OECD Working Papers on Finance, Insurance and Private Pensions No. 20

Coverage of Private Pension Systems: Evidence and Policy Options

Pablo Antolín,

Stéphanie Payet,

Juan Yermo

https://dx.doi.org/10.1787/5k94d6gh2w6c-en

OECD

Please cite this paper as:

Antolin, P., S. Payet and J. Yermo (2012), "Coverage of Private Pension Systems: Evidence and Policy Options", *OECD Working Papers on Finance, Insurance and Private Pensions*, No.20, OECD Publishing.

OECD WORKING PAPERS ON FINANCE, INSURANCE AND PRIVATE PENSIONS, NO. 20

COVERAGE OF PRIVATE PENSION SYSTEMS: EVIDENCE AND POLICY OPTIONS

Pablo Antolin, Stéphanie Payet, Juan Yermo

June 2012

OECD WORKING PAPERS ON FINANCE, INSURANCE AND PRIVATE PENSIONS

OECD Working Papers on Finance, Insurance and Private Pensions provide timely analysis and background on industry developments, structural issues, and public policy in the financial sector, including insurance and private pensions. Topics include risk management, governance, investments, benefit protection, and financial education. These studies are prepared for dissemination in order to stimulate wider discussion and further analysis and obtain feedback from interested audiences.

The papers are generally available only in their original language English or French with a summary in the other if available.

OECD WORKING PAPERS ON FINANCE,
INSURANCE AND PRIVATE PENSIONS
are published on www.oecd.org/daf/fin/wp

This document and any map included herein are without prejudice to the status of or sovereignty over any territory, to the delimitation of international frontiers and boundaries and to the name of any territory, city or area.

Ce document et toute carte qu'il peut comprendre ne préjugent en rien du statut de tout territoire, de la souveraineté s'exerçant sur ce dernier, du tracé des frontières et limites internationales, et du nom de tout territoire, ville ou région.

Abstract

COVERAGE OF PRIVATE PENSION SYSTEMS: EVIDENCE AND POLICY OPTIONS

To adapt pension systems to demographic trends, many countries are reducing pay-as-you-go public pension levels and lifting retirement ages. In this context, funded pensions could play a major role to avoid adequacy gaps. Yet, as this paper shows, the coverage of funded private pensions, as measured by enrolment rates, is highly uneven across countries and between individuals, especially in voluntary systems.

Some countries have made funded pensions compulsory (e.g. Australia, Chile) or quasi-mandatory (e.g. Denmark, the Netherlands) to ensure that most workers are covered and therefore have access to a sufficiently high complementary pension. However, in other countries with relatively low pay-as-you-go public pension benefits, funded private provision remains voluntary. The low level of funded pensions' coverage in such countries should be a major policy concern. Recent policy initiatives in Germany and New Zealand, involving the introduction of financial incentives (and auto enrolment in New Zealand) have been effective in raising coverage to the highest levels among voluntary pension arrangements, but coverage gaps remain that need to be addressed.

JEL codes: G23, J26, J32
Keywords: Coverage, funded pensions, compulsion, auto-enrolment, financial incentives, benefit adequacy

Résumé

COUVERTURE DES SYSTEMES DE PENSIONS PRIVEES :
PREUVE ET OPTIONS POLITIQUES

Pour adapter les systèmes de retraite aux tendances démographiques, de nombreux pays réduisent les niveaux des retraites publiques par répartition et relèvent les âges de départ à la retraite. Dans ce contexte, les retraites par capitalisation pourraient jouer un rôle majeur pour éviter des écarts d'adéquation. Toutefois, comme le montre ce document, la couverture des pensions privées par capitalisation, telle que mesurée par les taux d'adhésion, est fortement inégale entre les pays et entre les individus, en particulier dans les systèmes volontaires.

Certains pays ont rendu les pensions par capitalisation obligatoires (par ex. l'Australie, le Chile) ou quasi-obligatoires (par ex. le Danemark, les Pays-Bas) pour s'assurer que la plupart des travailleurs sont couverts et ont ainsi accès à une retraite complémentaire suffisamment élevée. En revanche, dans d'autres pays, où les prestations des retraites publiques par répartition sont relativement faibles, l'offre privée par capitalisation reste volontaire. La faible couverture des pensions par capitalisation dans ces pays devrait être un souci politique majeur. De récentes initiatives politiques en Allemagne et en Nouvelle-Zélande, impliquant l'introduction d'incitations financières (et l'adhésion automatique en Nouvelle-Zélande), ont été efficace à augmenter la couverture parmi les plus hauts niveaux au sein des dispositifs de retraites volontaires, mais des écarts de couverture demeurent et doivent être abordés.

Codes JEL: G23, J26, J32
Mots clés: Couverture, retraite par capitalisation, coercition, adhésion automatique, incitations financières, adéquation des prestations

COVERAGE OF PRIVATE PENSION SYSTEMS: EVIDENCE AND POLICY OPTIONS

TABLE OF CONTENTS

EXECUTIVE SUMMARY 5

1. Introduction 6
2. The need for private/funded pensions as a complement to public/pay-as-you-go pensions 6
3. Coverage of funded/private pensions in OECD countries 8
4. Assessment of the coverage of private pensions in 8 OECD countries 13
5. Policy options to increase coverage 20
6. Conclusions 29

REFERENCES 33

WORKING PAPERS PUBLISHED TO DATE 35

EXECUTIVE SUMMARY

The cuts in public pension benefits that future generations of retirees will experience in many OECD countries call for longer working periods and an expanded role for funded, private pensions. The latter is critical in countries where the public pension system offers relatively low pension benefits. Hence, policy makers need to closely monitor the coverage (enrolment or participation rates) of private pensions. Currently, coverage is uneven across countries and between individuals, especially in voluntary systems.

Some countries have made funded private pensions compulsory (*e.g*. Australia, Chile) or quasi-mandatory (*e.g*. Denmark, the Netherlands) to ensure that most workers are covered and therefore have access to a complementary pension. However, in other countries with relatively low public pension benefits, private provision remains voluntary and the highest coverage rates observed are around 50%.

Policy initiatives in Germany (*Riester*) and New Zeland (*KiwiSaver*) in the last decade, involving the introduction of financial incentives – and in the case of New Zealand also national auto-enrolment to the retirement savings programme – have been effective in raising coverage to the highest levels among voluntary pension arrangements (about 55% in New Zealand). The state's flat contribution subsidies provided to private pension plans have also promoted greater participation among lower income workers. Such workers do not normally benefit much from the tax incentives traditionally used to promote private pensions. The success of these countries in expanding coverage in a relatively short period largely vindicates these policies, though financial incentives can create a heavy burden on already stretched public budgets. Coverage gaps also remain in these countries, and overall enrolment rates are still below those observed in countries with mandatory or quasi-mandatory systems.

1. Introduction

Private or more generally, funded pensions play an important role in the retirement income systems of many OECD countries. This role is expected to grow as recent pension reforms in many OECD countries will lead to a reduction in pay-as-you-go (PAYG) public pension benefits. While prolonging working lives may partly offset these benefit cuts, there is no guarantee that this will happen in practice. Furthermore, unlike public pensions, private pensions are voluntary in many countries. As a result, participation in and contributions to these plans are largely the result of decisions made by employers and individuals, leading to wide disparities in coverage and contribution rates across the population and between countries. Differences may also occur in mandatory private pension systems if there is a high level of informality in labour markets.

Policy makers need to analyse these disparities and trends in order to determine whether individuals of different ages and socio-economic characteristics are using private pensions sufficiently to complement their public pension benefits and, if not, what policy measures may be needed to improve the situation. There is therefore a critical need for comparable and reliable information on private provision in order to better monitor retirement income adequacy and the role of private pensions across different groups of the population. Key indicators of the contribution of private pensions to the adequacy of retirement income are the access that individuals have to such provision (enrolment), the contributions made into private, defined contribution (DC) pension plans, the rights accrued in private, defined benefit (DB) plans, and the net returns from these systems. While a high participation rate is not enough to ensure retirement income adequacy from private pension plans – it should be associated with high contribution levels and good performance – it is a necessary condition to achieve it.

This paper therefore assesses private pensions' coverage for selected (mainly high-income) OECD countries, focusing on enrolment rates as a measure of coverage. It also provides some explanations for the differences observed across countries, and draws some policy conclusions. The paper first looks in Section 2 at the overall pension system and evaluates whether there is a need for private pension savings as a complement to PAYG public pensions. Section 3 then identifies countries where the overall participation in private pensions may be too low by comparing different types of private pension systems across OECD countries. Section 4 shows, focusing on eight selected OECD countries and using an analysis of household survey data, that coverage is unevenly distributed across individuals. Finally, Section 5 provides a set of policy options to increase participation in and contributions to private pension plans. Section 6 concludes, arguing that other than making private pensions mandatory, automatic enrolment coupled with financial incentives and matching contributions is most effective in increasing and broadening the coverage of private pensions, as well as increasing contribution rates.

2. The need for private/funded pensions as a complement to public/pay-as-you-go pensions

The analysis of the coverage of funded or private pensions needs to be done in the context of the overall structure of each country's pension system. In countries where public pensions, financed on a PAYG basis in most cases, already provide high benefits to individuals, private, or more generally, funded pension plans may not need to cover a large share of the population and offer high replacement rates. On the other hand, in countries where public pension benefits are low, it is critical to assess participation rates in complementary, private pension arrangements and the contributions made or benefit rights accrued by different population subgroups.

Most OECD countries have already moved or are moving towards a more diversified pension system, where PAYG pensions need to be complemented with funded pension arrangements and other

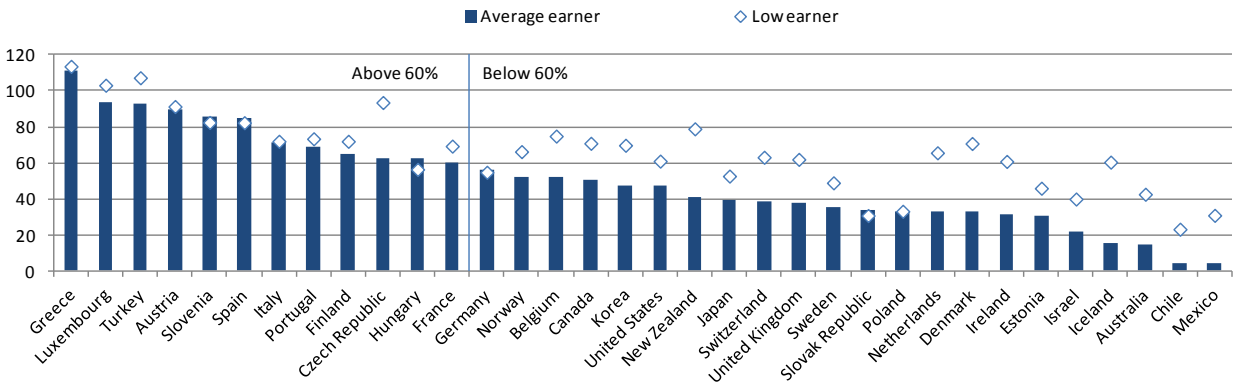
savings in order to ensure retirement income adequacy. While the crisis has damaged the short-term prospects for funded pension arrangements, most countries remain committed to such a diversified model of retirement income provision. Based on current pension rules, the average individual in at least two thirds of the OECD countries needs to complement her public pension benefits with funded, private pensions in order to maintain her standard of living after retirement.

Following OECD (2011), there are countries where PAYG pensions currently play a predominant role, such as Greece, where the net (after tax) PAYG pension benefit that a new entrant to the workforce on average earnings can expect to receive at retirement after a full career is 110% of net, final salary.[1] At the other extreme, in Mexico, the PAYG pension is provided in the form of a state subsidy to the mandatory funded pension accounts. This subsidy represents about 4% of the net, final salary for the typical worker on average earnings. PAYG pension benefits in other OECD countries fall between these two extremes (see Figure 1).

Net pension replacement rates for workers on average earnings from PAYG pension systems are not expected to reach 60% of the worker's final salary in twenty-two of the thirty-four OECD countries (for a worker entering the labour market at age 20 in 2008 and retiring at the normal retirement age). While the target replacement rate varies across countries and individuals, in countries where this level is not reached there is likely to be a great need to complement public pension benefits with additional income sources (private pensions and other savings) to maintain a similar standard of living after retirement. Even for low income workers (those on half average earnings), there are eleven countries (Australia, Chile, Estonia, Germany, Hungary, Israel, Japan, Mexico, Sweden, Slovak Republic, Poland) for which the replacement rate is expected to fall below 60%. Hence, the complementary role of funded pensions is of prime policy importance in these countries.

In addition, countries with high replacement rates from PAYG pensions may face sustainability problems in the future.[2] To the extent that these countries address this sustainability problem by lowering replacement rates from PAYG pensions, and unless working lives are extended, they may need to consider increasing coverage and contributions in funded pension plans in order to maintain future retirement income levels at an adequate level.

Figure 1. Net pension replacement rates from PAYG pension systems for average and low earners



Source: OECD (2011), *Pensions at a Glance: Retirement-income systems in OECD and G20 countries*, OECD Publishing, Paris.

3. Coverage of funded/private pensions in OECD countries

While funded and private pensions are growing in importance as sources of retirement income in practically all OECD countries, they reach very different levels of coverage across countries. As discussed in Box 1, there are different measures of coverage that may be used. For the purposes of comparing aggregate coverage rates among countries with relatively high per capital income levels, a useful metric is the percentage of the working age population (those aged 15 to 64) that is enrolled in a private pension plan (either occupational or personal).

As shown in Table 1, using this measure, low private pensions coverage is most evident in OECD countries where private pensions are voluntary. Of all such countries, the highest rates of coverage observed are around 50% of the working age population in countries such as the Czech Republic, Germany, New Zealand, and the United States. This 50% coverage level may not be sufficient, however, as these countries have replacement rates from public pensions around or below 60%. Hence, to the extent that workers on average earnings have coverage rates that are representative of the overall population – an issue to be further analysed in the next section - the expansion of private pension coverage should be a major policy priority.

Moreover, in these countries private pensions' coverage has generally been steady over recent years. Only a few countries have experienced a substantial increase in coverage. One of the most striking cases is New Zealand, where until the introduction of the "Kiwisaver" scheme in 2007, coverage rates had declined to less than 10% of the working age population. By 2010, the "Kiwisaver" scheme – which is based on automatic enrolment and government subsidies - had achieved a coverage rate of around 55%. Another country that has achieved a substantial increase in coverage is Germany, reaching 47% of households in which the head is aged between 16 and 64 by end 2008. As discussed in Section 5, this increase is linked to the introduction of the *Riester* pensions, which benefit from an important government subsidy. These plans experienced an increased in coverage from 2.5% of the working age population in 2001 - when they were introduced - to 10.2% in 2005 and 26.7% at the end of 2010.

Box 1. Different measures of coverage

Members versus contributors

Several measures coexist of private pension coverage (see Turner *et al*., 2003). Individuals can be considered as covered by a private pension plan or enrolled in a plan, if they have a positive account balance, have accrued benefits, contribute to a plan, or if contributions are being made on their behalf.

This paper considers that to be a member of a private pension plan, an individual must have assets or accrued benefits in a plan. Hence, an individual who does not contribute (for various reasons, including unemployment) or on behalf of whom contributions are not made during a year would still be considered as a plan member if she has assets accumulated or benefits accrued in the plan. The ultimate goal is to evaluate how much people have to finance retirement, so there is a need to account for all possible sources of income at retirement and therefore to consider those individuals who have assets in funded plans independently of whether they actively contribute today or not.

In countries with high levels of informality however, the measure of coverage based on the ownership of assets loses some relevance. Informal workers may have participated once in the private pension system and hence accumulated assets in a plan. They may however stop contributing during long periods, so that the benefits they may receive at retirement from such plans would not fit their needs. Complementary measures based on contribution frequency are therefore needed in such cases, in order to gauge the extent to which individuals will draw sufficient benefits from private pension plans.

Reference population for the calculation of the coverage rate

There is no standard reference population for the calculation of the coverage rate. The literature uses either the working age population (those aged 16 to 64), the labour force (those aged 16 to 64 either employed or unemployed), or the employed population. The choice of the reference population should be driven by the source used for the calculation and the policy question to address.

When using administrative data, only the aggregate number of pension plans members in a given country is available, whatever the labour force status of the individuals. Dividing this aggregate figure by the country's total labour force or total employment may lead to inaccurate measures of the coverage rate as some pension plan members may actually be out of the labour force (*e.g.* in Spain 17.4% of all the individuals enrolled in a pension plan are out of the labour force). The working age population, which includes all individuals independent of their labour market status, may therefore be used as a reference when coverage is measured with administrative data. The main issue when using this reference population is that the coverage rate then depends on the labour force participation rate in each country. Countries with lower labour force participation rates would be more likely to have lower coverage rates as a share of the working age population, while this may not be the case as a share of the labour force.

When using survey data, the labour force status of each surveyed individual is known. In particular, as surveys usually ask for individuals' professional activity, both workers in the formal and informal sector are included. It is therefore usually possible to calculate the coverage rate for any kind of reference population, depending on the policy question to address. From the perspective proposed in this paper, the labour force seems to be the most relevant reference population to calculate the coverage rate of private pension plans. The Table below compares the coverage rate using as the reference population the working age population or the labour force. It allows focusing on those individuals who are the most likely to save money in such plans because of employment and to also take into account unemployed individuals who may have accumulated assets through previous employment. In addition, it makes more sense to exclude those of working age who are out of the labour force, such as students or non-working spouses for instance, as they are not targeted by occupational pension plans. However, discouraged workers are not taken into account, while they could also have accumulated assets through previous employment.

Coverage rate of private pension plans in selected OECD countries using different reference populations

Country	As a % of the working age population	As a % of the labour force
Australia	85.7	90.6
Germany	47.1	51.6
Netherlands	88.6	93.4
Spain	18.6	22.7
United Kingdom	43.3	53.0
United States	47.1	56.7

Source: OECD calculations using survey data.

Despite the relative success of these countries in raising coverage over a relatively short time span, by far the highest coverage rates are found in countries with mandatory private pension arrangements. Australia, Chile, Estonia, Finland, Iceland, Israel, Sweden (Premium Pension System - PPS) and Switzerland have coverage rates around or above 70% of the working age population. Iceland has the highest coverage rate of any OECD country, at 85.5% of the working age population. In all these countries, private pensions are mandatory: employees must join a pension plan and minimum contribution rates (or benefits) are set by the government.

The only countries where mandating private pension provision has yet failed to generate such high coverage rates are Mexico, Norway, and Poland. Norway's coverage rate, at 66%, is somewhat lower than the other countries with mandatory systems but this may be explained by the recent and gradual introduction of compulsory enrolment. A similar factor may explain Poland's 55% coverage rate, as the private pension system was only made mandatory for new entrants to the labour force and

existing workers who were under 30 years old at the time of the pension reform. The coverage rate should increase over time as the structure of the working age population becomes increasingly dominated by employees for whom private pensions are mandatory. Labour market informality however may put a lower ceiling to Poland's lower coverage rates, just as it does in Mexico (58%), where the private pension system became mandatory for all workers at the time of the reform.

Table 1. Coverage of private pension schemes 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 QMO: 58.0	n.a.	23.6	23.6
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 QMO: ~90	n.a.	27.6	27.6
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.

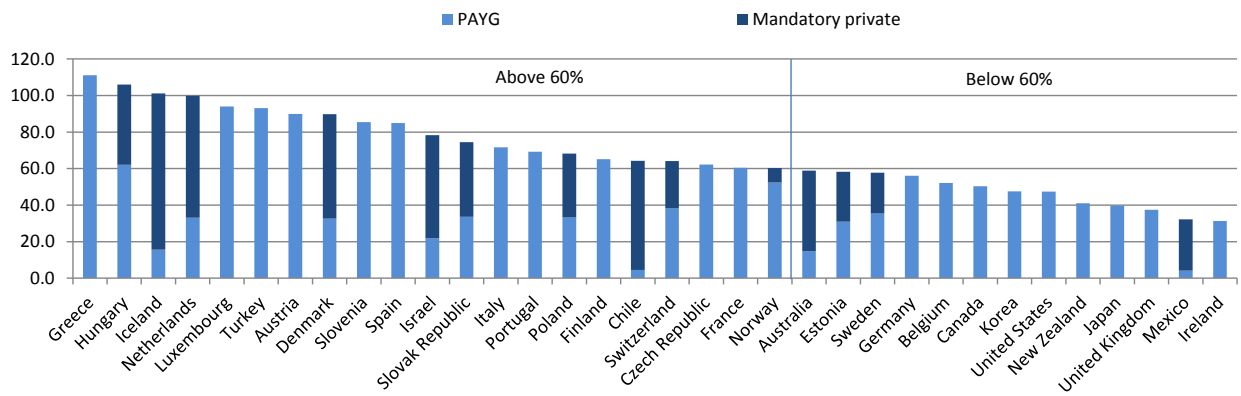
7. Data for occupational voluntary plans do not include provident funds (VASA).

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

Other occupational pension systems that achieve high coverage can be classified as quasi-mandatory: through industry-wide or nationwide collective bargaining agreements, employers establish schemes that employees must join. As not all sectors may be covered by such agreements, these systems are not classified as mandatory. Examples include the occupational pension systems in Denmark, the Netherlands and Sweden. In these countries, the coverage is close to the one in countries with mandatory systems, with 60% or more of the working age population covered.

All in all, thirteen of the thirty-four OECD countries have some form of mandatory or quasi-mandatory private pension system in place, which generally ensures a high coverage of the working age population. When combining PAYG and mandatory or quasi-mandatory private pension systems, net pension replacement rates for workers on average earnings are above 60% of the worker's final salary in these countries, except in Australia, Estonia, Sweden and Mexico. In total, thirteen OECD countries have an aggregate net replacement rate below 60%.

Figure 2. Net pension replacement rates from PAYG and mandatory private pension systems for average earners



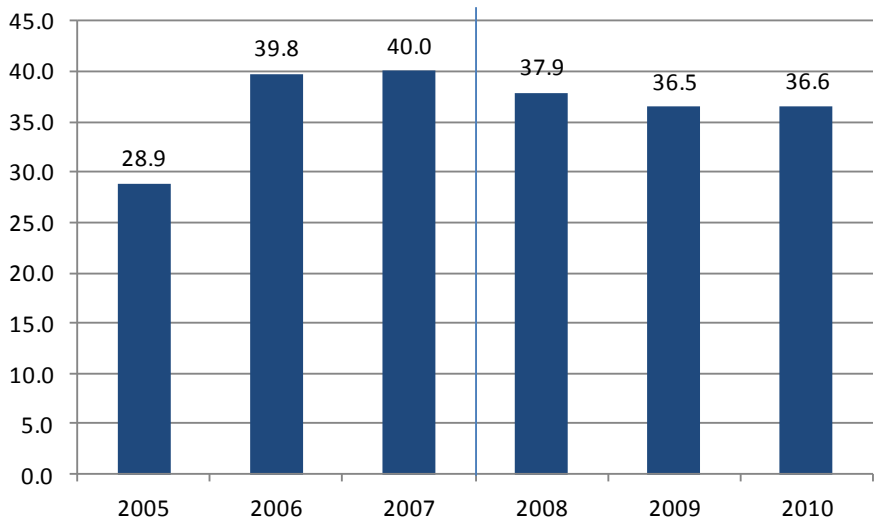
Source: OECD (2011), *Pensions at a Glance: Retirement-income systems in OECD and G20 countries*, OECD Publishing, Paris.

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 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 the 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 Global Pension Statistics.

So far, the discussion on coverage has focused on whether people are enrolled in private funded pension plans. However, sometimes, especially when there are high levels of informality in the economy, it is important to distinguish between being enrolled and making contributions and being enrolled but failing to contribute (see Box 1). Informality is a major obstacle to achieving high coverage, even in countries with mandatory or quasi-mandatory private pension systems. Individuals working in the informal sector are rarely covered by any contributory pension arrangement, whether public or private. Furthermore, when the incidence of informal employment is high, many of those who are enrolled in the private pension system are not contributing on a regular basis.

Therefore, in countries with high levels of informality, the measure of coverage based on participation as used in Table 1 needs to be complemented with measures based on contributors[3] (ideally, contribution frequency and levels during a person's career) in order to better gauge the extent to which individuals will draw sufficient benefits from private pension plans. As shown in Table 2, when coverage is measured as the ratio of contributors to working age population, the coverage rate drops substantially in countries such as Chile (by 40 percentage points)[4] and Mexico (by 38 percentage points) which have mandatory pension systems.[5] In other OECD countries with less informality, the drop in the coverage rate only applies to voluntary plans and is far less important (maximum 14 percentage points for voluntary personal plans in Australia). It is also larger for personal pension plans than for occupational plans.

Table 2. Contrasting measures of coverage

As a % of the working age population

	Type of plan	Members	Contributors
Autralia	Occupational mandatory	68.5	68.5
	Personal voluntary (1)	19.9	6.2
Chile	Personal mandatory	73.7	33.1
Germany	Occupational voluntary	22.5	13.3
	Personal voluntary	36.9	25.9
Mexico	Personal mandatory	57.7	19.2
Spain	Occupational voluntary	3.3	3.2
	Personal voluntary	15.7	14.8
United States	Occupational voluntary	41.6	40.2
	Personal voluntary	22.0	..

1. Personal voluntary plans include all superannuation plans other than mandatory occupational plans. Additional employee voluntary contributions are considered to be made in the occupational plan, not in a personal voluntary plan.

Source: For Chile: Pensions Supervisor. Mexico: the number of members comes from the OECD Global Pension Statistics, while the number of contributors comes from the AIOS 2010 Statistical Bulletin. For the other countries: OECD calculations using survey data.

4. Assessment of the coverage of private pensions in 8 OECD countries

This section assesses the coverage rate of private pension plans in 8 OECD countries with a breakdown by socio-economic characteristics.[6] Coverage is defined as the percentage of individuals in the labour force that are enrolled in a private funded pension plans, independently of whether they are currently contributing or not.[7] The labour force, rather than the working age population is chosen as the denominator to calculate the coverage rate because survey data is used. Box 1 explains this choice and also contrasts the two measures of coverage for six of the countries analysed in this section.

The previous section showed that private pensions cover a large part of the working age population (over 50%) in many OECD countries. In this section, it is shown that even for some of these countries such coverage is uneven, with some groups of the population having very low enrolment rates in private pension arrangements. In order to understand coverage gaps, especially in countries where private pensions are voluntary, and their implications for retirement income adequacy, it is necessary to break down coverage by various socio-economic characteristics. An in-depth analysis of coverage (and contribution levels) can also help evaluate the different policy options that can be used to improve access to private pensions and increase contribution levels.

This section presents the main results of calculating indicators on coverage from private pensions in eight OECD countries (Australia, Germany, Ireland, Italy, the Netherlands, Spain, the United Kingdom and the United States).[8] Coverage is calculated according to age, income, gender, type of employment (full-time versus part-time), and type of contract (permanent versus temporary) using household survey data. Calculations have been produced by extracting, processing, checking and organising the information from household survey data in each country, using software that allows programming and statistical analysis (Stata and SAS). This is a heterogeneous group of countries: in six of them (Germany, Ireland, Italy, Spain, the United Kingdom and the United States) private pensions are voluntary, while they are mandatory in Australia[9] and quasi-mandatory in the Netherlands. As shown in Table 3, coverage rates range from 21.1% in Italy to 93.4% in the Netherlands. In Australia, where employers are obliged to contribute[10] to occupational pension plans, while individuals are not, 90.6% of those in the labour force are enrolled in private pension plans, but only 24.7% make personal voluntary contributions to those plans.

Table 3. Coverage rate of private pension plans in selected OECD countries

As a % of total labour force or total employment

	Total[1]	Occupational plans	Personal plans
Australia (2006) - M+V[2]	90.6	78.0	15.7
Australia (2006) - V[2]	24.7	19.6	6.6
Germany (2008)[3]	51.6	24.9	40.5
Ireland (2009)[4]	41.3	31.0	12.0
Italy (2010)[5]	21.1	11.7	9.4
Netherlands (2010)[6]	93.4	92.9	30.4
Spain (2005)	22.7	4.1	19.1
United Kingdom (2009)	53.0	38.7	12.9
United States (2009)	56.7	51.6	25.2

Notes: Coverage rates are provided with respect to the total labour force for all countries except Ireland for which coverage rates are provided with respect to total employment.

1. The sum of the coverage rates by type of plan does not equal the coverage rate for the total as individuals may have both occupational and personal plans simultaneously.

2. The first row includes all individuals enrolled in any superannuation fund, whether contributions are being made by the employer only (mandatory), both the employer and the individual (mandatory and voluntary), or the individual only (voluntary). It also includes individuals not contributing or for whom no contributions are being made on their behalf into a pension plan in which they have assets. The second row only includes individuals voluntarily contributing to any superannuation fund.

3. The coverage rate represents the percentage of households where at least one of the partners is enrolled in private pension plans, and in which the head is younger than 65 and at least one of the partners is in the labour force.

4. The coverage rate represents the percentage of employed individuals enrolled in private pension plans and aged between 20 and 69.

5. The coverage rate represents the ratio between the total number of pension accounts and the total number of individuals in the labour force.

6. In the Netherlands, occupational pension plans are quasi-mandatory, while personal pension plans are voluntary.

Source: OECD calculations using the Household, Income and Labour Dynamics in Australia (HILDA) survey, the German SAVE survey, the Irish Quarterly National Household Survey (QNHS), the OECD Global Pension Statistics data set (for Italy), the Dutch DNB Household Survey (DHS), the Spanish Survey of Household Finances (EFF), the British Family Resource Survey (FRS), and the American Survey of Income and Programme Participation (SIPP).

Coverage rates of private pension plans by socio-economic characteristics

Calculations show that younger individuals tend to be less often enrolled in privately managed funded pensions, especially in voluntary systems. In Germany, Ireland, Italy, Spain, the United Kingdom, and the United States, where private pensions are voluntary, as well as in the voluntary part of the Australian and Dutch systems, coverage increases with age. Figure 4 shows that the share of the labour force enrolled in voluntary private pension plans is significantly lower for individuals aged between 25 and 34 than for individuals aged between 35 and 44 (the difference between these two age groups ranks from 5.8 percentage points in Italy to 17.6 in Spain). This suggests that individuals start saving in voluntary private pension plans rather late and may be too late to have adequate pension benefits at retirement.

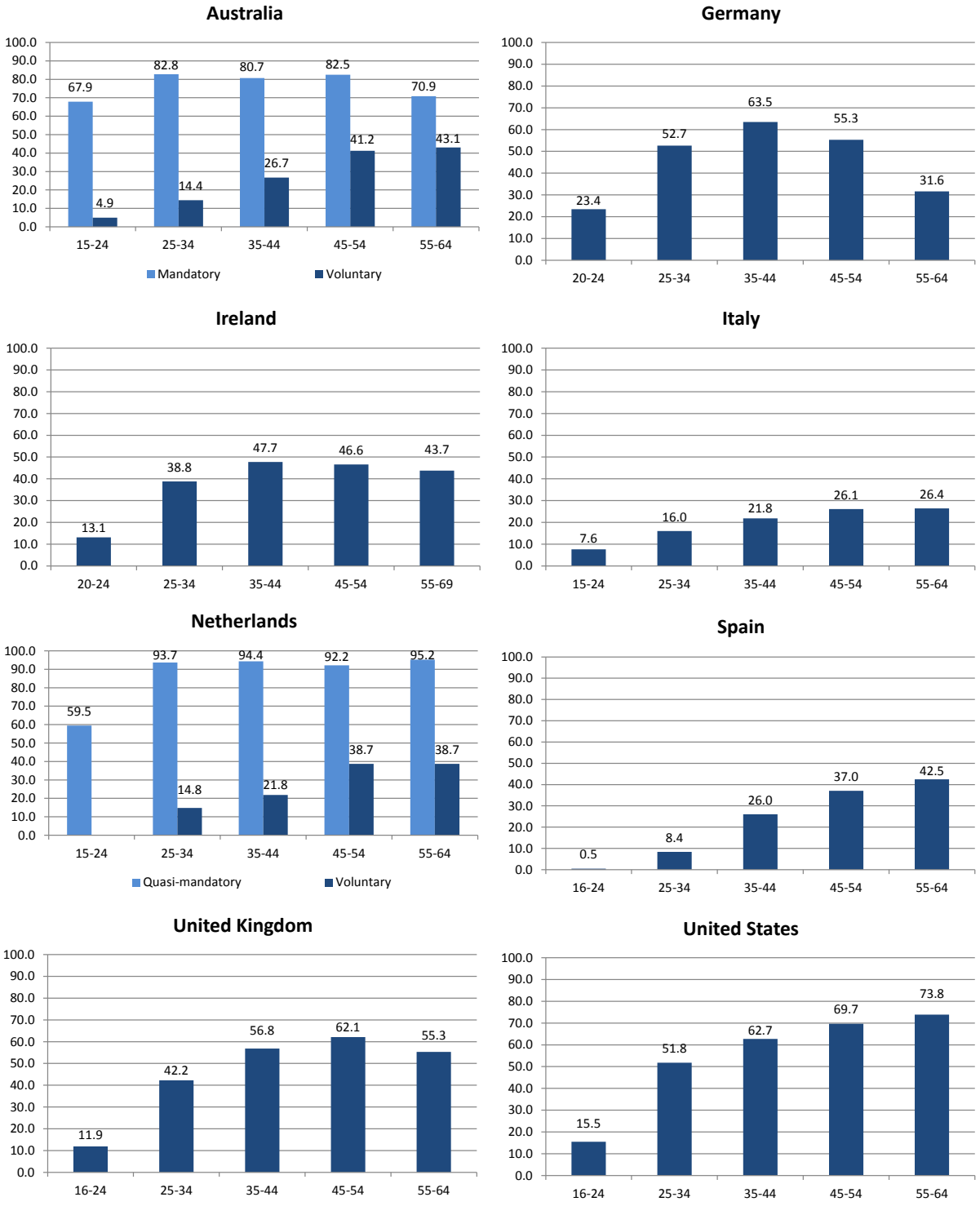
In contrast, coverage is relatively constant across age groups in mandatory or quasi-mandatory private pension plans, as illustrated for Australia and the Netherlands. In these two countries the coverage rate for those aged 15 to 24 is lower than for other age groups. In Australia, the system is mandatory (employers need to make contributions) for employed persons aged between 18 and 70 years old[11] earning more than AUD 450 a month. Therefore, the system is not mandatory for many in the very young group (those aged 15 to 24) and, moreover, the share of people earning less than AUD 450 a month is greater in the very young group than in other groups. In the Netherlands, the very young tend to work disproportionally in sectors without mandatory coverage. In addition, the young tend to have more temporary contracts than other age groups. People in temporary contracts are less likely to be enrolled in private pension plans.

Finally, it is interesting to note that in Germany coverage drops significantly for individuals aged 55 to 64. This is explained by the relatively higher share of low income people at old ages and the direct relationship between coverage and income (as shown below, low income individuals tend to be less often enrolled in private pension plans). Indeed, in Germany the share of households where the head is aged 55 to 64 and in the three lowest income deciles (39.8%) is higher than for those where the head is aged 45 to 54 (23.8%) or those aged 34 to 44 (22.8%).

Figure 5 shows that coverage also increases with income, especially in voluntary systems. In all the countries for which this information is available (all except Ireland), coverage rate in voluntary private pensions generally increases with income, reaching a plateau after the 7th or 8th income deciles.[12] In Australia and the Netherlands, when focusing on the mandatory or quasi-mandatory part of the system, the plateau is reached much earlier, after the 2nd or 3rd deciles and the coverage rate among the poorest income groups is above 65%.[13] In voluntary systems however, the coverage among the poorest income groups is quite low, at around 15%, except in the United States where it reaches 29%. This may have important implications for income inequalities in old age, especially if replacement rates from PAYG pensions are not sufficient for low earners.

Figure 4. Coverage rate of private pension plans according to age

As a % of total labour force

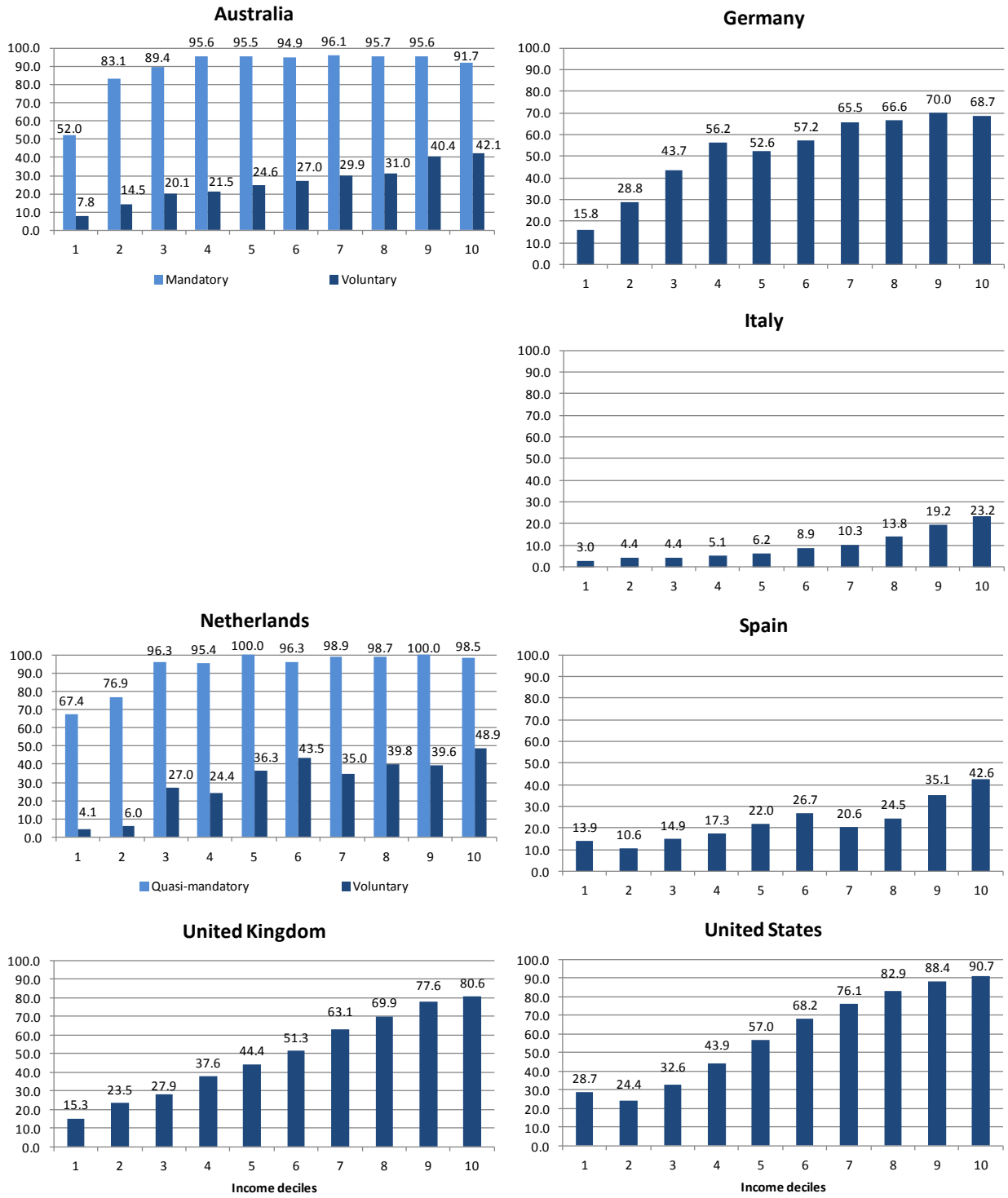


Note: Coverage rates are provided with respect to the total labour force for all countries except Ireland for which coverage rates are provided with respect to total employment.

Source: OECD calculations (see Table 3).

Figure 5. Coverage rate of private pension plans according to income

As a % of total labour force

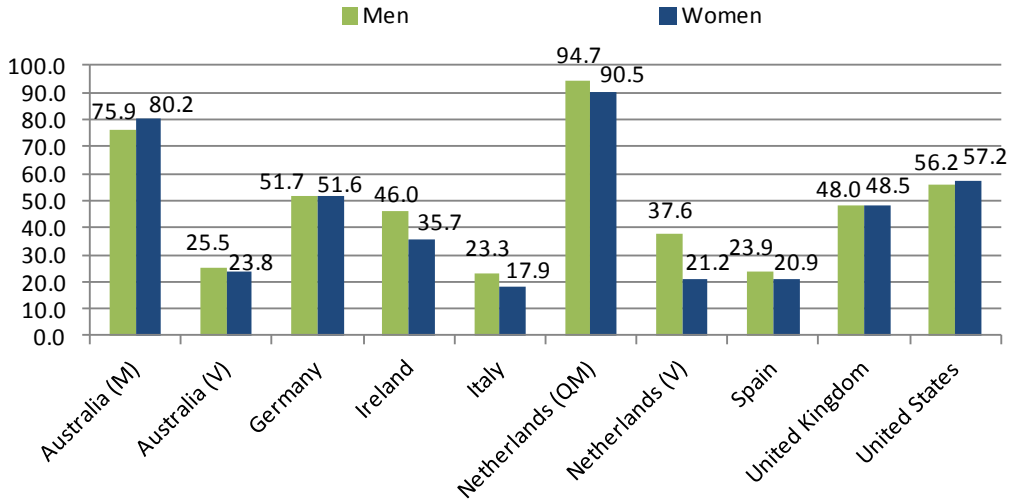


Source: OECD calculations (see Table 3, except for Italy for which the Survey of Household Income and Wealth has been used).

In contrast, only some of the countries analysed show a gap in coverage by gender. The largest gap is observed in the Netherlands (where the coverage rate of voluntary personal pension plans for men is higher than the one for women by 16.4 percentage points), followed by Ireland (10.3 p.p.), Italy (5.4 p.p.), and Spain (3.0 p.p.). In Germany, the United Kingdom and the United States, the difference in coverage between men and women is negligible (Figure 6).

Figure 6. Coverage rate of private pension plans according to gender

As a % of total labour force



Note: Coverage rates are provided with respect to the total labour force for all countries except Ireland for which coverage rates are provided with respect to total employment.

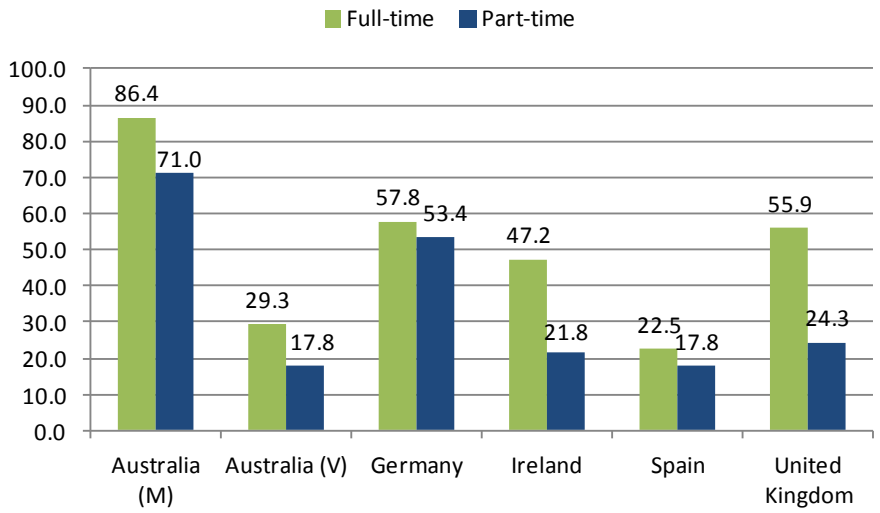
Source: OECD calculations (see Table 3).

The gender difference in Ireland may be explained by the large gap in coverage between full-time and part-time workers. Figure 7 indeed shows that full-time workers in Ireland are more often enrolled in private pension plans than part-time workers (25.4 p.p. difference). In addition, data from the Irish Quarterly National Household Survey show that women tend to be more often in part-time jobs (in 37.1% of the cases) than men (11.5%).

It may seem surprising that in the United Kingdom there is no gender effect on coverage like in Ireland, as the difference in coverage between part-time workers and full-time workers is also large (31.6 p.p.). Indeed, as shown by data from the British Family Resource Survey, 8.7% of women and 2.5% of men in the United Kingdom have a part-time job. However, the coverage rate of women in part-time jobs is higher (32.7%) than the one of men in the same category of jobs (17.8%), which explains why the overall coverage is broadly similar for both genders. The same explanation applies for Australia.

Figure 7. Coverage rate of private pension plans according to the type of employment

As a % of total labour force



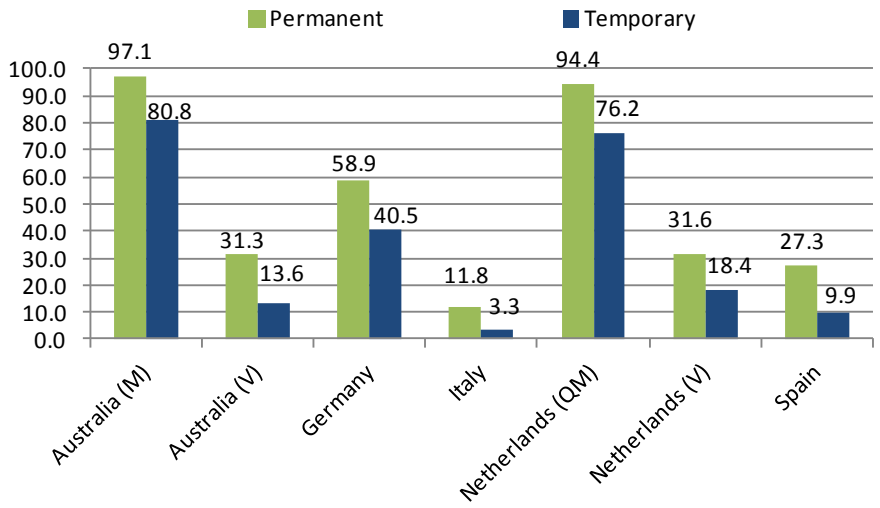
Note: Coverage rates are provided with respect to the total labour force for all countries except Ireland for which coverage rates are provided with respect to total employment.

Source: OECD calculations (see Table 3).

Finally, the coverage rate is lower for workers having a temporary contract than for workers having a permanent contract in all the countries for which this information is available (Figure 8). The difference is particularly important in Germany, the Netherlands, and Spain where the coverage rate of workers having a permanent contract is at least 17 percentage points higher than the one of workers having a temporary contract. The lower coverage rate of workers with temporary contracts can also partially explain why younger individuals tend to be less often covered than their elders as, in all the countries analysed, the proportion of workers having temporary contracts decreases with age.

Figure 8. Coverage rate of private pension plans according to the type of contract

As a % of total labour force



Source: OECD calculations (see Table 3, except for Italy for which the Survey of Household Income and Wealth has been used).

5. Policy options to increase coverage

This section assesses policy options to increase coverage in private pensions. Uneven coverage rates could be the result of differences in workers' access to private pension plans as well as differences in the set of incentives and alternatives faced by eligible individuals. Options to overcome obstacles to achieve high and uniformly distributed levels of coverage include compulsory and automatic enrolment, providing financial incentives, developing financial education programmes, as well as facilitating and simplifying provision of, access to and choice in private pension arrangements. Finally, the interaction between public and private pensions needs to be considered, particularly as means-tested benefits can strongly affect labour and savings decisions.

Compulsory enrolment

As shown in Section 3, making enrolment into private pensions compulsory is ultimately the most effective policy in raising coverage levels. In high income level OECD countries, the difference in coverage rates between countries with mandatory and voluntary private pension systems is as much as 30 percentage points. Both mandatory (as in Australia) and quasi-mandatory solutions (as in the Netherlands) can ensure high coverage rates.

As a policy, compulsory enrolment can be supported by evidence from the behavioural economics and psychology literature that shows individuals being bad at committing to save for retirement. Procrastination, myopia and inertia lead many individuals to postpone or avoid making the commitment to save sufficiently for retirement even when they know that this is ultimately in their best interest. Compulsory enrolment also ensures a more equal distribution of any tax benefits or other government incentives offered to private pension arrangements.

The main limit to compulsory enrolment is formal sector employment. It is very hard to get workers outside the formal economy and economically inactive individuals to contribute to any form of contributory pension arrangement (public or private). This explains why compulsory enrolment generally works well in high income OECD countries but has been less successful in achieving high coverage rates in countries such as Chile or Mexico.

There are also potential disadvantages to compulsory enrolment that need to be considered. First, making a system compulsory requires setting a specific contribution rate, which may be inefficient for some workers, especially if it forces them to become more indebted or diverts funds from other necessary expenses such as educating children, or from investing in property or one's own business. As argued by Blake et al. (2011), though, this problem can be at least partly addressed by setting age-dependent contribution rates. Second, mandatory contributions to pensions may be perceived as a tax, discouraging people from working. Third, compulsory enrolment can lead to a ratcheting down effect, where existing provision is reduced if the target set by the government is lower than prevailing practice. Fourth, compulsory enrolment may not be necessary for all individuals depending on the design of the overall pension system. Low income workers for instance may not need to contribute in private pension plans if they already enjoy high replacement rates from the public pension system.

Automatic enrolment

An alternative to compulsory enrolment that has gained popularity in recent years is automatic enrolment. At its essence, it involves signing up people automatically to private pensions but giving them the option to opt out with different degrees of difficulty. The policy relies on individual behavioural traits such as inertia and procrastination. Automatic enrolment has long been used by

employers in the United Kingdom and the United States on a voluntary basis and there is a long body of empirical research supporting a positive impact on coverage.[14]

The popularity of automatic enrolment has increased in the United States with the passing of the Pension Protection Act in 2006, which made it much easier for companies to automatic enrol their employees into pension plans. In 2012 the United Kingdom also saw the introduction of nation-wide automatic enrolment for all those workers who are not currently covered by a private pension arrangement. Employers must automatically enrol and pay minimum contributions for any workers aged at least 22 but under age 65 or State Pension age, depending on when they were born, who earn more than GBP 7 475 in a year. A new national, trust-based pension scheme has been established by the government (the National Employment Savings Trust, NEST) that may be used by employers looking for a relatively low-cost alternative to establishing their own plan or hiring existing private sector pension providers. Chile also introduced auto enrolment starting in 2012 for the self-employed working in certain tax categories. From 2015 on, though, contributing will be mandatory for these categories of workers, who will pay contributions through their annual income tax declaration. Ireland is also considering introducing a national auto enrolment retirement savings system.

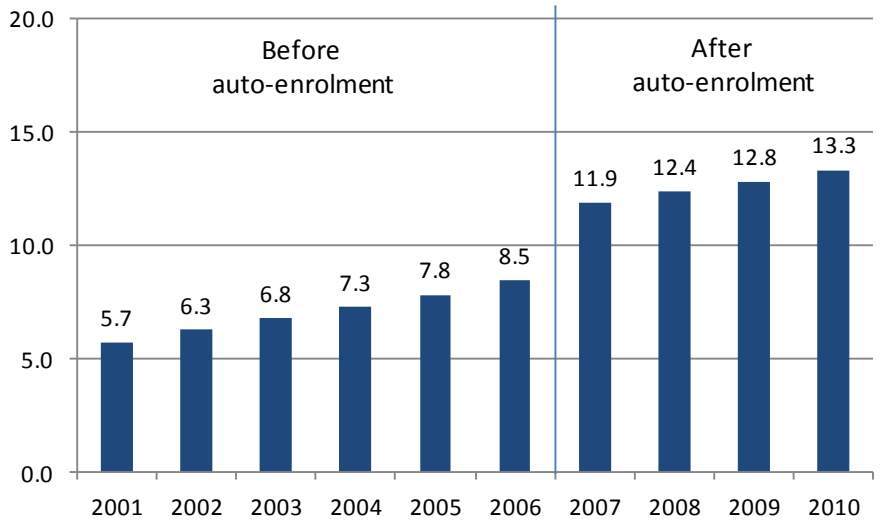
The first two OECD countries that introduced automatic enrolment at the national level were Italy and New Zealand. In Italy, automatic enrolment was introduced in 2007. It involved the payment into the pension funds of the future flow of the severance contributions (*Tratamento di fine raporto*, TFR) for all salaried employees. Individual workers were given a period of six months in order to decide whether to opt out of this arrangement, keeping their rights regarding the TFR as in the past. The pension fund that would receive the TFR contribution was generally indicated by labour agreements.

According to COVIP, the Italian pension supervisor, the reform involved about 12.2 million private-sector employed workers, and several hundreds of thousands of companies. The introduction of automatic enrolment accounts for the vast share of the 1.4m additional workers enrolled in private pensions between end 2006 and end 2007; only a small minority enrolled just automatically, while the vast majority of new members did express their will to enrol and pay additional contributions, so as to get matching contributions from employers. In the space of one year the working age population coverage rate increased from 8.5% to 11.9% (see Figure 9).

While the increase in coverage was significant it was below expectations and at odds with the experience in other countries. Rinaldi (2011) argues that the relative failure of the TFR reform may be due to the fact that the TFR is highly valued by both employers and employees. It provides a cheap form of financing to employers, hence they may have encouraged workers to opt out or at least provided no encouragement, especially. The TFR is also attractive for employees because it offers a return guarantee and it can be drawn when they leave their firm. The implementation of the automatic enrolment programme was also mired by some difficulties, such as its introduction one year earlier than originally planned, and a sub-optimal definition of the default option and of the communication strategy aimed to support the reform. Indeed, the government may have had mixed interests, since after the reform employers with 50 employees or more have to pay the annual contribution financing the TFR into a public fund for employees who opt out. Therefore, any increase in pension fund enrolment has a cost for the public budget.

Figure 9. Italy: Coverage rate of private pension funds before and after auto-enrolment

As a % of the working age population



Source: OECD Global Pension Statistics.

The other main example of automatic enrolment into private pension arrangements is New Zealand's KiwiSaver which was introduced in July 2007 (see Rashbrooke, 2009). Employers must enrol new employees into the scheme and individuals have two months to opt out. The minimum contribution is 2%, which is deducted from employee earnings, and an employer contribution of 2% of salary is added.[15] The government also fully matches employee contributions up to NZD 10 per week, and "kick-starts" each individual account with NZD 1 000.[16] If an employee makes no decision to either opt out or actively choose a KiwiSaver provider, Inland Revenue automatically assigns that employee to one of six "default" providers, as selected and registered by the government. Existing employees not subject to the auto-enrolment rule can also join (opt-in) the KiwiSaver plan on a voluntary basis.

As of end 2010, there were 1 610 453 members in KiwiSaver, according to Inland Revenue statistics, or about 55% the working age population. So far, the proportion of workers opting out has averaged around 30%, following a declining trend.[17] Unsurprisingly, opting out is more widespread among younger workers (37% of 25-34 years old, for example) than older (25% for people aged 55 or over).[18] According to Inland Revenue's statistics, as at the end of 2010, only 36.6% of KiwiSavers can be said to be in the plan because of automatic enrolment, while opt-in via the employer constituted 13.7% of enrolment, and opt-in via a KiwiSaver provider was 49.7%. The government subsidies provided to the Kiwisaver accounts and relatively liberal withdrawal rules (described in the corresponding subsection below) may have also played an important role in ensuring high levels of participation as shown below.

The KiwiSaver also provides a crucial insight into the importance of the default contribution rate. Members joining the KiwiSaver before 1 April 2009 where assigned to a default contribution rate of 4%. Since April 2009 the default contribution rate was moved down to 2%. Inland Revenue statistics show that as of 30 June 2011, 80% of people who joined the KiwiSaver after April 2009 contribute 2%, the default, while 62% of those who joined when the default contribution rate was 4%, still contribute 4%. The focal importance of the default and inertia are clearly at play here, showing how important it is to get the default contribution rate right. From 1 April 2013 the default contribution rate will increase to 3%.

Financial incentives

Historically, tax incentives (tax deductions and credits) have been the main type of financial incentive provided by governments to promote private pensions. Such incentives benefit higher income households most (as they are subject to the highest tax rates). However, the largest coverage gaps are concentrated among lower and middle income households who may draw little benefit from tax incentives. In order to enhance the financial value incentives for such households some countries have introduced flat subsidies to private pensions. Countries where governments pay flat subsidies to private pension accounts include the Czech Republic and Germany, Mexico (the *Cuota Social* paid to the mandatory individual account system), and New Zealand.

Matching contributions from either the employer or the state can also help increasing coverage and contributions in private pension plans. Matching contributions enable certain groups to be targeted. For example, governments can match contributions only for women, the young (as in Chile) or low income individuals (as in Australia). In New Zealand, on the other hand, matching contributions from both the government and employers are available for all workers. Matching contributions are also common in some voluntary, occupational pension plans (e.g. 401(k) plans in the United States), where sponsoring employers match the contribution made by employees up to a certain amount percentage of the worker's salary.

New Zealand offers an interesting case study as both flat subsidies and matching contributions are used at the relatively generous levels described above. According to Inland Revenue's 2009/10 annual report, most people in New Zealand are joining KiwiSaver because they consider it to be a good way to save for retirement. The financial incentives from the government and employers play a major part in the positive perception of the KiwiSaver and may partly explain why the proportion of the working age population that chose to opt in into the KiwiSaver (*i.e*. excluding the auto-enrolled) is larger (35.2%) than the coverage rate of occupational superannuation schemes (8.2%). There are however other motivations to join KiwiSaver, as shown in Table 4. In particular, its default and other design features make the KiwiSaver an easy and effective way to save for retirement and for purchasing a home.[19]

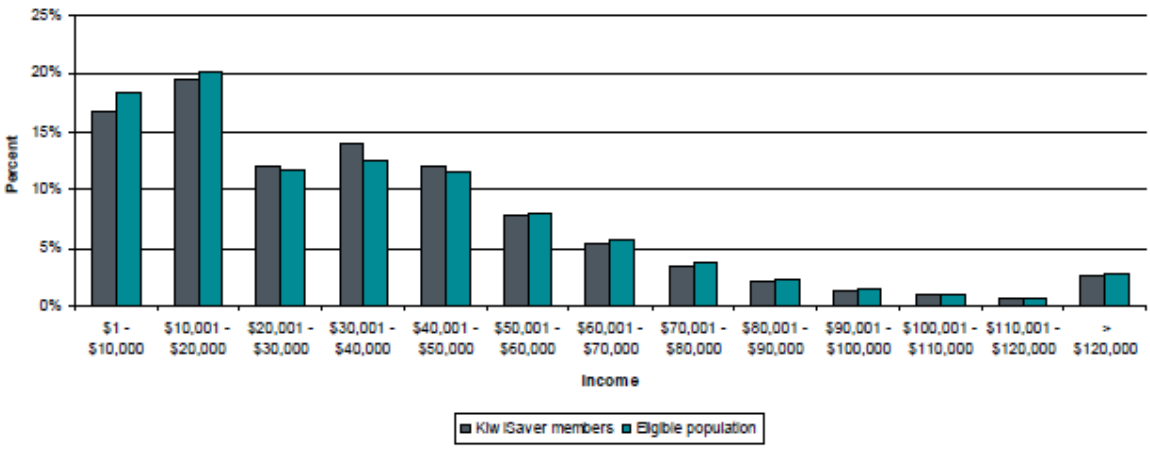
Table 4. Most important motivations and barriers to membership

Reasons for joining KiwiSaver	% of members
Securing a retirement income	75
Government and employer contributions	77
Easy way to save	72
Reasons to enrol children	% of members who have enrolled their children
Government kick-start contribution	83
Saving for retirement	59
Saving for a home	54
Teaching children good savings habits	52
Reasons for not joining KiwiSaver	% of non-members
Could not afford to join	32
There are better ways to provide for one's financial security / It is better to pay off mortgage or student loan debt	30
Simply had not got around to joining	26
Concern about the lack of security for the money or the fact that current and/or future governments may make changes to the scheme as membership deterrents	25

Source: Inland Revenue's Annual Report July 2009 - June 2010.

The financial incentives (flat subsidies and matching contributions) largely explain why the coverage rate (as reported by Inland Revenue statistics) is very similar across income groups in New Zealand (see Figure 10), a rather unique feature among voluntary, private pension systems. The Kiwisaver plan provides strong financial incentives for existing employees to opt-in and for new employees to remain (not to opt-out).

Figure 10. Income distribution for KiwiSaver members and KiwiSaver eligible population



Note: KiwiSaver members are all members at 30 June 2011 with income for the 2010 tax year. Eligible population are those eligible to join KiwiSaver (i.e. those who are New Zealand citizens or residents and under the age of 65 years), whether or not they have joined, with income for the 2010 tax year.

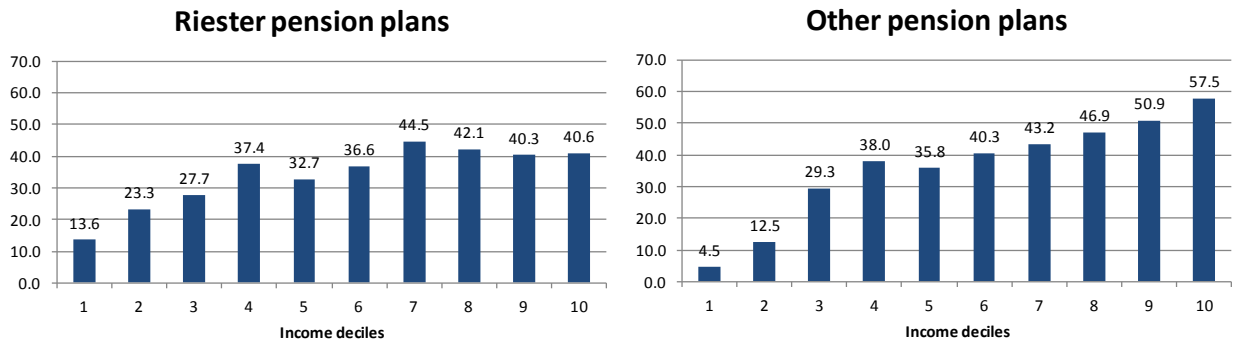
Source: Inland Revenue's Annual Report July 2010 – June 2011.

Germany also experienced an important increase in coverage thanks to the introduction of *Riester* pensions in 2001 as part of a major pension reform. *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.[20] 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 11 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 11. Germany: Coverage rate of private pension plans according to the income of the household and the type of plan, December 2008

As a % of total labour force



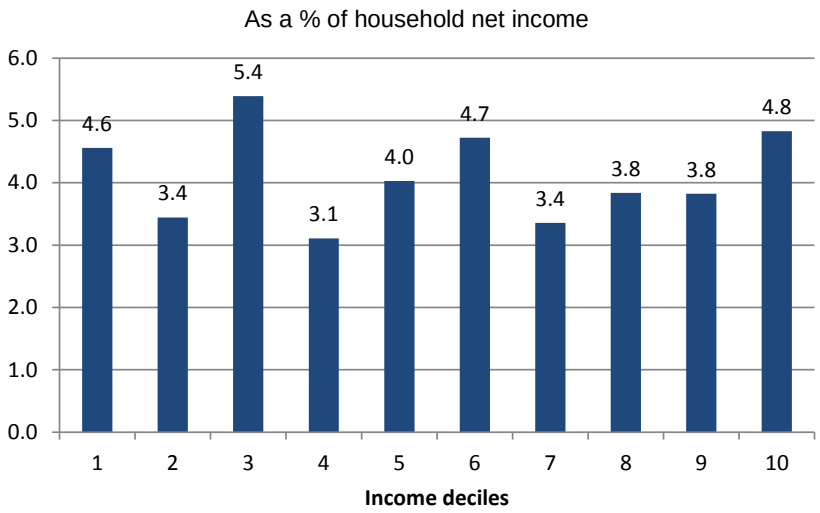
Source: OECD calculations using the 2009 SAVE survey.

The main difference between *Riester* pensions and other pension arrangements is that they are predominantly of the personal kind and that they benefit from a substantial government subsidy. The fact that they are personal should in principle make them less accessible to low earners. However, as the system has been primarily designed so as to be accessible to low earners (through the minimum annual contribution of EUR 60 for people receiving minimum social benefits for instance), it is

actually easier for them to get the full state subsidy. This is most probably the prime factor behind the comparatively high coverage rates among low earners.

Additionally, the design of the government subsidy in *Riester* plans may explain why contribution rates do not follow any clear pattern by income (Figure 12). As indicated above, the subsidy in *Riester* plans is similar for everyone independently of income and, consequently, introduces a strong incentive to enrol but it does not provide strong incentives to make contributions above the minimum required. The actual contribution rate is actually rather constant across the income scale, around the 4% minimum required by the legislation to obtain the full state subsidy.

Figure 12. Germany: Contribution rates in *Riester* pensions according to the income of the household, December 2008



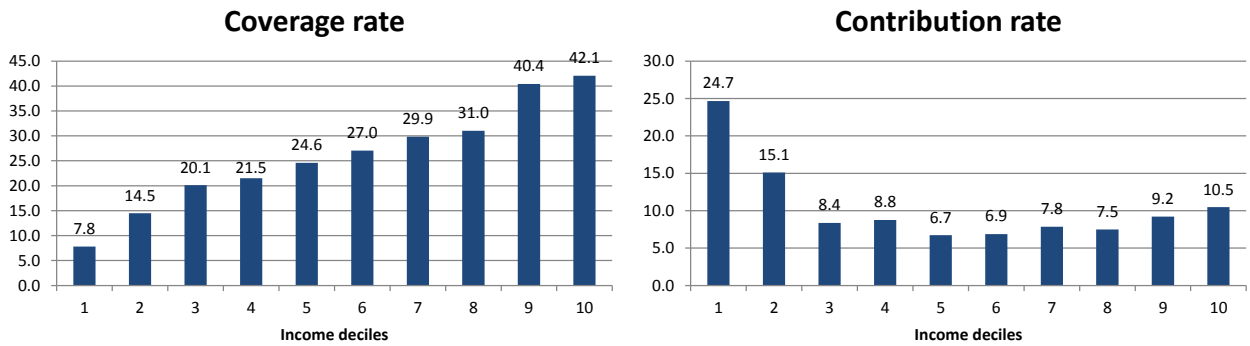
Source: OECD calculations using the 2009 SAVE survey.

In Australia, since 2003, the Superannuation Co-contribution scheme provides dollar-for-dollar matching contributions from the government for low income earners who make additional contributions to their superannuation fund, up to a maximum of AUD 1 000 per year. On the other hand, unlike Germany and New Zealand, there is no flat subsidy. The target population for co-contributions is those who, during the previous financial year, lodged an income tax return, were aged under 71, their total income was below the maximum threshold and their eligible income was at least 10% of total income. According to the Australian Taxation Office, of that target population, only 15.7% were entitled to a co-contribution in the 2010-11 year of processing. This has been reducing each year since the 2007-08 year peak of 20.3%. The reduction in co-contribution matching rates from 150% to 100% for eligible personal contributions made after 1 July 2009, combined with a reduction in the maximum entitlement from AUD 1 500 to AUD 1 000 can partially explain why fewer low income individuals make use of this system.[22]

In Australia, low income people are less likely to be enrolled and contributing than other income groups, but those contributing tend to contribute a higher share of their wage than other income groups. Coverage and contribution rates in the voluntary component of the Australian superannuation system (Figure 13) suggest that despite the matching, low income individuals still have lower coverage rates than other income groups in Australia.[23] However, among those who contribute to their superannuation account voluntarily, low income individuals tend to have a higher contribution rate than other income groups. For low income people to take advantage of the maximum matching requires a larger contribution effort than for higher income groups.

Figure 13. Australia (voluntary component): Coverage and contribution rates according to income

As a % of total labour force and as a % of individual gross earnings



Source: OECD calculations using the 2006 HILDA survey.

The Australian, German and New Zealand experiences highlight the strong impact that subsidies and matching contributions can have on coverage and contribution rates. The German experience suggests that flat subsidies have a positive effect on the coverage rate for low income individuals, while the Australian case shows that matching contributions encourage higher contributions but are not necessarily effective in raising coverage among low income groups. New Zealand, which combines both subsidies and matching contributions, achieves the highest coverage rates among low income workers groups when compared to other groups.

Financial education

Financial education programmes can also be used to promote coverage in private pension arrangements. However, the evidence on the effectiveness of these programmes – primarily from the United States-, is rather mixed. For instance, there is little evidence that printed media has any impact on participation or savings rates (Bernheim and Garrett, 2003), while there is some evidence that at-work retirement seminars help raise coverage and contributions among lower income workers (Lusardi, 2004).

Some of the most effective programmes are those that aim at explaining the rationale for saving in simple terms using effective communication tools borrowed from the advertising and marketing world. Lusardi, Keller, and Keller (2008) describe a planning aid that simplifies the decision to save and helps employees make an active choice. The planning aid provides several pieces of information to help overcome identified barriers to saving and uses marketing techniques to motivate participants to save. The programme's success can be judged by the tripling of contribution rates after its introduction.

Facilitating and simplifying provision, access and choice

In countries with voluntary occupational pension arrangements, small companies are often discouraged from establishing a pension plan because of the associated administrative costs and regulatory burden. Some countries, such as the United States and, more recently, Canada have addressed this problem by creating a framework for a simpler type of pension arrangement. The United States has the Simplified Employee Pension (SEP) Plan while Canada introduced the Pooled Registered Pension Plan (PRPP) in December 2010.[24] In both cases, these plans are of the defined contribution type and are administered by financial institutions. In Canada's case, the PRPPs are

intended to be a low-cost portable vehicle, offered by licensed providers and attractive for small and medium sized employers and the self-employed.

A more direct route to promoting low-cost provision has been taken in the United Kingdom, where the government has established a relatively low-cost pensions provider, NEST, that will be run with charges of 1.8% on contributions and 0.3% on assets. While there has been some criticism of this charge level, it compares rather well with the typical fees charged by commercial pension providers. NEST's main target are low-income employees, who have currently the lowest coverage rate of private pensions.

Employee participation in existing private pension arrangements can also be improved by simplifying the steps and choices that must be taken for joining a plan. Choi, Laibson, and Madrian (2009) study the effect of Quick Enrolment in the United States, a programme that simplifies the decision of whether or not to enrol by assigning those who do enrol into a pre-set contribution rate and asset allocation. Employees may change these parameters if they wish, but they do not have to make an active choice when they join the plan. The programme had a clear positive impact on coverage, tripling participation rates in 401(k) plans among new hires from 5% to 19% in the first month of enrolment. When the programme was offered to previously hired nonparticipants, participation increased by 10 to 20 percentage points.

Access to private pension arrangements can also be improved by ensuring that providers reach out effectively to the uncovered population, particularly those groups that are most difficult to enrol such as the self-employed and rural-sector workers. An interesting case is the Indian New Pension Scheme, which is mandatory for government officials, but voluntary for informal sector workers. Enrolment is performed by so-called "points-of-presence", the first point of contact between members (or potential members) and the NPS system. Banks, post offices, depository agencies, and pay and accounts offices are all permitted to conduct the NPS related business as "points-of-presence". This should greatly assist individuals' participation, particularly those living in remote rural area where many financial institutions are absent and the establishment of new branches is not financially practical.

Possibility of withdrawals

For individuals, a major worry about putting money into private pension arrangements, whether mandatory or not, is that they are not able to withdraw it until retirement. Yet, there may be cases where accessing some of those funds could help solvent a major shock, such as defraying health expenses that are not covered by the health system (or private insurers). For this reason, some countries allow withdrawals from retirement saving systems under specific, exceptional circumstances. Such rules may reassure savers and increase the attraction of private pension arrangements.

Some countries have a rather liberal approach to withdrawals. In New Zealand's Kiwisaver, after the first 12 months of membership, automatically enrolled workers may take a "contribution holiday" for a minimum of 3 months, up to 5 years at a time for any reason. Participants may also withdraw all of their funds at any time in the event of serious illness or permanent disability, if they face significant financial hardship (such as a dependent's medical care or education) or if they wish to use the funds to make a down payment on the purchase of a first home after at least 3 years of saving in a KiwiSaver account. Similar rules on so-called hardship withdrawals apply in the United States for 401(k) plans, IRAs and other qualified plans. In addition, funds may be withdrawn at any time before age 59.5, but are subject to a 10% tax penalty in addition to the going income tax rate.[25] Allowing early

withdrawals, even when subject to a tax penalty, may divert too much of the money initially intended to finance retirement and pose retirement income adequacy issues.

Disincentives created by means-testing

In many countries, basic, public pension benefits and in particular the social safety net is means-tested. Under means-testing, public benefits are withdrawn more or less rapidly depending on the individual's other income sources (and in some cases, his or her wealth). Incentives to save for retirement in complementary arrangements can be severely affected, at least for low and middle income employees. In recent years, some countries have addressed this problem by reducing the so-called withdrawal rate, that is, the rate at which public pensions are reduced with growing private pension income. For instance, in Chile, the 2008 pension reform introduced a universal, basic pension benefit that lowered the withdrawal rate to about 30%. In the United Kingdom, the withdrawal rate was close to 100% until 2003, when it was lowered to about 40% with the introduction of the Pension Credit (OECD, 2011).

The ultimate effect of means-testing on savings and labour supply decision is ambiguous, as there are both substitution and income effects. However, as they generally make individuals worse off, particularly those on lower earnings, there is a strong argument to keep withdrawal rates low. Some countries have gone as far as eliminating means-testing altogether, by introducing universal, flat-rate pensions where the only eligibility conditions are age and a residency test. Examples of such universal pensions include the Netherlands and New Zealand.

6. Conclusions

The complementary role of funded, private pensions is of prime policy importance as in many OECD countries replacement rates from public, PAYG pension systems are not expected to reach a level that would allow all individuals to avoid a significant reduction in their standard of living in retirement. In as many as 22 of the 34 OECD countries, based on current legislation, replacement rates offered by public, PAYG pensions to new entrants to the labour force are not expected to reach 60% for workers on average earnings. In all these countries, therefore, funded pensions are needed to ensure retirement income adequacy.

Comparing the different funded pension systems across OECD countries shows that the highest coverage rates (defined as being enrolled in a private pension plan) are found in countries with mandatory or quasi-mandatory private pension arrangements. In countries where private pensions are voluntary, the rates of coverage observed range from around 13% to 50% of the working age population, while mandatory systems have coverage rates around or above 70%. While a high participation rate is not enough to ensure retirement income adequacy from private pension plans – it should be associated with high contribution levels and good performance – it is a necessary condition to achieve it.

In order to understand gaps in the coverage of private pensions, especially in countries where these plans are voluntary, and their implications for retirement income adequacy, coverage is broken down by various socio-economic characteristics for 8 OECD countries (Australia, Germany, Ireland, Italy, the Netherlands, Spain, the United Kingdom and the United States). This analysis concludes that coverage is uneven across individuals, especially in voluntary systems. Population subgroups experiencing the lowest coverage rates are individuals younger than 35, mid-to-low income individuals, part-time workers and workers having temporary contracts. On the other hand, women are found to have similar coverage rates than men, except in Ireland, Italy, and the Netherlands, where women have substantially lower coverage.

The assessment of policy options to broaden coverage and increase contribution levels suggests that compulsory enrolment is the most effective one in achieving high and uniformly distributed levels of coverage. A national mandate for private pensions can be particularly justified in countries where public pension benefits are relatively low. However, compulsory enrolment has some potential drawbacks, as it may force some people to become more indebted or divert funds from other necessary expenses such as educating children, or from investing in one's own property or business. Furthermore, making private pensions compulsory is a politically difficult reform. An alternative to compulsory enrolment that has gained popularity in recent years is automatic enrolment. It was introduced in 2007 in Italy and New Zealand at the national level with different levels of success and is being introduced from this year in the United Kingdom.

While the increase in coverage was significant in Italy after the TFR reform (from 8.5% to 11.9% of the working age population in the space of one year), it was below expectations and at odds with the experience in other countries. New Zealand, on the other hand, has achieved one of the highest coverage rates among voluntary pension systems, around 55% of the working age population in the space of four years. While the auto-enrolment feature has been a key factor in raising coverage, it only applies to new employees. Existing ones have to opt in. The substantial government subsidies and government and employer matching contributions provided to the Kiwisaver accounts and the relatively easy design (with various pre-set default settings) may have also played an important role in ensuring high levels of participation in this new system. In particular, New Zealand stands out among countries with voluntary systems for achieving a relatively stable coverage rate across individuals of different income, a feature otherwise unique to mandatory systems.

Government subsidies in the form of matching contributions have also been effective in raising the coverage of *Riester* pensions in Germany, particularly among lower income workers. Unlike occupational and other personal pensions in Germany, *Riester* pensions generally achieve a better distribution of coverage across income groups and reach relatively high coverage rates among low earners. Subsidies and matching seem to broaden coverage across income groups and to entice low income contributors to contribute more than otherwise.

Other important policy options to boost coverage are financial education and facilitating and simplifying the conditions to join a plan and the choices to be made. These policies have also proved effective at increasing coverage and contribution rates. In particular, some successful financial education programmes have been developed that explain the rationale for saving in simple terms using effective communication tools borrowed from the advertising and marketing world.

It should also be noted that the effectiveness of all these policies designed to increase coverage is largely restricted to workers in the formal economy. In countries with large informality, achieving high coverage rates and regular contributions to private pension systems is a much greater challenge. Auto-enrolment, financial incentives and other policies can help, but high coverage rates are unlikely to be achieved until income levels and formal sector employment increase sufficiently.

Finally, it should be remembered that promoting the coverage of and contributions to funded, private pensions is only part of the solution to ensure the adequacy of benefits paid by these plans. Policy makers also need to address other challenges facing these arrangements, such as management costs and investment risk. The crisis has demonstrated that regulatory and supervisory frameworks need to be reviewed and adapted to better promote benefit security in private pension plans.

NOTES

1. This estimate is based on rules in place prior to the latest, crisis-induced pension reform in 2011.

2. See Chapter 2 of the *OECD Pensions Outlook 2012* for a discussion on the sustainability of public pension promises in different OECD countries.

3. Or more generally, participants who are actively accumulating additional pension assets via contributions or additional benefit rights (in defined benefit plans).

4. Informality may not be the only possible cause for the divergence between coverage among members and contributors. For the Chilean case, Berstein and Tokman (2005) find that one of the main reasons men have for not contributing is being self-employed (the savings mandate did not apply to this employment group). In the case of women one of the main reasons is being outside the workforce.

5. For a detailed description of pension coverage in these and other Latin American countries, see OECD (2010), Ribe et al. (2010) and Mesa-Lago (2008). Hu and Stewart (2009) discuss options to increase coverage among informal sector workers.

6. This section benefited from the financial support of the European Commission.

7. Calculations have been done as well for the case of contributors alone. Results show the same patterns as those described in this section for all people enrolled in a plan independently of whether they currently make contributions or not. The corresponding data and results are available upon request.

8. For a detailed description of the overall pension systems in these countries, see the IOPS country profiles at http://www.iopsweb.org/document/14/0,3746,en_35030657_38606785_41578062_1_1_1_1,00.html.

9. The mandatory private pension system, called the Superannuation Guarantee, applies to all employees aged between 18 and 70 years old earning more than AUD 450 a month. Coverage for the self-employed is not mandatory, but there are tax advantages if one contributes.

10. Employers may contribute more than the mandatory 9% of an ordinary time wages base. This rate will gradually increase to 12% from 1 July 2013 to 1 July 2019.

11. The Australian government is removing the maximum age limit for superannuation guarantee payments for employees from 1 July 2013.

12. When focusing on personal pension plans only, the coverage rate does not reach a plateau for high income individuals but rather continues growing, except for Germany and the Netherlands.

13. In Australia, the system is mandatory for employed persons aged between 18 and 70 years old earning more than AUD 450 a month. This is why only 68% of the individuals in the lower income decile are covered.

14. Madrian and Shea (2001) and Beshears et al. (2006) found that automatic enrolment in two different US firms increased coverage by as much as 35 percentage points, although the effect diminished with the tenure of employees. Substantial increases in participation have been documented in other papers (e.g. Choi et al. 2004, 2006, Thaler and Benartzi, 2004), while other papers have found that participation rates have remained high for several years (Choi et al. 2004, 2006). Evidence from the United Kingdom is also generally supportive. Horack and Wood (2005) looked at 11 company pension plans in the United Kingdom of which two had introduced automatic enrolment and had low

initial levels of coverage. With the introduction of automatic enrolment, coverage in these firms increased by 33 and 17 percentage points.

15. From 1 April 2013 minimum employee and employer contributions will rise from 2% to 3%.

16. A NZD 40 annual fee subsidy was eliminated in 2009.

17. The opt-out rate for the year to 30 June 2010 was 18%.

18. As discussed in OECD (2009).

19. For instance, deductions at source, savings lock-in, and the various default settings of KiwiSaver mean that, should they wish to, all an individual needs to do is to enrol and the decisions are made for them.

20. Both own contributions and state subsidies are taken into account to calculate this rate.

21. If the tax relief resulting from the deduction of *Riester* savings (both own contributions and state subsidies) from the taxable income is above the state subsidy, the tax authority pays to the participant the difference between both amounts in the form of a tax repayment.

22. From 1 July 2012, the co-contribution will be further reduced to provide 50 cents for each dollar contributed, up to a maximum of AUD 500. The Australian government will however provide a new superannuation contribution for low income earners (earning up to AUD 37 000) which will effectively refund the tax paid on concessional contributions, up to a maximum of AUD 500 per year. This contribution recognises that low income earners currently do not receive a tax concession for contributing to superannuation.

23. However, in Germany, the *Riester* system also shows lower coverage than other income groups, but higher coverage among low income groups when comparing with other pension plans.

24. PRPPs do not exist yet. A federal-provincial framework for a new workplace retirement savings vehicle was released in December 2010, and federal legislation is currently being reviewed.

25. In the United States, 401(k) plan members may also obtain loans drawn from their individual accounts. However, as these have to be paid back, they only have a small impact on asset accumulation (see Beshears et al. 2010).

REFERENCES

Bernheim, D. and D. Garrett (2003), "The Effects of Financial Education in the Workplace: Evidence from a Survey of Households", *Journal of Public Economics*, 87, pp.1487–1519.

Berstein, S. and A. Tokman (2005), "Brechas de ingreso entre géneros: Perpetuadas o exacerbadas en la vejez?", *Superintendencia de Pensiones Working Papers Series*, No. 8, Santiago.

Beshears, J., J.J. Choi, D. Laibson and B.C. Madrian (2006), "The Importance of Default Options for Retirement Saving Outcomes: Evidence from the United States", *Working Paper* No. 12009, National Bureau of Economic Research, Cambridge, Mass.

Beshears, J., J.J. Choi, D. Laibson and B.C. Madrian (2010), "The Impact of 401(k) Loans on Saving", *Working Paper*, National Bureau of Economic Research, Cambridge, Mass.

Choi, J.J., D. Laibson, and B.C. Madrian (2009), "Reducing the Complexity Costs of 401(k) Participation Through Quick Enrollment (TM)," in David Wise (ed.), *Development in the Economics of Aging*, Chicago: University of Chicago Press, pp. 57-88.

Choi, J.J., D. Laibson, B.C. Marian, and A. Metrick (2004), "For Better or For Worse: Default Effects and 401(k) Savings Behavior", in D.A. Wise, ed., *Perspectives on the Economics of Aging*, 81-121, University of Chicago Press.

Choi, J.J., D. Laibson, B.C. Marian, and A. Metrick (2006), "Saving for Retirement on the Path of Least Resistance", in E.J. McCaffrey and J. Slemrod, eds., *Behavioral Public Finance: Toward a New Agenda*, 304-351, Russel Sage Foundation.

Blake, D., D. Wright and Y. Zhang (2011), "Age-Dependent Investing: Optimal Funding and Investment Strategies in Defined Contribution Pension Plans when Members are Rational Life Cycle Financial Planners", *Pensions Institute Working Paper* 1111, London.

Horack, S. and A. Wood (2005), "An Evaluation of Scheme Joining Techniques in Workplace Pension Schemes with an Employer Contribution", *Research Report* No. 292, Department for Work and Pensions, London.

Hu, Yu-wei and Stewart, F. (2009), "Pension Coverage and Informal Sector Workers", *OECD Working Papers on Insurance and Private Pensions*, No. 31, OECD Publishing, Paris.

Lusardi, A. (2004), "Savings and the Effectiveness of Financial Education," in Olivia S. Mitchell and Stephen Utkus (eds.), *Pension Design and Structure: New Lessons from Behavioral Finance*, Oxford: Oxford University Press, pp. 157–184.

Lusardi, A., P. Keller and A. Keller (2008), "New Ways to Make People Save: A Social Marketing Approach," in Annamaria Lusardi (ed.), *Overcoming the Saving Slump: How to Increase the Effectiveness of Financial Education and Saving Programs*, Chicago: University of Chicago Press, pp. 209-236.

Lusardi, A. (2011), "Financial Literacy and the Shift From Defined Benefit to Defined Contribution Pension Plans", in OECD, *Improving Financial Education Efficiency*: *OECD-Bank of Italy Symposium on Financial Literacy*, OECD Publishing, Paris.

Madrian, B.C. and D. Shea (2001), "The Power of Suggestion: Inertia in 401(k) Participation and Savings Behavior", *Quarterly Journal of Economics*, Vol. 116, No. 4, pp. 1149-1525.

Mesa-Lago, C. (2008), "Social Insurance (Pensions and Health), Labour Markets and Coverage in Latin America", *Social Policy and Development Programme Paper* 36, United Nations Research Institute for Social Development, Geneva.

OECD (2009), *Pensions at a Glance 2009: Retirement-Income Systems in OECD Countries, OECD Publishing*, Paris.

OECD (2010), *Latin American Economic Outlook 2011*, OECD Publishing, Paris.

OECD (2011), *Pensions at a Glance 2011: Retirement-Income Systems in OECD and G20 Countries*, OECD Publishing, Paris.

OECD (2012), *OECD Pensions Outlook 2012*, OECD Publishing, Paris.

Rashbrooke, G. (2009), "Automatic Enrolment: KiwiSaver in New Zealand", *The Changing Pensions Landscape in Asia and the Pacific*, OECD, Paris, forthcoming.

Ribe, H., D.A. Robalino and I. Walker (2010), *From Right to Reality: Achieving Effective Social Protection for all in Latin America and the Caribbean*, World Bank, Washington, D.C.

Thaler, R.H. and S. Benartzi (2004), "Save More Tomorrow: Using Behavioral Economics to Increase Employee Saving", *Journal of Political Economy*, Vol. 112, No. 1, pt. 2.

Turner, J., L. Muller and S. Verma (2003), "Defining participation in defined contribution pension plans", *Monthly Labor Review*, August 2003, Bureau of Labor Statistics, Washington, D.C.

WORKING PAPERS PUBLISHED TO DATE

The full series is listed below in chronological order. Prior to March 2010, the series was named OECD Working Papers on Insurance and Private Pensions. All working papers can be accessed online at: www.oecd.org/daf/fin/wp.

2012

WP 19: Annual DC Pension Statements and the Communications Challenge

WP 18: Lessons from National Pensions Communication Campaigns

WP17: Review of the Swedish National Pension Funds

WP16: Current Status of National Strategies for Financial Education: A Comparative Analysis and Relevant Practices

WP15: Measuring Financial Literacy: Results of the OECD INFE Pilot Study

WP14: Empowering Women Through Financial Awareness and Education

2011

WP13: Pension Funds Investment in Infrastructure: Policy Actions

WP12: Designing Optimal Risk Mitigation and Risk Transfer Mechanisms to Improve the Management of Earthquake Risk in Chile

WP11: The Role of Guarantees in Defined Contribution Pensions

WP10: The Role of Pension Funds in Financing Green Growth Initiatives

WP9: Catastrophe Financing for Governments

WP8: Funding in Public Sector Pension Plans - International Evidence

WP7: Reform on Pension Fund Governance and Management: The 1998 Reform of Korea National Pension Fund

2010

WP6: Options to improve the governance and investment of Japan's Government Pension Investment Fund

WP5: The New IAS 19 Exposure Draft

WP4: The EU Stress Test and Sovereign Debt Exposures

WP3: The Impact of the Financial Crisis on Defined Benefit Plans and the Need for Counter-Cyclical Funding Regulations

WP2: Assessing Default Investment Strategies in Defined Contribution Pension Plans

WP1: Framework for the development of financial literacy baseline surveys: A first international comparative analysis

OECD Working Papers on Insurance and Private Pensions

WP41: Policy Action in Private Occupational Pensions in Japan since the Economic Crisis of the 1990s

WP40: Pension Funds' Risk-management Framework: Regulation and Supervisory Oversight

WP38: Managing investment risk in defined benefit pension funds

2009

WP37: Investment Regulations and Defined Contribution Pensions

WP36: Private Pensions and Policy Responses to the Financial and Economic Crisis

WP35: Defined-contribution (DC) arrangements in Anglo-Saxon Countries

WP34: Evaluating the Design of Private Pension Plans: Costs and Benefits of Risk-Sharing

WP33: Licensing Regulation and the Supervisory Structure of Private Pensions: International Experience and Implications for China

WP32: Pension Fund Investment in Infrastructure

WP31: Pension Coverage and Informal Sector Workers: International Experiences

WP30: Pensions in Africa

2008

WP29: Ageing and the Payout Phase of Pensions, Annuities and Financial Markets

WP27: Fees in Individual Account Pension Systems: A Cross-Country Comparison

WP26: Forms of Benefit Payment at Retirement

WP25: Policy Options for the Payout Phase

WP24: National Annuity Markets: Features and Implications

WP23: Accounting for Defined Benefit Plans: An International Comparison of Exchange-Listed Companies

WP22: Description of Private Pension Systems

WP21: Comparing Aggregate Investment Returns in Privately Managed Pension Funds: an initial assessment

WP20: Pension Fund Performance

WP19: Coverage of Funded Pension Plans

WP18: Pension Fund Governance: Challenges and Potential Solutions

WP17: Funding Regulations and Risk Sharing

WP16: Evaluating the Impact of Risk Based Funding Requirements on Pension Funds

WP15: Governance and Investment of Public Pension Reserve Funds in Selected OECD Countries

WP14: Reforming the Valuation and Funding of Pension Promises: Are Occupational Pension Plans Safer?

2007

WP13: Pension Fund Investment in Hedge Funds

WP11: Implications of Behavioural Economics for Mandatory Individual Account Pension Systems

WP10: Portfolio Investment in an Intertemporal Setting: Assessment of the Literature and Policy Implications for latin American Pension Systems

WP9: Collective Pension Funds: International Evidence and Implications for China's Enterprise Annuities Reform

WP8: Pension Fund Regulation and Risk Management

WP7: Survey of Investment Choice by Pension Fund Members

WP6: Benefit Protection: Priority Creditor Rights for Pension Funds

WP5: Benefit Security Pension Fund Guarantee Schemes

WP4: Governments and the Market for Longevity-Indexed Bonds

WP3: Longevity Risk and Private Pensions

WP2: Policy Issues for Developing Annuities Markets

2006

WP1: Funding Rules and Actuarial Methods