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The Role of Funded Pensions in Retirement Income Systems: Issues for the Russian Federation

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Abstract/Résumé

THE ROLE OF FUNDED PENSIONS IN RETIREMENT INCOME SYSTEMS: ISSUES FOR THE RUSSIAN FEDERATION

Abstract:

This paper reviews the recent development of the funded pension system in the Russian Federation and considers it role in the context of the overall retirement income system. By describing current OECD practices and policy recommendations and comparing them with the current Russian pension system, the report aims to facilitate ongoing discussions between the OECD and the Russian Federation regarding the latter's pension system.

The report is based to a large extent on existing OECD published material, in particular the latest edition of OECD Pensions at a Glance (2011) and the OECD Pensions Outlook 2012. It also draws on the OECD review of labour and social policy published in December 2011.

JEL codes: G18, G23, G28, H55

Keywords: social security, public pensions, funded pensions, investment, regulation, supervision.

LE RÔLE DES RÉGIMES DE PENSION PRIVÉS DANS LES SYSTÈMES DE RETRAITE : LES ENJEUX POUR LA FÉDÉRATION DE RUSSIE

Résumé :

Cette publication analyse l'évolution récente des régimes de pension privés dans la Fédération de Russie et examine leur rôle dans le contexte du système de retraite du pays. Elle met en regard le système de retraite russe et les pratiques en vigueur dans les pays de l'OCDE ainsi que les recommandations stratégiques formulées par l'Organisation. Ce rapport a pour objectif de faciliter les discussions en cours entre l'OCDE et la Fédération de Russie sur le système de retraite du pays.

Ce document s'inspire largement de publications de l'OCDE, et notamment des dernières éditions du *Panorama des pensions 2011* et des *Perspectives de l'OCDE sur les pensions privées 2012*. Il fait également fond sur l'examen de l'OCDE du marché du travail et des politiques sociales dans la Fédération de Russie, publié en décembre 2011.

Codes JEL : G18, G23, G28, H55

Mots clés : sécurité sociale, pensions publiques, pensions privées, investissement, régulation, supervision:

THE ROLE OF FUNDED PENSIONS IN RETIREMENT INCOME SYSTEMS: ISSUES FOR THE RUSSIAN FEDERATION

By Juan Yermo*

1. OECD experience in developing combined pension systems

Pension systems serve two main purposes: old-age poverty alleviation and income replacement or consumption smoothing. The former goal is normally addressed by public pension systems financed on a pay-as-you-go (PAYG) basis from earmarked contributions or from general revenues. Countries also often rely on social assistance programmes to complement contributory basic pensions. On the other hand, the second goal of a pension system, maintaining a more or less similar standard of living after retirement, can be met by either PAYG or funded pension systems.

In a funded pension system, pension contributions are invested and the benefits are paid by drawing on those accumulated savings. Often, funded pension systems are referred to as private. Indeed, in most OECD countries, public systems are PAYG-financed, while private systems are funded. However, funded systems can also be managed by the state, as is partly the case in the Russian Federation. In order to carry out an evaluation of a pension system it is therefore necessary to address these two issues (PAYG vs. funded, public vs. private) separately.

Pension systems in the OECD have evolved markedly over the last twenty years. While no two pensions reforms are exactly alike, they have all generally included the following features:

- Lower public (PAYG-financed) pension benefits achieved via (i) discretionary changes in benefit formulas or (ii) an introduction of automatic adjustment mechanisms in PAYG pensions;
- Higher retirement ages;
- Further development of funded pension arrangements, in some cases including the introduction of mandatory funded pension arrangements.

Over these last decades, and as a result of various reforms, the structure of the retirement income system is more diversified in most OECD countries, with a larger role for the funded system and a small role for the PAYG system (as a proportion of the total benefits offered).

As of today, in 22 out of the 34 OECD countries, the PAYG pension system will provide a benefit to workers entering the workforce that will be below 60% of their final salary if they retire at the normal retirement age after a full career (see Figure 1).[1] This net (after taxes) replacement rate will be below 40%

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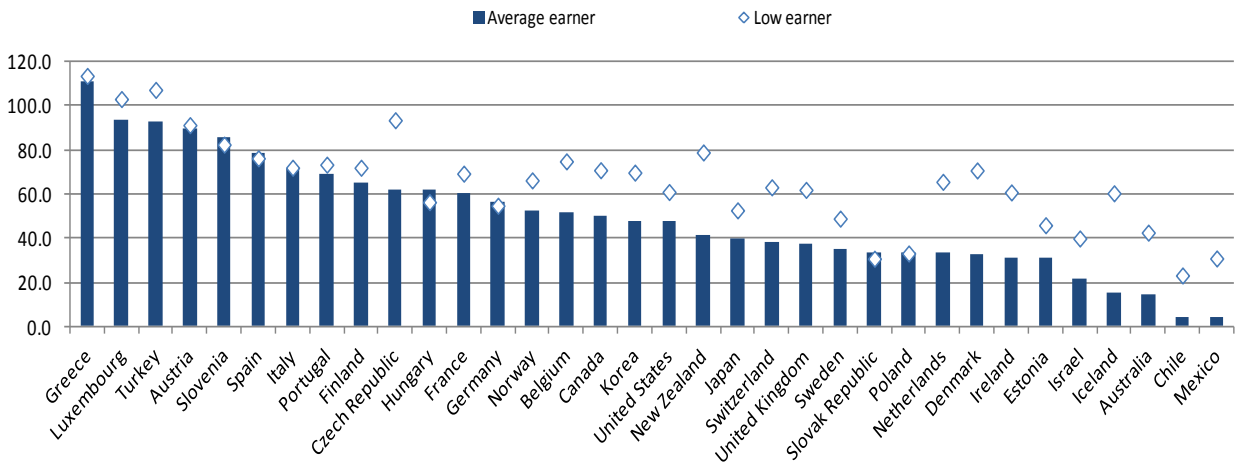
* Juan Yermo is the Head of the Private Pensions Unit in the Financial Affairs Division of the OECD's Directorate for Financial and Enterprise Affairs. This Working Paper is an extract from a forthcoming study that evaluates the role of funded pensions in retirement income systems and draws lessons from the international experience that may help guide the development of the funded pension system in the Russian Federation. This report is published under the responsibility of the OECD Secretary General. The views contained herein may not necessarily reflect those of the OECD Members. The financial contribution of the National Association of Pension Funds of the Russian Federation in preparing this report is gratefully acknowledged.

[1] These results do not take into account the recent reforms in many OECD countries, in particular the reform in Greece where the net replacement rates will be considerably reduced. Updated figures will be available in Pensions at a Glance 2013.

in 16 countries. Furthermore, future reforms could lead to further cuts in PAYG pensions in those countries with the highest level.

Figure 1. Net replacement rates from PAYG pension systems



Source: OECD (2012)

Although public pension systems are usually financed on a PAYG basis, there are two OECD countries, Canada and Sweden, where the PAYG system has an associated funded reserve (a public pension reserve fund, or PPRF) that is expected to cover some of the pension benefits provided by the system on an ongoing basis. In Canada, the reserve is expected to finance about one third of overall benefits. Many other OECD countries have set up such reserve funds. However, with the exception of the afore-mentioned countries, these are temporary reserves meant to be used during periods of negative cash flows in the PAYG system (as a result of, for instance, intense demographic ageing). The assets accumulated in such reserve funds are substantial in many countries, with the total reaching nearly USD 5 trillion in December 2010 (see Table 1.1.). These reserve funds are managed by state-sponsored institutions in all OECD countries.

Table 1. Size of Public Pension Reserve Funds in selected OECD countries, Dec. 2010

Country	Name of the fund or institution	Founded in	Assets	
			USD, bn	%, GDP
Selected OECD countries				
United States	Social Security Trust Fund	1940	2,609.0	17.9
Japan (1)	Government Pension Investment Fund	2006	1,312.8	25.9
Korea	National Pension Fund	1988	280.4	27.6
Canada	Canadian Pension Plan	1997	136.0	8.6
Sweden	National Pension Funds (AP1-AP4 and AP6)	2000	124.7	27.2
Spain	Social Security Reserve Fund	1997	85.3	6.1
France (1)	AGIRC-ARRCO	n.d.	71.7	2.7
Australia	Future Fund	2006	65.8	5.5
France	Pension Reserve Fund	1999	49.0	1.9
Ireland	National Pensions Reserve Fund	2000	32.3	15.9
Belgium	Zilverfonds	2001	23.3	5.0
Norway	Government Pension Fund - Norway	2006	23.1	5.6
Portugal	Social Security Financial Stabilisation Fund	1989	12.8	5.6
New Zealand (2)	New Zealand Superannuation Fund	2001	11.2	7.9
Chile	Pension Reserve Fund	2006	3.8	1.9
Mexico	IMSS Reserve	n.d.	3.6	0.3
Poland	Demographic Reserve Fund	2002	3.4	0.7
Total selected OECD countries			4,848.1	19.6

Source: OECD (2011b)

PAYG pensions are complemented in 14 of the 34 OECD countries by mandatory, funded pension arrangements, which all or most employees must join or "quasi-mandatory" arrangements, which require enrolment into specific pension arrangements as a result of collective bargaining at either the industry or national level. The OECD countries with mandatory or quasi-mandatory funded pensions are shown in Table 1.2. The Czech Republic is also expected to join this group with a new mandatory DC system, bringing the total number of countries with mandatory or quasi-mandatory funded pension arrangements to 15.

The Table also describes whether the funded plans are complementary to the PAYG regime or whether they substitute partly for PAYG benefits. In the former case, contributions to the funded system were added to existing PAYG contributions. In the latter case, the contributions for the funded system were diverted from those of the PAYG system. In Latin America and Central and Eastern Europe, funded pension systems tend to be of the substitutive kind.

The last column describes the benefit plan of the funded plans (defined benefit – DB – or defined contribution - DC). DC is the most popular type of arrangement, being present in 9 of the countries with mandatory, funded arrangements, while three more countries have so-called collective DC systems, which aim at providing specific benefits with a fixed contribution rate, but ultimately benefits can be adjusted in cases of adverse performance.

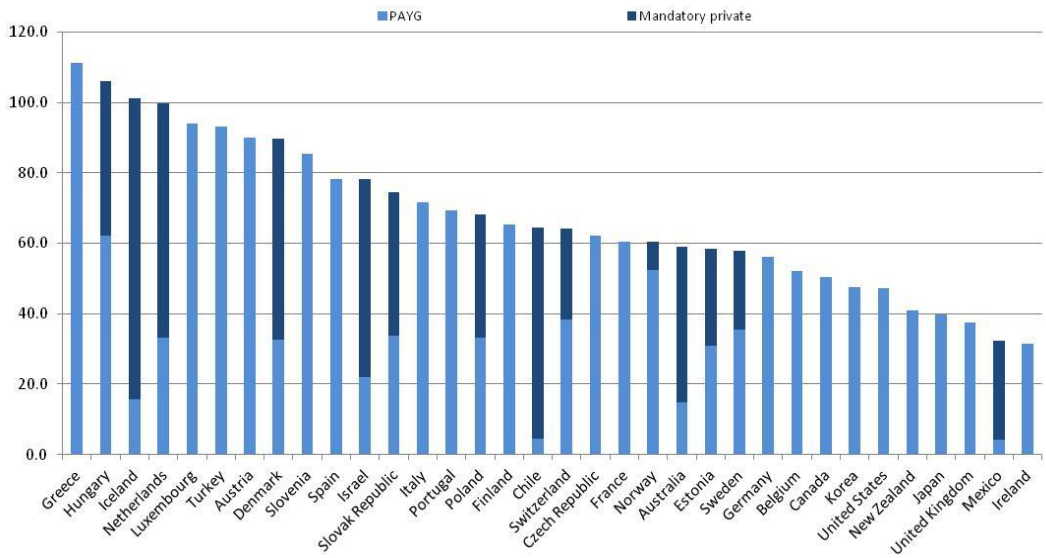
Table 2. Mandatory funded pension systems in OECD countries

Country	Mandatory (M) or quasi-mandatory (QM)	Substitutive (S) or complementary (C)	DB or DC
Australia	M	C	DC
Chile	M	S	DC
Denmark	M and QM	C	Collective DC
Estonia	M	S	DC
Finland	M	C	DB
Iceland	M	C	Collective DC
Israel	M	C	DC
Mexico	M	S	DC
Netherlands	QM	C	DB and collective DC
Norway	M	C	DC
Poland	M	S	DC
Slovak Republic	M	S	DC
Sweden	M and QM	S	DC
Switzerland	M	C	DB

Source: OECD (2012)

These mandatory funded pension systems play a major role in retirement income provision, complementing the income provided by the PAYG system. Figure 2 below shows how once one adds the mandatory funded income, overall net replacement rates are below 60% in only 13 of the 34 OECD countries. All countries with mandatory funded systems, with the exception of Mexico, target replacement rates around or above 60%.

Figure 2. Net replacement rates from combined PAYG and mandatory funded systems



Source: OECD (2012)

Note: This chart shows the mandatory, funded pension system in Hungary that was eliminated in 2008. On the other hand, it does not show the statutory funded system in Finland as financing is integrated with the PAYG part. The figures do not take into account the recent reforms in many OECD countries, in particular the reform in Greece where the net replacement rates will be considerably reduced. Updated figures will be available in Pensions at a Glance 2013.

In twenty other OECD countries, funded pension systems are voluntary, that is, employers decide on a voluntary basis whether to establish pension plans for their employees. Three countries, Italy (2007), New Zealand (2007) and the United Kingdom (2012) have made enrolment into funded pensions automatic, but offer employees the possibility of opting out. These auto-enrolment systems rely on individual inertia to raise coverage levels. In particular, the New Zealand *Kiwisaver* has raised coverage levels from less than 10% of the working age population to more than 55%.

While most countries have moved towards multi-tier pension systems, combining PAYG and funded systems, some countries in Central and Eastern Europe have partially reversed the original reforms that introduced the mandatory funded component. Two other OECD countries, Hungary and the Slovak Republic, used to have mandatory private pension systems but have recently changed enrolment rules, with a dramatic effect on coverage, especially in Hungary. In this country, the government decided to effectively close down the mandatory private pension system at the end of 2010. Contributions to the system were suspended between 1 November 2010 and 31 December 2011, the whole social security contributions flowing to the Pension Insurance Fund thereafter. The vast share of pension fund assets accumulated by members was transferred back to the state. As a result, coverage of the mandatory system plunged from 45.4% of the working age population at the end of 2010 (as shown in Table 4.1) to 1.5% at the end of September 2011. From 2012 on, the mandatory private pension system does not exist anymore. The former members of the mandatory private pension system will only accrue public pension rights.

Between 2005 and 2007, participation in the Slovakian private pension system was mandatory for workers entering the labour force for the first time and voluntary for the others. Starting 1 January 2008, people joining the labour market for the first time can choose whether to put their mandatory contribution into the public or private system. Workers already in the system at that time had an opportunity to opt back into the public system between November 2008 and June 2009. The only compulsory feature that remains in the system is that, once workers choose to participate or stay in the private pension system, they cannot opt out anymore. Figure 3 shows that the coverage rate stopped increasing after the reform was put in place (40% in 2007) and even declined in 2008 and 2009 (to 36.5%) due to the possibility to opt out of the system during a short period of time.

Figure 3. Slovak Republic: Coverage rate of private pension funds before and after the reform

As a % of the working age population

Source: OECD (2012)

Overall, there is a clear trend towards combining PAYG and funded pension systems and for the latter to be increasingly of a mandatory nature and DC. In about two thirds of OECD countries, the average worker has to rely on funded pension systems to complement a public pension benefit of less than 60% of their final salary.

2. Impact of financial, demographic, and other risks on PAYG and funded pension systems

All pensions, whether PAYG-financed or funded, are claims on future production. In a theoretical economic sense, therefore, it matters little how pensions are financed, as ultimately it is the current working population that has to produce the goods and services that will be consumed by the retired population. However, the practice is rather different for four main reasons:

- Funded pensions can rely on foreign investment to finance future benefits. To the extent that one can invest in economies growing faster than the one where the pensioner is based, the final pension pot can be increased;

- PAYG pensions can be linked to some extent to the evolution of wages in the economy. To the extent that wages follow inflation, PAYG systems can provide good inflation protection to pensioners;

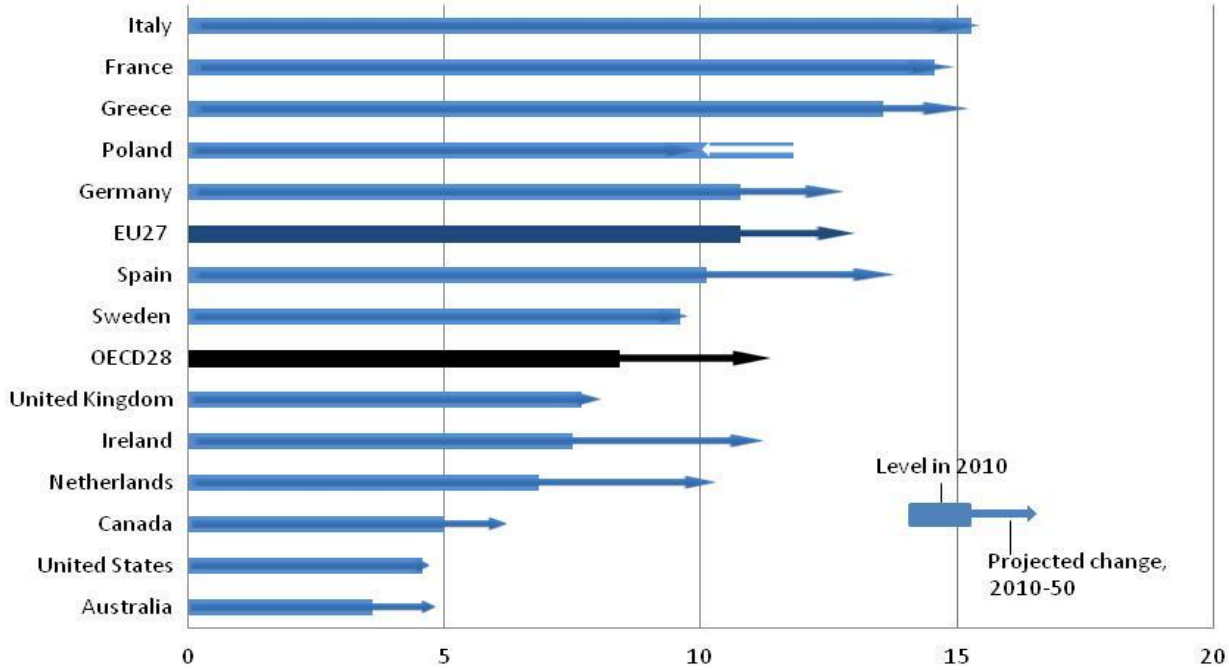
- Funded pensions rely on the accumulation of assets whose market price at any time may differ from the fundamental value of the underlying capital assets. This market risk is borne by individuals and will cause fluctuations in the level of pension benefits unless there are risk sharing and pooling mechanisms in place. At the same time, market risk or more generally the volatility of financial asset prices is associated with risk premium, that is, an excess of returns over assets with little or no risk;

- PAYG pensions rely on an implicit intergenerational contract between the working and the retired population. When demographic or economic conditions change, this contract can break down. Demographic ageing and slow growth create a natural stress on intergenerational contracts. As the weight of the elderly population increases, so does its political power, at a time when financing the same level of pensions becomes increasingly difficult. By contrast, with funded pensions, claims consist of securities that have legally enforceable rights to payments from companies or the state.

From this discussion, it is clear that both PAYG and funded systems have advantages and disadvantages. For precisely this reason, the OECD has often advocated the need for a mixed-financing pension system that combines PAYG and funding to achieve an adequate level of retirement income (OECD, 2011a).

PAYG systems need to be sustainable in the sense that the cost of pension provision does not increase dramatically over time in relation to the size of the economy. For this purpose, many countries in Europe and elsewhere have introduced so-called automatic adjustment mechanisms to their PAYG systems, which effectively tie some parameter of the pension system, such as the retirement age, minimum contribution periods or benefit levels to the country's demographic evolution. The best known such mechanism is the Notional Defined Contribution system that has been implemented in countries such as Italy, Norway, Poland and Sweden. The NDC system largely explains why public pension expenditure is expected to stabilize and even decrease as a % of GDP over the coming decades in these countries (see Figure 4.).

Figure 4. Public pension expenditure as a % of GDP



Source: OECD (2012)

An additional factor to consider is that the cost of administering a PAYG and a funded scheme can be very different in practice. PAYG systems generally cost very little to administer. However, in some countries, such systems have been beset by bad administration and corruption. Funded systems involve the additional cost of investment the pension assets, which require the development of an asset management industry with its associated costs. Furthermore, if there are many providers of funded pensions, there may be limits to efficiency gains from economies of scale. Competing commercial providers can also lead to high marketing, sales and distribution costs that are passed on to individuals in the form of higher management fees.

The costs and efficiency of administering PAYG and funded pension systems is a critical aspect that needs to be addressed with appropriate regulations and oversight. Indeed, in practice one can run a funded system with only slightly higher costs than a PAYG one. The Swedish Premium Pension System and the United Kingdom's National Employment Savings Trust (NEST) are two examples of national, funded pension arrangements that are run at relatively low costs (less than 0.4% of assets under management).

A diversified pension system, combining a PAYG and a funded component is the safest way to provide retirement income. While both systems depend on strong growth to deliver adequate benefits, reliance on a single type of system exposes pensioners to excessive risk.

3. The sustainability of combined pension systems in a global economy

Globalization brings countries together via trade, capital flows, people migration, and communication. At the same time, this growing closeness between countries raises the intensity of competition between companies and people. Companies can move operations to lower cost locations, while people can migrate to countries with higher wages.

Pension systems that rely solely on PAYG financing are handicapped relative to mixed financing system. PAYG systems rely heavily on social security contributions from employers. By contrast, funded arrangements, particularly those of the DC kind, rely more on employee contributions. While theoretically, there is little economic difference between an employer or an employee contribution, companies take into account the taxes and social security contributions they pay when making strategic decisions over the location of the business and investment. Hence, the higher are the charges they face in a particular country, the more likely they are to move operations abroad.

The design of pension systems can also affect the labour decisions of individuals. To the extent that PAYG-financed benefits are unrelated to individual contributions, the latter are effectively an earmarked tax and they may reduce labour supply. On the other other hand, if the PAYG pension offers a close link between benefits and contributions, the latter are effectively a form of mandatory saving. They may only be regarded as a tax if, and to the extent that, they are higher than would be required to obtain the same amount of retirement income by other means (i.e. funding).

In practice, there is little evidence showing that countries that have large social protection (pensions, health, unemployment) spending suffer competitiveness problems (De Grauwe and Polan, 2003). On the contrary, there are many rich economies with high social spending that also enjoy high degrees of competitiveness (see Table 1.3). Such economies are primarily in Northern Europe (e.g. Denmark, Finland, Germany, and Sweden).

Table 3. IMD competitiveness index and social spending

Country	IMD competitiveness index (2011)	Social Protection Spending as a % GDP (2007)
United States	1	16.2
Sweden	4	27.3
Switzerland	5	18.5
Canada	7	16.9
Australia	9	16.0
Germany	10	25.2
Luxembourg	11	20.6
Denmark	12	26.0
Norway	13	20.8
Netherlands	14	20.1
Finland	15	24.9
Austria	18	26.4
United Kingdom	20	20.5
New Zealand	21	18.4

Source: IMD Competitiveness Yearbook 2011, OECD Social Expenditure Database

While large welfare spending may be compatible with rich, developed societies, it is more difficult for countries at a lower level of development to maintain high levels of welfare spending (such as pensions and unemployment) while ensuring sufficient levels of investment in education, health and infrastructure.

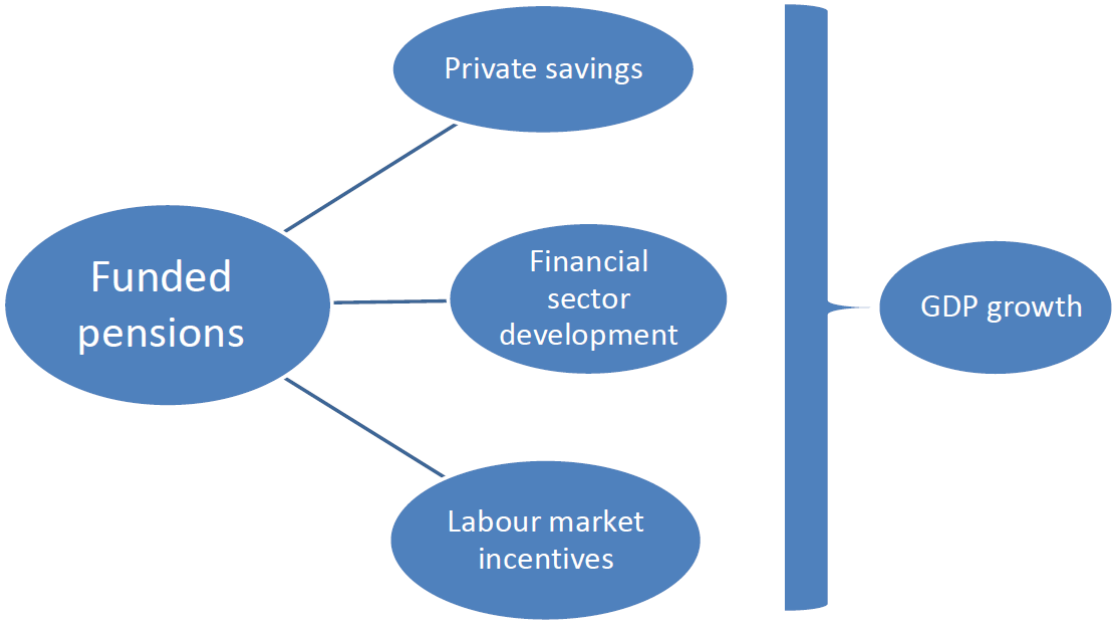
4. Impact of funded pensions on national savings, financial markets and the national economy

There has been much theoretical and empirical research as to the impact of funded pension systems on household and national savings. The empirical research is largely inconclusive expect for mandatory

funded system which in general can be shown to contribute to higher national savings rates (López Murphy and Musalem 2004, Kune 2010).

Funded pension systems can also contribute to economic growth through other means. As shown in Figure 5 below, funded systems can reduce employment distortions and savings disincentives caused by social security contributions. They can also provide much needed funds for critical, long-term investments such as infrastructure and can raise the efficiency and level of financial intermediation, improving growth prospects.

Figure 5. Impact of funded pensions on growth



Source: OECD

Three basic channels of the impact of funded pensions on financial development can be distinguished:

- Direct changes in savings and the size and composition of the financial system as a result of a move of mandatory pension contributions from a PAYG to a funded system. Pension reform can affect the savings rate of the economy and hence change the level of financial intermediation.

- Direct effects on financial intermediation are also to be expected. If the transition from a PAYG to a funded system takes place through the issuing of public debt, market capitalisation will grow and the maturity of public debt maturity could increase. The development of a public debt market could in turn foster the growth of the market for private securities.

- Changes in the efficiency and composition of financial intermediation as a result of the emergence of pension funds and other institutional investors. Some improvements in the operation of the financial system may result from regulatory reform and the operation of pension funds and other institutional investors that participate in the new funded system.

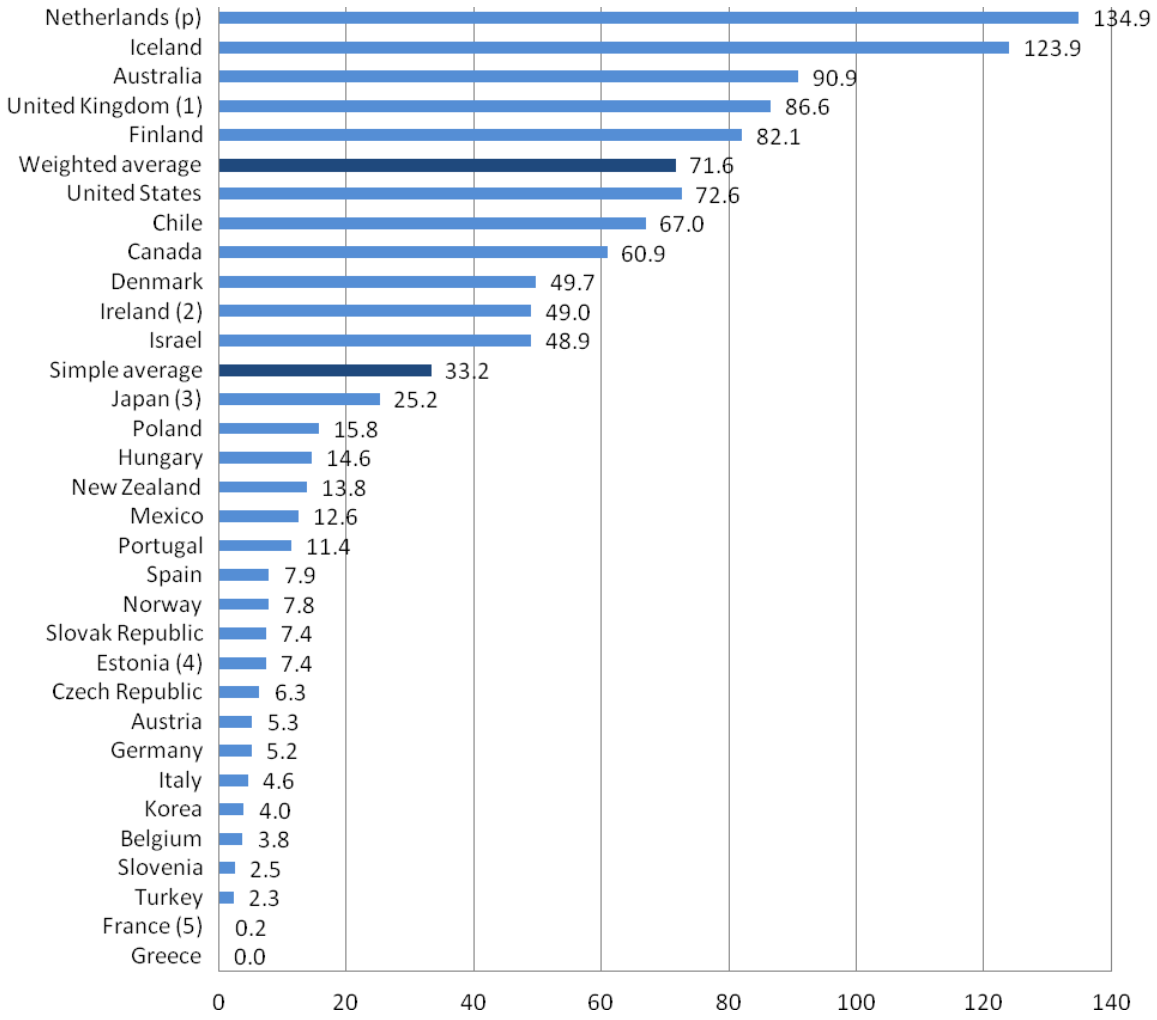
Pension funds and other institutional investors can have secondary effects on the composition of the financial system by, for example, lengthening the maturity of company and household financing. They may also increase the efficiency of financial intermediation, by, for example, increasing the liquidity of capital

markets and serving to counterbalance the power exercised by banks (Allen and Gale (2000)). They may therefore contribute to a better allocation of resources and improved economic performance.

Davis (2002) finds a significant direct effect of the share of equities held by pension funds and life insurance companies on TFP growth in 16 OECD countries. Davis and Hu (2004) using a dataset covering 38 countries also find a direct positive link between pension assets and the growth of output per worker. Both papers argue that an important aspect of the financial development channel is an enhancement of corporate governance. Even firms unaffected by shareholder activism, they conclude, have natural incentives to improve their performance so as to avoid the threat from pension fund activism in the future.

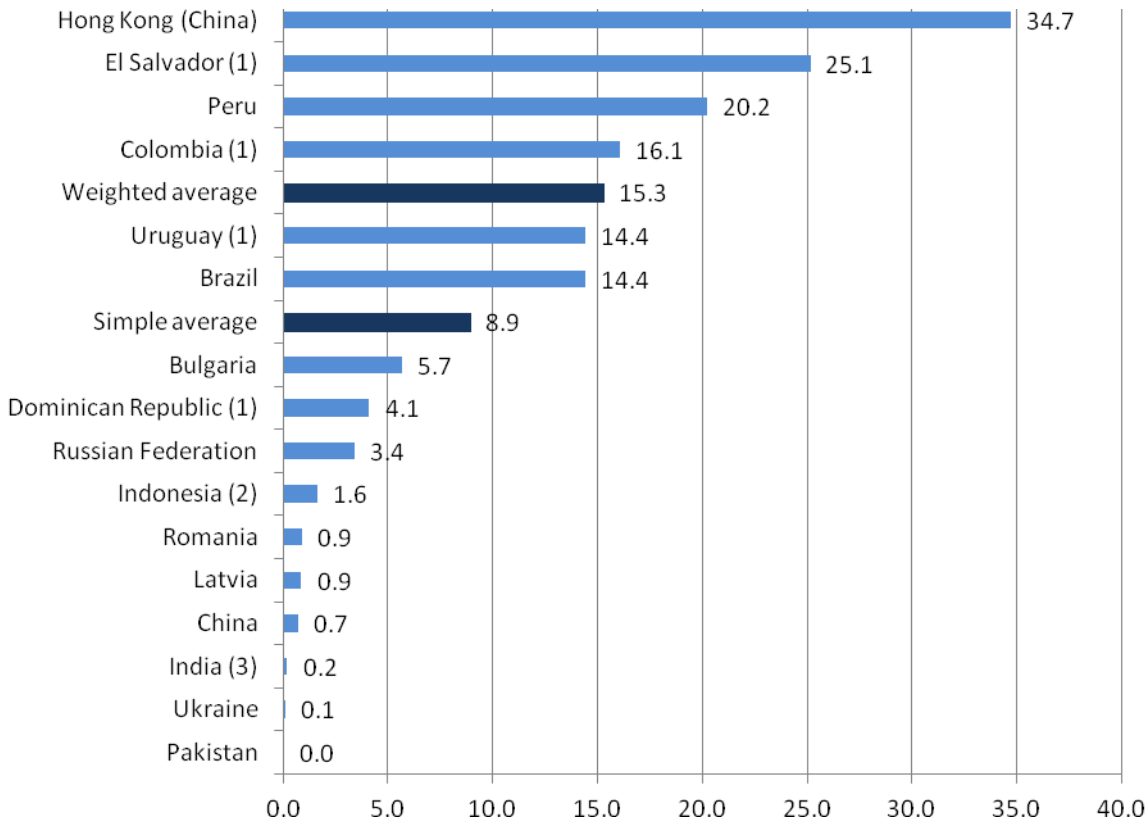
The impact of pension funds in the financial system depends on the volume of assets managed by these institutions. As shown in Figure 6a, the largest pension fund sectors in relation to GDP can be found in countries such as Iceland and the Netherlands. Figure 6b shows the same indicator for selected non-OECD countries. The Russian pension fund sector comes in the lower half of the chart, with assets that represent less than 4% of annual GDP.

Figure 6a. Pension fund assets as a % of GDP in selected OECD countries, 2010



Source: OECD Pension Markets in Focus, 2011

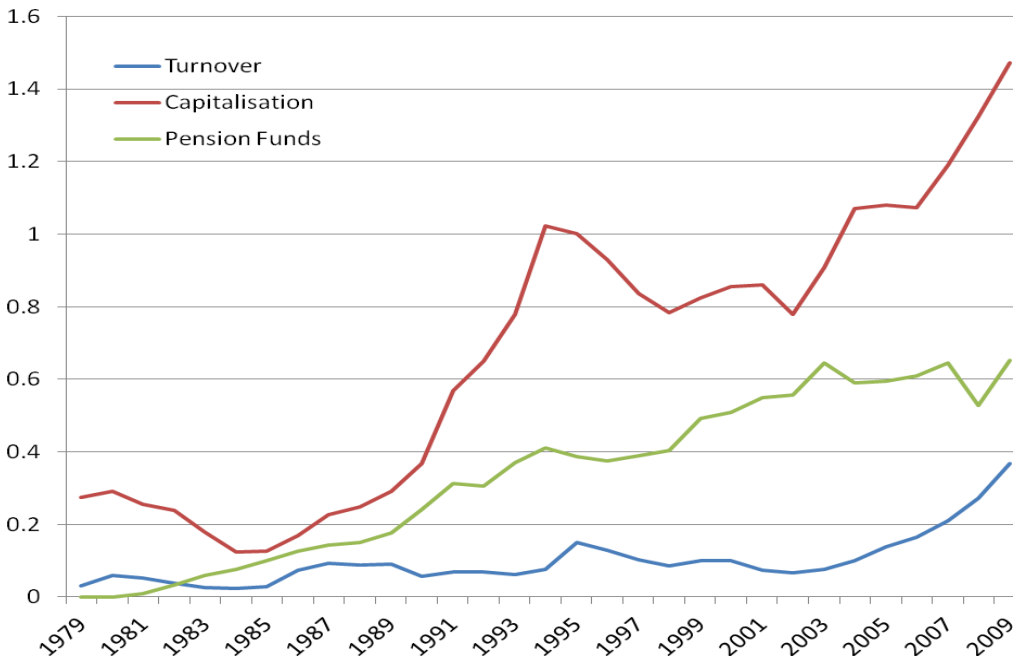
Figure 6b. Pension fund assets as a % of GDP in selected non-OECD countries, 2010



Source: OECD Pension Markets in Focus, 2011

Through their investments, pension funds can contribute to capital market development, boosting both stock and bond markets. One of the clearest examples of the strong relationship between pension funds and stock markets is Chile, where a mandatory pension fund system was established in 1981. As it can be seen in Figure 7, the growth of pension funds has been accompanied with a rapid increase in stock market capitalization and more recently a jump in turnover rates.

Figure 7. Chile: pension fund assets to GDP ratio, stock market capitalization to GDP ratio and stock market turnover rate, 1978-2009



Source: Superintendencia de Pensiones, World Bank Financial Sector Database

Pension funds typically invest in listed equity markets and relatively low risk, regulated bond markets. However, they are increasingly looking into investments in illiquid assets, such as property, infrastructure and venture capital. These investments can be especially attractive given that investors can obtain an illiquidity premium. For pension funds, investment in (project) infrastructure also has the added advantage that it offers revenues that are often inflation-linked.

While pension fund investment in infrastructure is still rather low at the aggregate OECD level (1% on average), many large pension funds, especially in Canada (OMERS, OTTP) and Australia (Australian Super, UniSuper), are rapidly expanding their allocations to infrastructure (see Table 1.3).

Table 4. Pension fund project infrastructure investment: current and target, 2011

Institution	Country	Total Assets bn	Infra Allocation (% of total assets)	
			Current	Target
OMERS	Canada	CAD$ 44	15.7	22
OTPP	Canada	CAD$ 87.4	8	8
Australian Super	Australia	A$31.9	11.3	11.3
UniSuper	Australia	A$23	na	6.5
CALPERS	United States	US$ 183.9	1.5	3
Illinois State Board	United States	US$ 9	5.6	5
ABP	Holland	Eur 208	1	2
PFZW	Holland	Eur 102	2	3
USS	United Kingdom	GBP 24	2.5	3
ATP	Denmark	Eur 66	1.8	na
PensionDanmark	Denmark	Eur16	3.6	10

Source: OECD Large Pension Funds questionnaire, 2011

Mandatory funded pension systems can contribute to raising national savings rates. This is especially the case in countries with low levels of financial sector development as households face borrowing constraints. Funded systems also give a major boost to capital markets. They can also help finance productive investment in infrastructure and innovation, both of which are major sources of economic growth.

5. Risks and implications of mandatory and voluntary savings mechanisms

As discussed in Section 1, there are two main types of mandatory funded pension systems. Those that are set up with new pension contributions (complementary) and those that are financed with contributions that have been diverted from the PAYG system (substitutive). Of the fourteen OECD countries with mandatory contributions to funded pension systems, only six are of the substitutive type. The mandatory funded system in these six countries are also all of the DC type.

Carve-out individual account systems typically create a long-term fiscal gain in terms of lower public pension expenditure at the expense of a revenue shortfall as part of the contributions used to finance social security are transferred to the funded pension system. Typically, the fiscal benefits from such reforms are only after thirty years or more.

A major risk to such reforms is therefore the continuing profligacy of governments, which may lead them to unwind the reform if they are subject to major fiscal pressures. This is precisely what happened in Argentina in 2001 and Hungary in 2010. Other Central and Eastern European countries, such as Estonia, Lithuania and Poland also suspended contributions to the funded pillar in order to reduce fiscal pressures during the 2008-9 economic crisis.

For voluntary pension systems, the main risk is the likely low coverage of the system among lower income workers, which may withdraw political legitimacy from the system. Indeed, some OECD countries like Australia, Ireland, New Zealand and the United Kingdom have moved to restrict tax incentives for voluntary retirement savings. Ireland meanwhile recently introduced a tax levy of 0.6% of assets on pension funds for each of four years. While the weakening of tax incentives has been largely motivated by cash-strapped budgets, considerations over the progressivity of tax incentives for funded pensions have also played a role (OECD, 2012).

Voluntary pension systems rarely achieve coverage rates among the working age population above 50% (se Table 1.5). This contrasts with the coverage rates above 70% observed in mandatory and quasi-mandatory funded pension systems.

Table 5. Coverage rates of funded pensions by type of plan, 2010

(as a % of the working age population)

	Mandatory/Quasi-mandatory	Voluntary		
		Occupational	Personal	Total
Australia	68.5	n.a.	19.9	19.9
Austria	n.a.	12.3	25.7	. .
Belgium	n.a.	42.3	. .	. .
Canada[1]	n.a.	33.5	33.1	. .
Chile	73.7	n.a.	. .	. .
Czech Republic	n.a.	n.a.	61.2	61.2
Denmark	ATP: 83.8	n.a.	23.6	23.6
	QMO: 58.0			
Estonia	67.1	n.a.	. .	. .
Finland[2]	75.5	7.4	21.3	28.8
France	n.a.	17.3	5.3	. .
Germany	n.a.	22.5	36.9	47.1
Greece	n.a.	0.3	. .	. .
Hungary[3]	45.4	n.a.	18.9	18.9
Iceland[1]	85.5	n.a.	42.0	42.0
Ireland[4]	n.a.	31.0	12.0	41.3
Israel	75.9	. .	. .	. .
Italy	n.a.	7.6	6.2	13.3
Japan	n.a.	. .	. .	. .
Korea	n.a.	14.6	36.5	. .
Luxembourg	n.a.	3.3	. .	. .
Mexico	57.7	1.6	n.a.	1.6
Netherlands	88.0	n.a.	28.3	28.3
New Zealand	n.a.	8.2	55.5	. .
Norway	65.8	. .	22.0	. .
Poland	54.8	1.3	. .	. .
Portugal	n.a.	3.1	5.6	. .
Slovak Republic[5]	43.9	n.a.	. .	. .
Slovenia	n.a.	. .	. .	38.3
Spain[6]	n.a.	3.3	15.7	18.6
Sweden[4]	PPS: ~100	n.a.	27.6	27.6
	QMO: ~90			
Switzerland	70.1	n.a.	. .	. .
Turkey[7]	0.9	0.2	4.2	. .
United Kingdom	n.a.	30.0	11.1	43.3
United States	n.a.	41.6	22.0	47.1

QMO = Quasi-mandatory occupational.
Coverage rates are provided with respect to the total working age population (*i.e.* individuals aged 15 to 64 years old) for all countries except Ireland and Sweden for which coverage rates are provided with respect to total employment.

1. Data only represent individuals who contributed to a pension plan in 2010.
2. The data for mandatory private pension plans refer to the statutory earnings-related pension system (*e.g.* TyEL plans).
3. After the government decision to effectively close down the mandatory private pension system at the end of 2010, the vast majority of the members transferred their pension rights to the state's PAYG pension system. At the end of September 2011, only 1.5% of the working age population was still in the mandatory private pension system.
4. Coverage rates are expressed as a percentage of the employed population, not of the working age population.
5. The data for mandatory private pension plans refer to both mandatory and voluntary personal plans as the split is not available.
6. Data refer to 2005/06.
7. Data for occupational voluntary plans do not include provident funds (VASA).

Source: OECD, *Global Pension Statistics*, estimates and OECD calculations using survey data.

Source: OECD (2012)

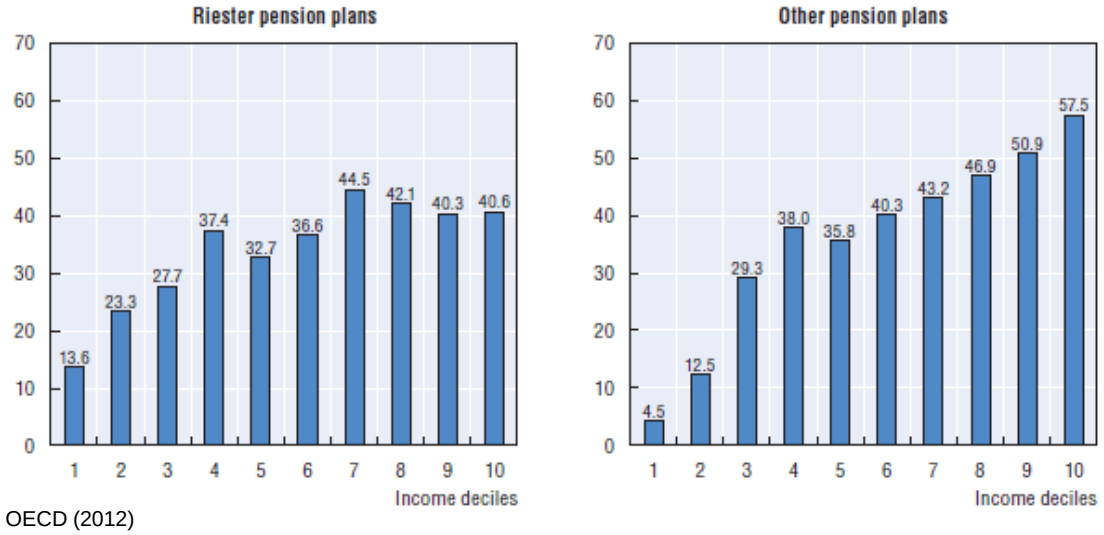
Some countries have revamped their tax relief policies towards private pensions and are increasingly relying on flat subsidies and matching contributions to reach out to lower income groups who benefit least from the traditional form of tax relief (tax deductions or tax credits). One example of such reform are the German *Riester* pensions.

The government subsidy was introduced in Germany as part of the *Riester* pension reform in 2001. *Riester* products can be purchased by anyone covered by the social insurance system and who is subject to full tax liability. Participants qualify for subsidies or tax relief from the government, the level of which depends on the respective contribution rate and number of children. To receive full state subsidy, pension participants must invest at least 4% of their previous year's income in a *Riester* plan. Since 2008, the basic annual state subsidy is EUR 154 for single persons, EUR 308 for married couples (when each partner has his/her own plan) and EUR 185 for every child (EUR 300 for children born in 2008 or after). Only very low income households can get the full subsidy without investing 4% of their income if they contribute at least EUR 60 annually. This exception holds for people receiving minimum social benefits, low income workers (earnings less than EUR 800 per month) and non-retired inactive people without income. Alternatively, both own contributions and state subsidies can be deducted from the participant's taxable income, up to EUR 2 100.21. This is usually more advantageous for workers with higher-than-average earnings. The coverage rate of *Riester* pension plans was 26.7% of the working age population at the end of 2010.

Unlike occupational and other personal pensions in Germany, *Riester* pensions generally achieve a better distribution of coverage across income groups. Figure 8 below shows the percentage of households where at least one of the partners is enrolled in a private pension plan other than a *Riester* plan (right panel) or in a *Riester* plan (left panel). When *Riester* plans are excluded, the higher is the income of the household the higher is the coverage rate of private pension plans. Coverage rates for *Riester* pensions are on the other hand more homogeneous across income groups and actually peak for individuals in the medium income groups (4th and 7th deciles). The distribution of coverage rates by income is also more concentrated for *Riester* pension plans than for other private pension plans. In particular, *Riester* pension plans achieve higher coverage rates for low income households (e.g. 13.6% of the labour force in the 1st decile) than other private pension plans (4.5%), even though the average coverage rate of *Riester* plans is lower.

Figure 8. Coverage rates according to income of household and type of plan

% total labour force



Source: OECD (2012)

As mandatory funded pension systems aim to reach universal coverage of the workforce, government incentives such as tax relief are more equally distributed across the population. This should increase their political support. However, when mandatory funded systems are financed from contributions previously assigned to the PAYG systems, fiscal pressures can lead to reform reversals as was observed in Hungary, Poland and other Central and Eastern European countries since 2008.

6. The role of the regulator in funded pension systems

Regulation plays a central role in funded pension system promoting the prudent management of pension funds and the protection of the rights of pension plan members. Two critical roles of the regulator are to ensure that contributions are paid on a timely basis by employers into the pension fund and managing effectively the risks inherent to a funded pension system.

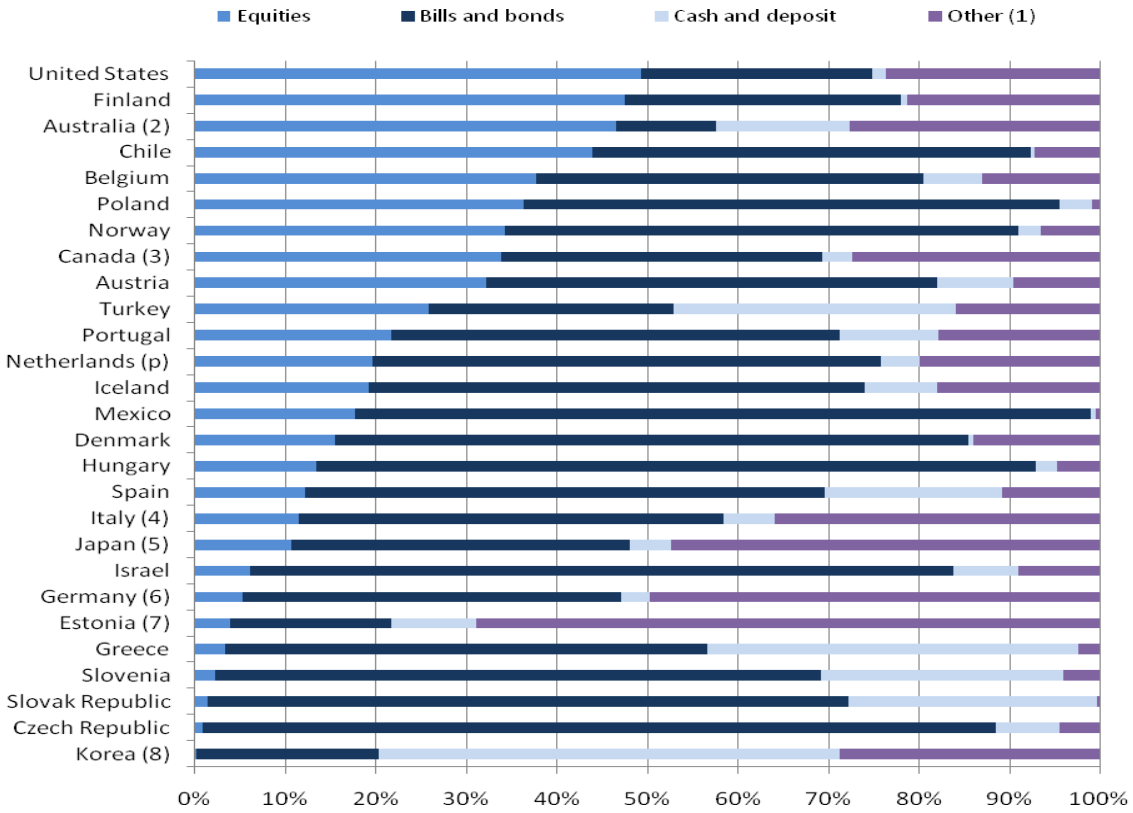
In a defined contribution pension system, prudential regulations need to address the following features of the pension plan:

- The investment of pension assets
- Risk management, including operational risks
- The payment of pension benefits

Much of the focus of regulators is on the accumulation phase, when contributions are saved into an individual account and those funds earn a rate of return. Traditionally, many countries imposed quantitative investment ceilings on different asset classes, but over the last two decades many countries have been liberalising their investment regime. As can be seen in Figure 9, many OECD have a diversified asset allocation, with different allocations to the main asset classes (equities, bonds, cash and other/alternatives).

Historically, pension funds with the highest equity allocations have obtained the highest long-term investment returns. This is because equity returns typically receive a premium over bonds', which has often been above what may deemed justifiable by their different riskiness (this is the so-called equity premium puzzle).

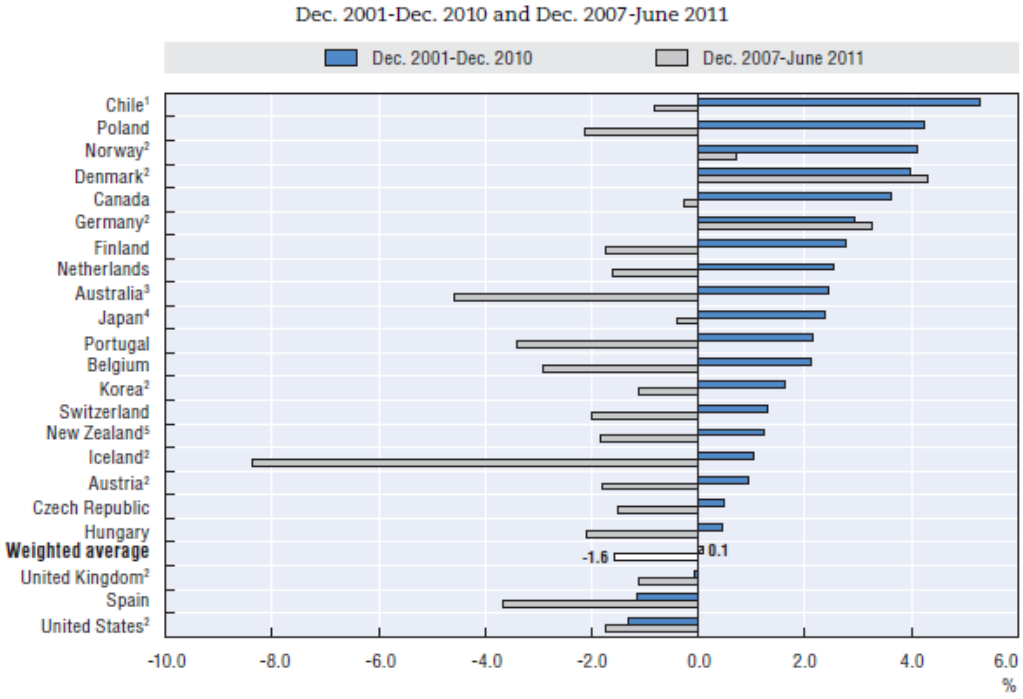
Figure 9. Pension fund asset allocation for selected investment categories in selected OECD countries, 2010



Source: OECD (2011b)

However, over the last decade equity market performance in most developed markets has been dismal (see Figure 10), and worse than that of long-term government bonds (except where yields rose substantially because of default risk). Yet, some pension fund markets like Chile have achieved very returns even in this very adverse context, demonstrating that well-diversified portfolios can ensure good performance.

Figure 10. Average annual real net investment return of pension funds in selected OECD countries



1. The average annual return for the long period is calculated over the period December 2002-December 2010.

2. The average annual return for the short period is calculated over the period December 2007-December 2010.

3. The average annual returns are calculated over the periods June 2002-June 2010 and June 2007-June 2011.

4. *Source:* Bank of Japan.

5. The average annual returns are calculated over the periods June 2001-June 2010 and June 2007-June 2010.

Source: OECD (2012)

7. The Russian pension system

The Russian pension system has experienced a major transformation over the course of the last two decades. Some of most important reforms include the following:

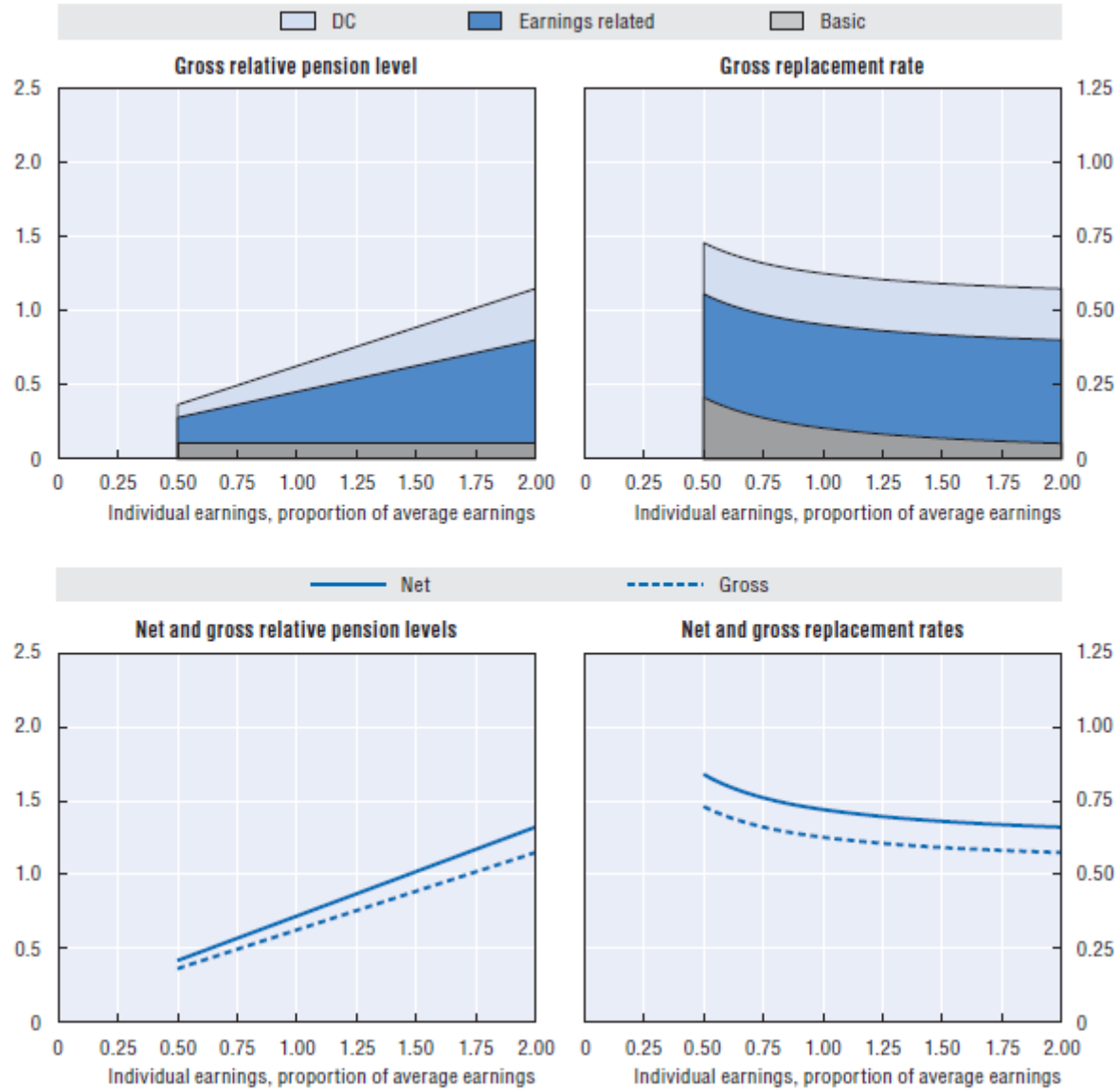
- Establishment of a three-tier mandatory pension system in the late 1990s to early 2000s with the introduction of a basic pension, a notional defined contribution system and a mandatory funded component;

- Unification of the social security tax in 2011 and transfer of contribution collection from the tax authorities to the State Fund of the Russian Federation.

The current Russian pension system resembles those of countries such as Poland and Sweden, where there is both a PAYG component of the NDC type and a funded component of the DC type in the statutory pension system. For the Russian population that was born after 1967, mandatory contributions equivalent to 16% of wages are paid to finance the PAYG system, while 6% of wages are directed to the mandatory funded system. On the other hand, those born before 1967 receive pensions only from the PAYG system. For new employees with full careers and retiring at the normal retirement age, the future structure of pension benefits is laid out in Figure 11, which compares the replacement rate for workers with different earnings and breaks it down by the three main components of the mandatory system (basic, the NDC /

earnings-related component, and the mandatory funded / DC component). The lower right hand chart shows the replacement rate in net terms (after taxes), comparing it to that before taxes (gross). For a worker on average earnings, the total net replacement rate from the mandatory system is close to 75% which is above the OECD average.

Figure 11. Pension benefit modeling: Russian Federation



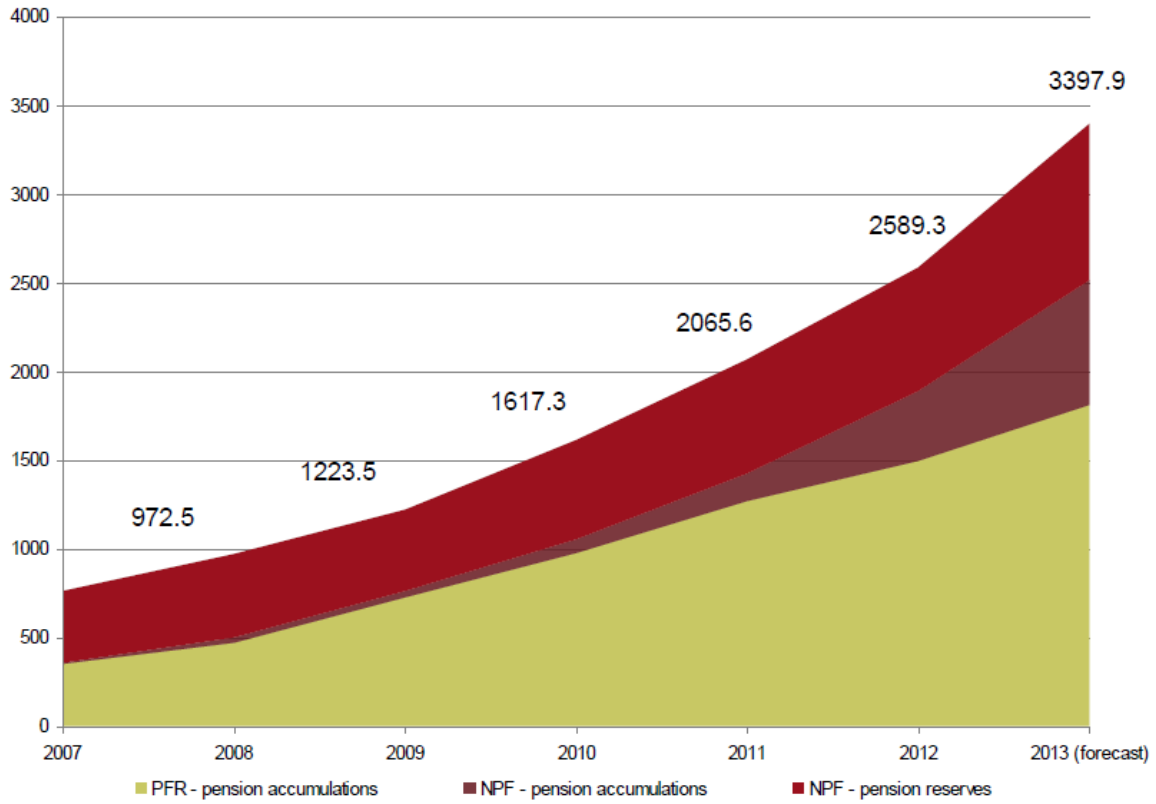
Source: OECD (2011a)

The mandatory funded pension system is administered by the State Pension Fund of the Russian Federation which collects contributions and pays benefits, although individuals can opt out and choose instead a Non-State Pension Fund (NPF). They can also opt for an alternative, private asset manager to VEB, the state bank that invests assets on behalf of the State Pension Fund.

Complementing this statutory pension system, there is a voluntary funded pension system that covers about 10% of the workforce (6.6 million) and is run by the NPFs. Currently, there are 145 NPFs operating

in the country, of which 103 also operate in the compulsory system. The pension funds held around RUB 1.2 trillion (€30 billion) by mid-2012, of which RUB 0.7 trillion were in the voluntary pension system and RUB 0.5 trillion were in the mandatory system (see Figure 11).

Figure 12. Assets accumulated in the funded pension system in the Russian Federation (mandatory and voluntary, RUB billions)



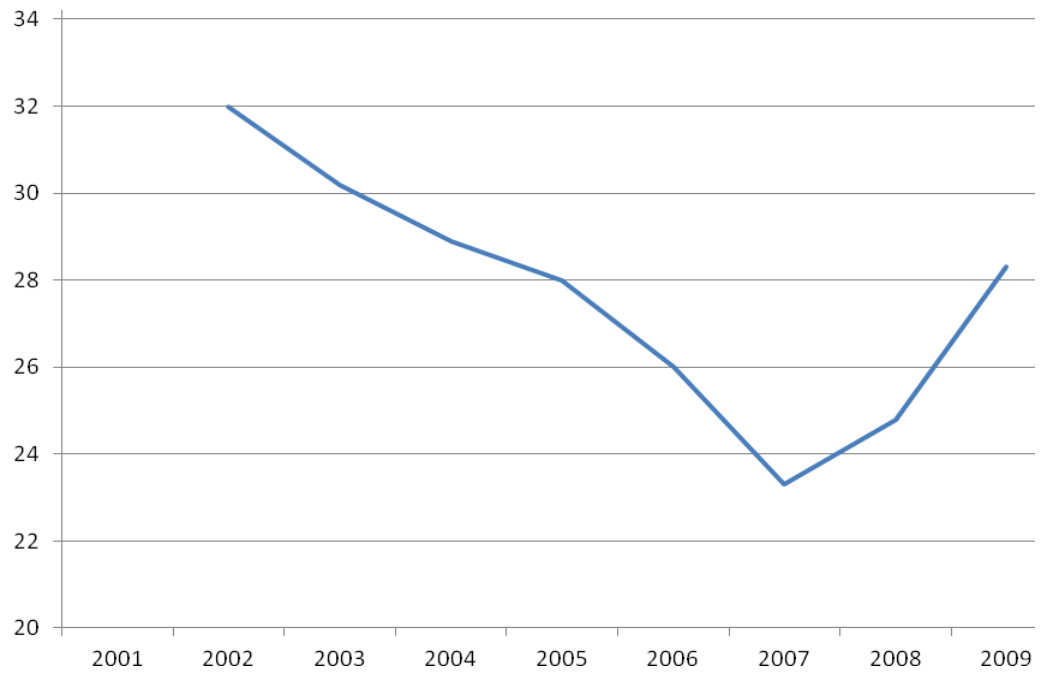
Source: Ministry of Finance, Russian Federation.

The Russian pension system has seen many changes in key parameters and rules over the last two decades.

The pension system has been in a constant state of flux since the first reforms of the late 1990s. The system's parameters have changed substantially over the course of the last decade. For instance, the mandatory contribution rate was 20% before 2011, was raised to 26% that year, and was reduced to 22% in 2012. The cut-off year of birth for workers to be enrolled into the mixed financing system (currently 1967) has also changed twice since the initial reforms. The basic pension has also been changed on a discretionary basis over the last ten years, leading to wide swings in the ratio of pensions to wages (see Figure 13.). Meanwhile, the number of beneficiaries covered by the mandatory pension system has increased somewhat, from 35.7 million in 2008 to 36.8 million in 2011.

Some of these changes, such as recent increases in the basic pension, have been necessary to address a growing problem of old-age poverty. However, ongoing changes in the system's rules can create uncertainty over future pension benefits. As argued by Kudrin and Gurvich (2012), pension systems need long-term planning and a regular evaluation of financial sustainability and the adequacy of pension benefits. Pension systems also need degree of some stability and gradual change to allow the population to adjust to change and maintain their trust in the pension system's ability to deliver adequate pensions.

Figure 13. Average ratio of pensions to wages in the Russian Federation, 2001-2009



Source: Gurvich (2011).

The Russian mixed PAYG-funded system is in line with international experience. In the long-term, mandatory funded pensions can ease the fiscal burden of the pension system on the state while improving the diversification and adequacy of retirement income.

The combination of PAYG and funded components within the same pension system can be explained by the need to diversify the sources of retirement income, which is a key OECD pension policy recommendation.[2] PAYG and funded systems are affected differently by risks (financial, longevity, political risks, etc.), so combining the two in a single pension system can bring diversification benefits to retirement benefits.

Such a mixed pension financing structure is becoming increasingly popular across the OECD. It exists or will soon exist in 15 of the 34 OECD countries, including Australia, Chile, Mexico, Norway, Poland, Sweden, and Switzerland. In addition, Italy, New Zealand ("Kiwisaver") and from October 2012 the United Kingdom have introduced a system of auto-enrolment into a national retirement savings schemes. Ireland is also considering introducing a similar system.

The Russian pension reform that introduced the mandatory funded pillar for those born after 1967 is most similar to those implemented in many Latin American and Central Eastern European countries. These reforms involved a partial substitution of a PAYG by a funded system, with a reduction in PAYG benefits to be compensated by the transfer of social security contributions to the individual funded pension accounts. Similarly, in Russia the 6% of salaries paid into the funded system for those born after 1967 was previously part of the overall compulsory pension contribution that before the reform financed solely the PAYG system. Such transfer of contributions from the PAYG to the funded system was common in other

[2] See OECD (2011a).

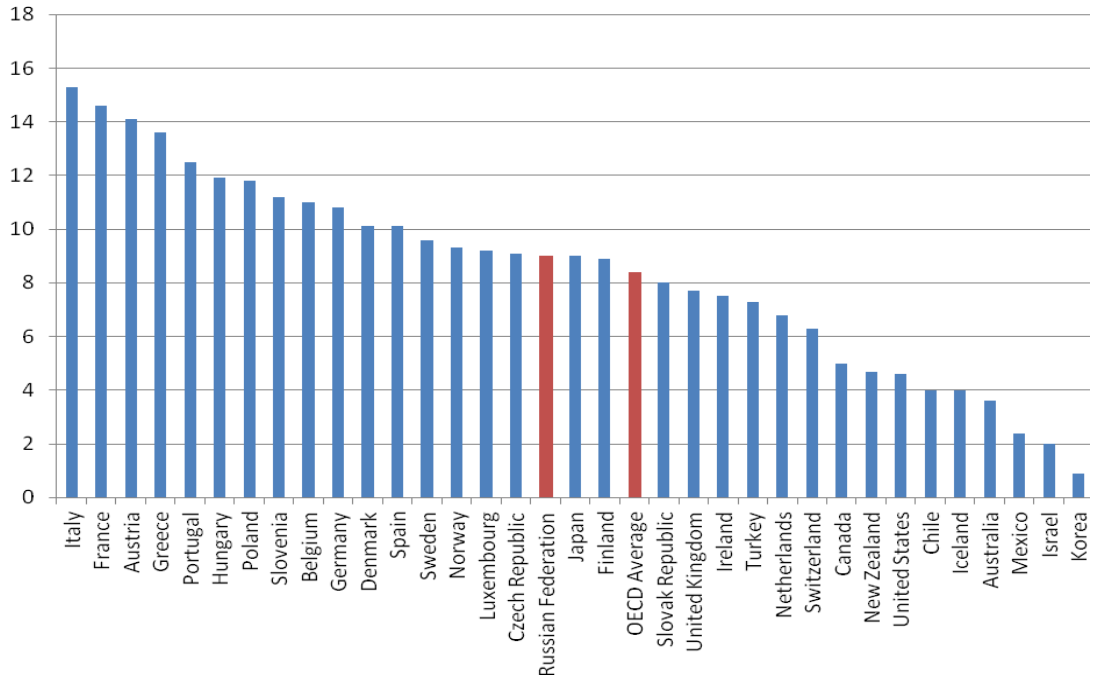
pension reforms in Central and Eastern Europe such as Estonia and Poland, but was reversed in Hungary because of fiscal considerations, among other factors.

These reforms improved the long-term fiscal balance of the PAYG system at the cost of a short-term increase in the deficit. During the crisis, some countries in Europe like Estonia and Poland rechanneled part of the contributions back to the PAYG system. In Hungary, the pension reform reversal was complete, as even the assets accumulated in the private pension funds were transferred back to the PAYG system.

According to the OECD (2012), the main cost of these pension-reform reversals will be borne by individuals in the form of lower benefits in retirement. These are shown to be of the order of 20% for a full-career worker in Hungary and around 15% with Poland's partial reversal. The effects on the public finances will be a short-term boost from additional contribution revenues but a long-term cost in extra public spending just as the fiscal pressure of population ageing will become severe.

Thanks to the pension reform that established the mandatory funded system and introduced a notional defined contribution formula for the PAYG component, public pension expenditure in Russia may grow less in the future than in other OECD countries, despite its unfavourable demographic trends. Russia is ageing at a similar rate to the OECD average. Its old-age dependency ratio is expected to double until 2050 (see Figure 14.). Yet, at 8.7% of GDP in 2011 (see Figure 15.), Russian public pension expenditure is already above the OECD average and has increased rapidly in recent years, from a level of 5.1% in 2007.

Figure 14. Public expenditure on pensions as a percentage of GDP, Russian Federation and OECD countries, 2011



Source: OECD (2011c) and OECD (2012)

Figure 15. Population by sex and age group, 2005 and 2050, millions of people

	Russian Federation		OECD	
	2005	2050	2005	2050
Total population	144	107.8	1129.6	1334
- Men	66.8	49.2	554.5	652
- Women	77.1	58.6	575.1	681.9
- Age 0-15	21.7	16.2	231.7	211.5
- Age 16-65	102.4	66	750.5	785.8
- Age 65+	19.8	25.7	147.5	336.7
Old-age dependency ratio[1]	22%	42%	22%	47%

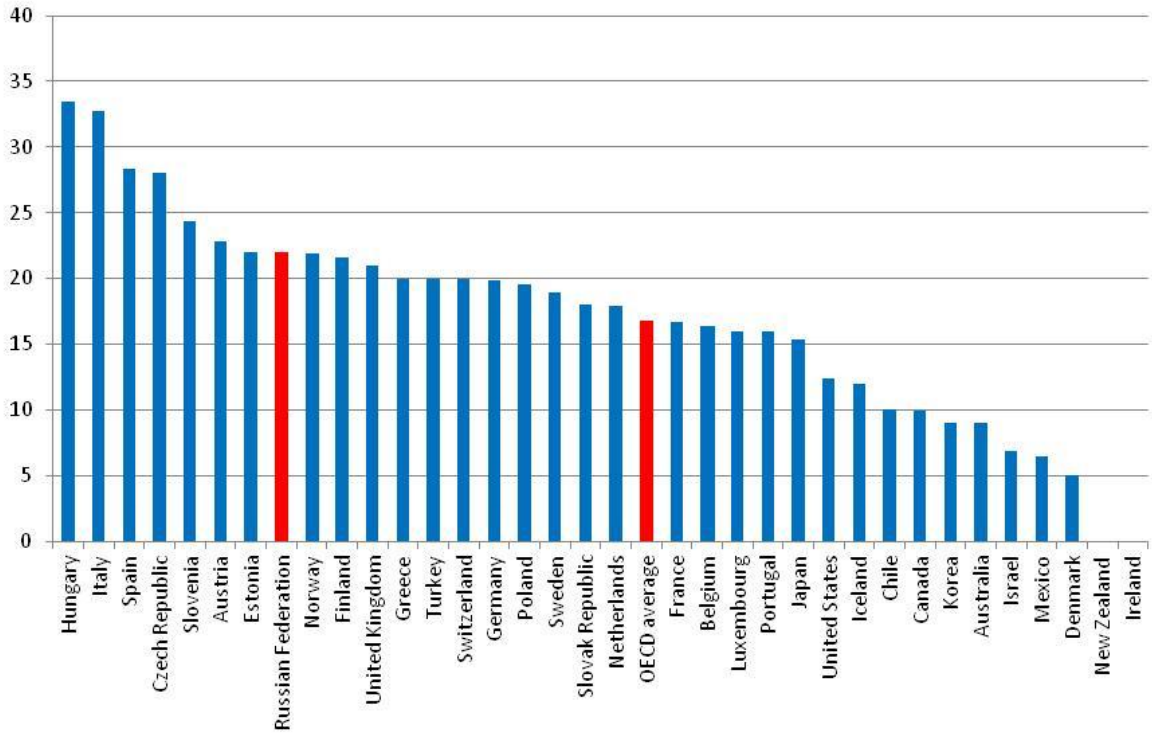
Source: OECD (2011c)

The mandatory contribution rate, at 22%, is relatively high by OECD standards, although some occupational groups benefit from much lower contribution rates. The total amount of contributions is insufficient to balance the system financially and so the government has to make ever increasing transfers from general revenues to cover the deficit.

The current total (PAYG plus funded) contribution rate set at 22% since 2012 is well above the OECD average (see Figure 15.). Kudrin and Gurvich (2012) argue that such high contribution rates may be discouraging labor supply and damaging the competitiveness of the Russian economy. Furthermore, despite the relatively high contribution rate, the pension system has been receiving ever higher subsidies from the general budget to cover the growing deficit.

Part of the explanation for the failure to reach a financial balance in the PAYG component are the wide-spread early retirement schemes and the special, low contribution rates for certain occupations (see Figure 16). The financing problem is worsening over the years. The share of general budget financing of pensions has increased from 24% of total pension expenditure in 2007 to 46% in 2011 (Gurvich 2011). The pension system is rapidly chipping away at the government's fiscal resources, which could have major implications for the country's ability to invest in other social services such as education, health and infrastructure.

Figure 16. Mandatory pension contribution as a percentage of gross earnings, 2007 (2011 for the Russian Federation)



Note: the chart does not include the minimum or default contribution rate in auto-enrolment DC systems. New Zealand's minimum contribution rate is set at 2% of wages (3% from 2013). In the United Kingdom it is set at 8%.

Source: OECD (2011c)

Figure 17. Contribution rates in the main mandatory system and special regimes (% of wages)

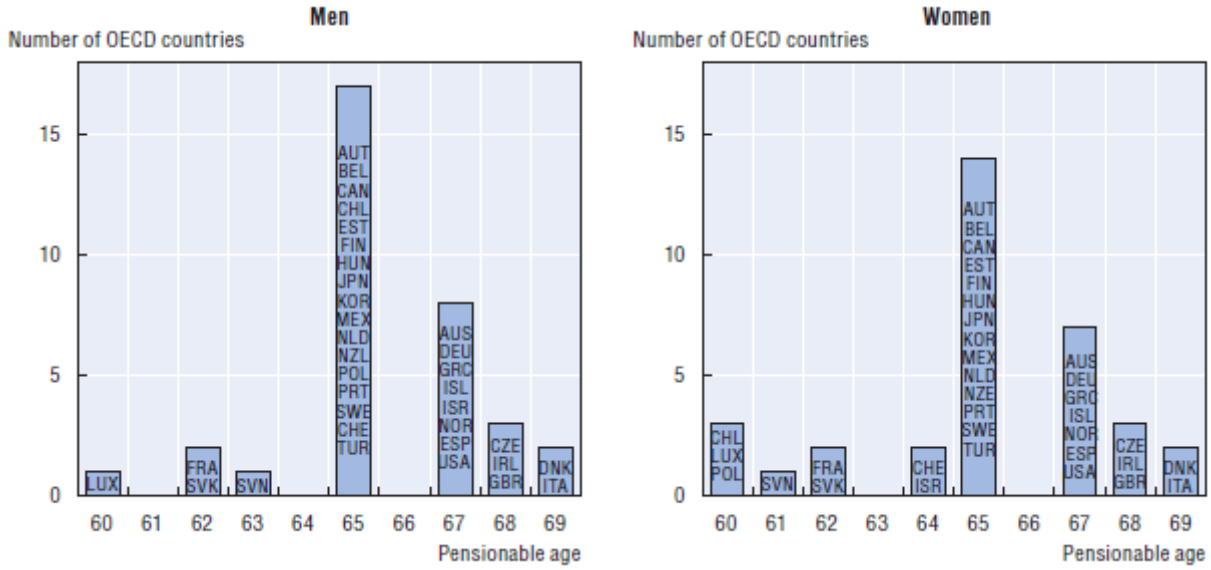
	2010	2011	2012
Aggregated contribution rate for mandatory pension insurance	**20%**	**26%**	**22%**
Agriculture	15,8%	16%	16%
Institutions and owners being residents of HiTech special economic areas	14%	8%	8%
Institutions and owners paid agricultural tax	10,3%	16%	16%
Institutions with disabled employees, non-government organisations of disabled and their institutions	14%	16%	16%
Mass media institutions	20%	20%	20,8%
Companies set up by scientific institutions		8%	8%
IT institutions	14%	8%	8%
Institutions and owners in industrial and social areas with preferential taxation, drag stores and non-profit organisations, charities	14%	18%	20%
Innovation Centre "Skolkovo"	14%	14%	14%
Ceilings to pensionable earnings, thousand RUR	**415**	**463**	**512***

Source: State Fund of the Russian Federation

About a quarter of the workforce benefits from early retirement schemes that in some cases allow retirement up to ten years before the normal retirement age.

The standard pensionable ages of 55 for women and 60 for men are relatively low by international standards. As shown in Figure 18, most OECD countries have increased retirement ages in recent years and the long-term rules in 13 OECD countries are now at or above 67. Russia's low pensionable ages are often justified, at least for men, by their relatively low life expectancy. However, the effective retirement age is even lower as about 35% of people draw their pensions before the standard retirement age. According to the OECD (2011c), early retirement programmes can create major financial pressure on the pension system.

Figure 18. Pensionable age under long-term rules, by sex



Source: OECD (2012)

Of those taking early retirement, most are following special retirement conditions for so-called 'hazardous' professions. For many of these privileged occupations, or work in designated geographical areas, the fact is that modern technology has facilitated great progress in living and working conditions in most sectors, compared to the time when these early-pension privileges were first awarded.

According to OECD (2011c), many of these early-pensions cannot be justified any longer and reform is being considered, which involves certification of work conditions in terms of risks, and compensatory payments to employers in view of their increasing social security contributions. The public system should not pay for early pensions, and any financial compensation towards employers for the reform of the current early pension system should be phased out as soon as possible.

Workers can choose different providers in the mandatory funded pension system, but most end up in the default state fund.

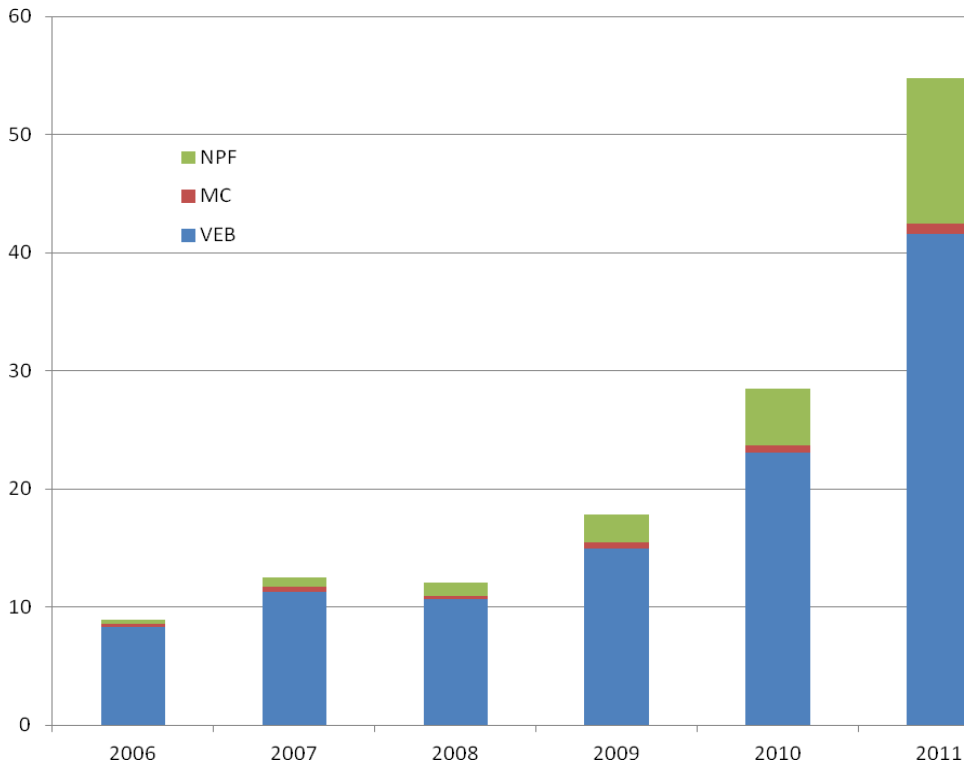
Currently, employees that participate in the mandatory funded pension system can choose to have their savings managed by the State Pension Fund of the Russian Federation – PFR - (the default option if not request is filed) or the Non-State Pension Funds (NPFs). In addition, members can opt out of the state asset manager (VEB) that manages assets for the PFR and choose instead a private asset manager.

As of December 2011, of the 73.4 million workers affiliated to the mandatory pension system (PAYG and funded), 61 million were in the PFR, 11.8 million were with NPFs and 0.6 million were in private asset managers.

The vast part of the US$ 55bn held in the mandatory funded pension system is administered by the PFR and invested by the state bank, VEB. While employees can opt out from state management, few have chosen to do so. However, over the last six years, the proportion choosing a private asset manager instead of VEB has been growing (See Figure 19). Similarly, the share of assets in NPFs has grown from 3% of the total in 20067 to over 22% of the total by December 2011.

The main goal of having different competing providers in the mandatory funded system is to allow the forces of competition to lead to lower costs and better services for the participants. However, over the last few years there have been some cases of irregularities where members were switched from the state default fund to a private provider without their knowledge. Pension fund management costs are also relatively high. These challenges need to be addressed through appropriate regulation and effective communication and financial education policies.

Figure 19. Assets in the mandatory funded system (USD bn.)



Note: VEB is the state-owned bank and asset manager, MC stands for (private) asset management company, NPF stands for Non-state pension fund.

Source: Ministry of Finance of the Russian Federation

Pension fund investments in the mandatory system are currently very conservative, with a large exposure to government bonds.

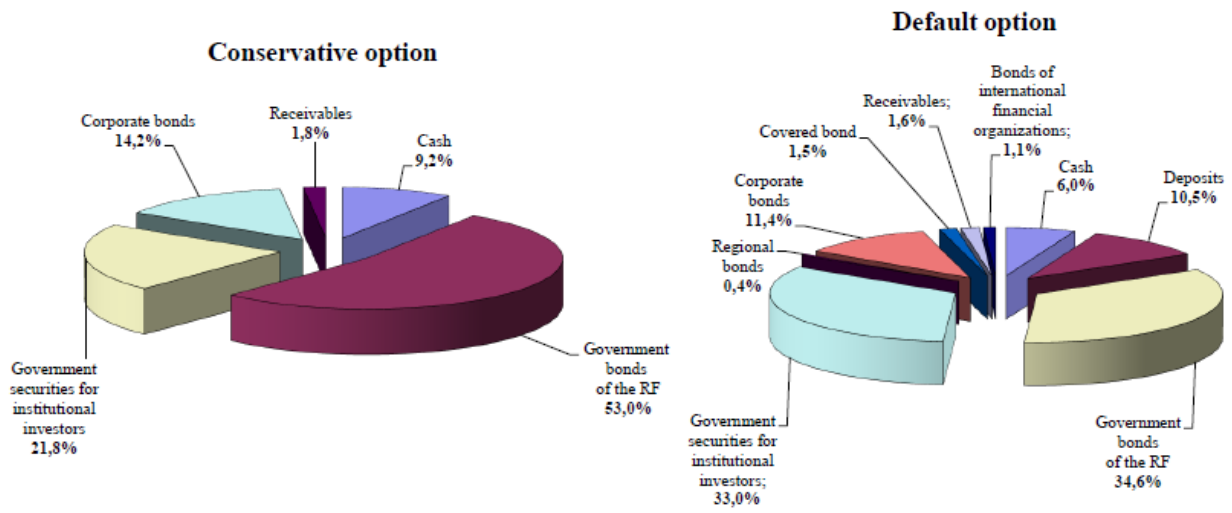
Another issue that needs careful attention is the investment regime. From an economic perspective, the distinction between the PAYG and the funded component in Russia is largely illusory because a large

proportion of total assets in the mandatory funded system (about 80%) are invested in Russian sovereign bonds (PAYG financing is also a form of – implicit - sovereign debt). While funding still provides the benefit of asset ownership that is absent in a PAYG system, the current asset allocation implies that there is a limited benefit in terms of promoting productive private sector investment or achieving diversification gains from foreign investment.

The investment regulations are particularly restrictive for the asset managed by the state-owned asset manager, VEB. Although a new, less conservative default portfolio was established in 2010, government bonds (both traded securities and special issues for institutional investors) still account for nearly 70% of total assets of that portfolio (see Figure 20). Neither the conservative nor the default portfolio have any equity investment. The only foreign investment is a 1.1% allocation to bonds issued by international organizations in the default portfolio.

Figure 20. Asset allocation in the mandatory funded component managed by VEB

(% of total assets, December 2011)



Source: Ministry of Finance of the Russian Federation

A conservative asset allocation focused mainly on domestic government bonds is particularly risky in the context of relatively high inflation experienced by the country. There is therefore an urgent need to review the investment regime for the mandatory funded pension system. The Russian investment regime contrasts with that in most OECD counties, where equities and foreign investment play a major role in risk diversification.

The investment allocation of the state asset manager also contrasts with that of the private asset managers and the Non-state pension funds, which have around half of their assets allocated to corporate bonds while equities account between 12-25% of total assets under management. On the other hand, private asset managers and NPFs have hardly any foreign investment although the law allows up to 20% of assets to be invested in foreign investment funds and 20% in securities issued by international finance organizations (see Table 1.4).

One important development that should facilitate the comparison of returns across the different managers and their efficiency is the development of a performance benchmark by the Ministry of Finance which will be made up of indices from the various asset categories that pension funds can invest in.

Table 6. Non-state pension fund investment ceilings

Assets type	Maximum limit, % of assets
Government securities of the RF	no
Government securities of subjects of the RF, municipal bonds	40 %
Bonds of Russian issuers (besides federal government securities of the RF and the subjects of the RF)	80 %
Stocks of Russian issuers created in the form of open joint-stock companies	65 %
Mortgage securities	40 %
Deposits in roubles and balances in accounts with lending institutions	80 %
Units (shares, allotments) in foreign investment funds	20%
Obligations of the International Finance Organizations	20%

Source: Ministry of Finance of the Russian Federation

Unlike the mandatory system, the investment regulations applied to the voluntary funded system are relatively more liberal. The assets in the voluntary system amounted to nearly US$ 22bn by December 2011 and the NPFs operating in this system (146) had about 6.6 million members. The real investment return of the NPFs has also been positive over the period 2000-10. At nearly 6% annually on average, it is higher than the net, real investment returns achieved by pension funds in any OECD country that reports official investment performance information (see Figure 20).

Going forward, two key issues to be considered are the design of quantitative investment regulations and the implementation of the prudent person rule, which is a key recommendation of OECD standards regarding pension fund asset management.

The investment return guarantee system is being reformed to apply at retirement, rather than on an annual basis. This should improve incentives for long-term investment.

The funded system needs to be reformed to unleash its potential to deliver high returns and improve its resilience to financial shocks. The requirement for guaranteeing contributions to the pension funds has some merit, but it should not be applied on an annual basis. Instead it should be applied only at retirement, as is done with the *Riester* pensions in Germany. Policymakers also need to consider that guarantees can force the pension funds into rather conservative investment strategies, which may not be in the interest of plan members.

Table 1.6 below shows the cost of different guarantees as a % of the net asset value and as a % of contributions. The guarantees modeled except the ongoing one are applied only at retirement, at the end of the contribution period. The ongoing guarantee is applied on an annual basis. The cheapest guarantee is the capital guarantee, which offers principal protection (or a 0% nominal return guarantee). This is the

guarantee that is currently in place in the Russian funded pension system. The ongoing capital guarantee has a cost that is over six times that of the capital guarantee applied at retirement. Yet, it offers no additional value to the plan member as long as she has to keep her savings invested until retirement. A final-period guarantee is therefore preferable.

Table 7. Costs of different return guarantees

	Capital guarantee	2% guarantee	Inflation-indexed capital guarantee	Ongoing capital guarantee	4% guarantee with annual fees	Floating guarantee
% of net asset value	0.06	0.22	0.24	0.39	0.89	1.22
% of contributions	1.24	4.94	5.58	18.36	18.71	26.09

Source: OECD (2012)

The rules for benefit calculation at retirement need to be consistent with longevity projections.

Both the notional accounts (PAYG) and funded components of the mandatory pension system divide accumulated capital at the time of retirement by an arbitrary figure of 12, 16 and 19 at different points in time. Instead, as is the case in most OECD countries and as argued in OECD (2011c), this figure should be linked to projected life expectancy at the time the individual draws the pension.

In addition, this calculation of life expectancy should also take into account the age of individuals when they draw their pension. This would mean that benefit levels reflect the length of duration over which the pension is to be paid. Such changes would not only improve the financial sustainability of the pension system but they would also improve intergenerational justice, assigning the cost of longer lives to those who benefit from it.

The co-financing scheme for additional savings to the mandatory funded pension provision can strengthen retirement income adequacy. However, it important to assess the reach of these subsidies and whether they could be better designed to attract more low income workers.

The mandatory pension system in Russia is expected to provide a replacement rate of around 40% of wages. In 2010 Russia introduced a system of co-financing or matching contributions from the state into the mandatory funded pension system. The subsidy is paid from the National Welfare Fund and as of May 2012 it had received 7 million requests, of which approximately 700,000 had been granted. The state subsidy can therefore be a powerful tool to promote higher retirement savings and therefore improve future benefit adequacy.

Such a system is also similar to that introduced in countries such as Australia, Germany and New Zealand, although in Germany and New Zealand the state subsidy is greater as a percentage of income for lower income workers. Such designs strengthen the incentive on these workers to participate in the scheme.

The development of the voluntary pension fund system is tied to the design of the mandatory system, and in particular the level of mandatory pension contributions and the financial sustainability of the PAYG system.

The further development of the voluntary, funded pension system could also help the Russian population to maintain their living standards after retirement. However, for employers the relatively high level of statutory pension contributions and the uncertainty regarding the future financing needs of the PAYG system can put a break on their willingness to sponsor complementary pension arrangements.

Currently, the coverage rate of the voluntary system is rather low by OECD standards, at around 10% of the workforce. Depending on how the PAYG system is reformed in order to bring it onto a more stable financing footing, policy options could be considered to further promote the voluntary pension system. One way to boost coverage in the voluntary system may be to introduce a system of auto-enrolment into NPFs, as was introduced in New Zealand in 2007 and as is being planned in the United Kingdom from October 2012.

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