannot be properly constrained. In this respect, the current conditions are reminiscent of favourable financing terms that, despite unsustainable pension policies, Greece enjoyed for many years before the emergence of the 2010 fiscal crisis. For example, nominal yields on Greek 5-year bonds were around 3% to 4% in the decade preceding the crisis, then skyrocketed to over 50% during the 2010-2012 crisis, only to plummet and eventually become negative in 2021. However, when international and European financing terms change, the fiscally imprudent aspects of the 2022 reform will be exposed, as was the case earlier in Eastern Europe with the emergence of the Global Financial Crisis. When this happens, Greece will face the dilemma of implementing the missing austerity measures or going for Eastern European-type of reform reversals.

Implementing the missing austerity measures will be a challenging fiscal task that will likely require a permanent increase in taxes and a stronger political commitment than what has been observed during the course of pension consolidation in Greece so far. In particular, the 2017 pro-growth reform bill that was abolished due to a lack of political support was supposed to deliver the austerity of 1% of GDP in the first year of implementation, with the level of austerity slowly dissipating over time and the average annual austerity standing of about 0.5% of GDP over the 20-year transition period (Kangur et al, 2021). The transitional deficits caused by the 2022 reform are actually much higher and longer lasting, despite being initially more modest and up to 0.4% of GDP in the early years. The 2022 transition costs will steadily grow for years to come, so that the average annual transitional deficit will be close to 1% of GDP during the next 50 years, as we can observe from transition dynamics in Figure 2. Financing these transition costs will thus require much stronger social and political commitment than was the case with the abolished 2017 reform.

[10] In dealing with poor performance of private funds, countries like Slovakia, Bulgaria, Croatia and North Macedonia are allowing members to freely return to the public system in order to receive full PAYG benefits. These short-term fixes are however suboptimal and will lead to increased policy uncertainty in the future.

8. Concluding remarks

The 2022 carve-out funding reform can be considered unexpected given the fiscally prudent course of pension consolidation in Greece thus far and the fact that most Eastern European counterparts are implementing reform reversals of the carve-out pension funding. Entrusting the management of pension savings to a dedicated government institution, TEKA, is a welcome attempt to try to avoid the poor performance of competitive private pension provision in Eastern Europe. However, this approach caries a considerable political risk and it remains to be seen whether public governance standards in Greece will be able to deliver a performance resembling that in a handful of successful OECD countries.

Similar to earlier reformers in Eastern Europe, the Greek government has vastly underestimated the multi-decade transition costs which will give rise to fiscal distress in the coming years, especially after favourable international financing terms start to change. Maintaining the 2022 carve-out reform will thus require the implementation of the missing austerity measures, which will in turn require a strong political commitment, stronger than that observed during the 2010-2020 pension consolidation efforts.

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