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Pension Reforms in Poland
and Elsewhere:
the View from Paris

Peter Jarrett

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Peter Jarrett is a senior official of the Paris-based Organisation of Economic Cooperation and Development, an inter-governmental organisation comprising 30 mainly industrialised nations whose goal is to provide members with policy advice in every area except justice, culture and defense. He has been a staff member of the Economics Department since 1985. He began as an expert in supply-side econometric modeling before heading a series of country desks, notably those of France, Belgium/Luxembourg, Portugal, the United States, Iceland, Japan and Ireland. Since 1999 he has headed a Country Studies division that has comprised a variety of member and non-member countries. Currently his stable includes Canada, New Zealand, France, Poland, Spain, Switzerland, Indonesia, Brazil and Israel. Before coming to the OECD Peter spent over five years working in the Research Department of the Bank of Canada. He holds a BA from the University of Toronto (Victoria) and a PhD from Harvard (1979).



Abstract

Recently several countries, including Estonia, Latvia, Lithuania, Hungary, Poland, Romania and Slovakia, have at least partially reversed their earlier moves towards compulsory defined-contribution schemes. This paper concentrates on Poland, which just reduced contributions going to the mandatory second pillar from 7.3 to 2.3% of earnings with that amount diverted to the public pension regime (ZUS).

Trying to solve the problem of public finance sustainability by radically shrinking the second tier of the pension system has obvious costs in terms of poverty among old-age pensioners. Their incomes will fall sharply relative to those of working-age population. Partially reversing pension reform will also cost Poland in terms of risk spreading and capital market development. It will also undermine the population's trust in the system. There is no alternative for achieving public finance sustainability but to restrain current spending and/or raise taxes. The pensionable age should be raised further (probably to 70 by mid-century), even in the general scheme, to deal with the long-run demographic challenge and be equalized across the two sexes. The authorities should move to unify pension provision systems, in particular by phasing out the farmers' regime (KRUS) and making pensions for miners and others with special regimes closer to actuarially neutral.



1. A synopsis of the recent legislative change

Starting in 2010 debate began in Poland about whether the existing retirement income system was functioning as well as its original designers had hoped when they overhauled it in the late 1990s. Dissatisfaction emanated from a variety of sources, and criticisms followed several lines. Early on the main concern was that it was wasteful, since a new layer of management and administration had been interposed between the pensioner and his/her savings in the “open pension funds” (OFEs, using the Polish acronym), to the extent that such funds invested a large share of their portfolios in the form of government bonds, and the government itself was in deficit and thus having to issue those bonds merely to finance its deficit, a large part of which is attributable to making the necessary transfers to the OFEs. Over time the terrain shifted somewhat, and the emphasis focused increasingly on the burden on the public finances in view of the proximity of the ceilings for government debt of 55 and 60% of GDP inscribed in law and the constitution, respectively. Opinions differed within the government and even within the majority party (PO) as to what changes should be made, but a formal proposal finally came out only over the end-year holidays (no mention had been made of it in the 2011 budget discussions in the autumn). The package entailed:

- a reduction in the contributions going to the OFEs from 7.3 to 2.3% of earnings (with a recovery to 3.5% from 2013 to 2017), with that amount diverted to the public pension regime (ZUS);
- keeping the 5% in separate accounts that would earn returns based on GDP growth rather than the economy-wide wage bill as for the ordinary first pillar; and
- tax cuts for optional third-pillar retirement saving.

The package was sent to the parliament and passed through it with very little discussion nor official analysis, the government arguing that it wanted to put the new system in place as soon as possible in order to stop paying out those funds to the OFEs and safeguard its fiscal position. In the end the opposition to the change came mainly from economists and jurists who were concerned about the implications for the safety and security of both the funds already within the OFEs and the remaining 2.3%, the negative impact on public trust in the



system from the reversal, the likely shallowing out of financial markets and the fall in the prices to be achieved for future privatisations of state-owned companies and the ability of the government to put off reforms that would deal more fundamentally with the problem of unsustainable public finances. Parliament quickly passed the bill, then within a few weeks the President signed it, and it took effect on 1 May 2011.

This paper will describe the different kinds of pension systems used in OECD countries¹. It will then review the pension situation in Poland in the period prior to the 1999 reform. Next it will describe the key features of that reform and its impact before moving on to discuss more recent outcomes and developments, especially with regard to pension adequacy. Subsequently, it will look forward to the longer-term outlook for an unchanged system, with a particular focus on the public finances. Finally, it will briefly discuss the impact of the 2011 reform reversal before drawing conclusions and making recommendations.

2. Retirement-income provision in OECD countries

Public old-age pensions come in different forms. Most countries have some sort of minimum, basic fixed or means-tested safety-net pensions. Then a majority have a defined-benefit or – contribution system that is income-related. Variants are sometimes, as in Poland's case, called “notional defined contribution” systems, while others are based on points. Then, many countries have mandatory second-pillar regimes, which are located in the private sector and are funded. Finally, tax incentives may encourage optional retirement saving in third-pillar vehicles. A summary of these systems is given in Table 1. More information is available in OECD (2009, 2011). A discussion of the merits of different systems may be found in Barr and Diamond (2009).

¹ This paper is based on a presentation made at the CASE/BRE Bank Seminar on 24 March 2011. The author is Head of Division in the Country Studies Branch of the Economics Department. He would like to thank Hervé Boulhol, Balazs Egert, Monika Queisser and Edward Whitehouse for useful discussions, but any errors are his own. The views expressed herein are the author's own and in no way represent the views of the OECD.

Table 1: Structure of retirement-income provision

Country	Public			Public	Private	Country	Public			Public	Private
	Resource-tested	Basic	Minimum	Type	Type		Resource-tested	Basic	Minimum	Type	Type
OECD countries						Netherlands		x			DB
Australia	x				DC	New Zealand		x			
Austria				DB		Norway		x	NDC	DC	
Belgium	x		x	DB		Poland		x	NDC	DC	
Canada	x	x		DB		Portugal		x	DB		
Chile	x		x		DC	Slovakia		x	Points	DC	
Czech Republic		x	x	DB		Slovenia		x	DB		
Denmark	x	x			DC	Spain		x	DB		
Estonia		x		Points	DC	Sweden		x	NDC	DC	
Finland			x	DB		Switzerland	x	x	DB	DB	
France			x	DB+ points		Turkey		x	DB		
Germany	x			Points		UK	x	x	x	DB	
Greece			x	DB		US				DB	
Hungary				DB	DC	Other major economies					
Iceland	x	x		DB		Argentina		x		DB	
Ireland		x				Brazil				DB	
Israel		x			DC	China		x		NDC/ DC	
Italy	x			NDC		India				DB + DC	
Japan		x		DB		Indonesia				DC	
Korea	x	x		DB		Russia		x		NDC	DC
Luxembourg	x	x	x	DB		Saudi Arabia			x	DB	
Mexico			x		DC	South Africa	x				

Note: In Iceland and Switzerland, the government sets contribution rates, minimum rates of return and the annuity rate at which the accumulation is converted into a pension for mandatory occupational plans. These schemes are therefore implicitly defined benefits.

DB = defined benefit; DC = defined contribution; NDC = notional accounts

Source: OECD



3. A brief trip back to pre-reform Poland (in the mid-to-late 1990s)

Before Poland reformed its former defined-benefit system it was spending around 10-15% of its GDP on public pensions (depending on the precise definition, that is whether or not disability pensions are included), perhaps the highest share in the OECD (Table 2 and Figure 1). That outlay represented a quarter of general government expenditure, compared to an OECD average of about a sixth. The system was extremely generous, with an observed gross replacement rate² of more than 60%, even though that figure was slightly lower than where it had been earlier in the decade. The theoretical full-career replacement rate was 65%.

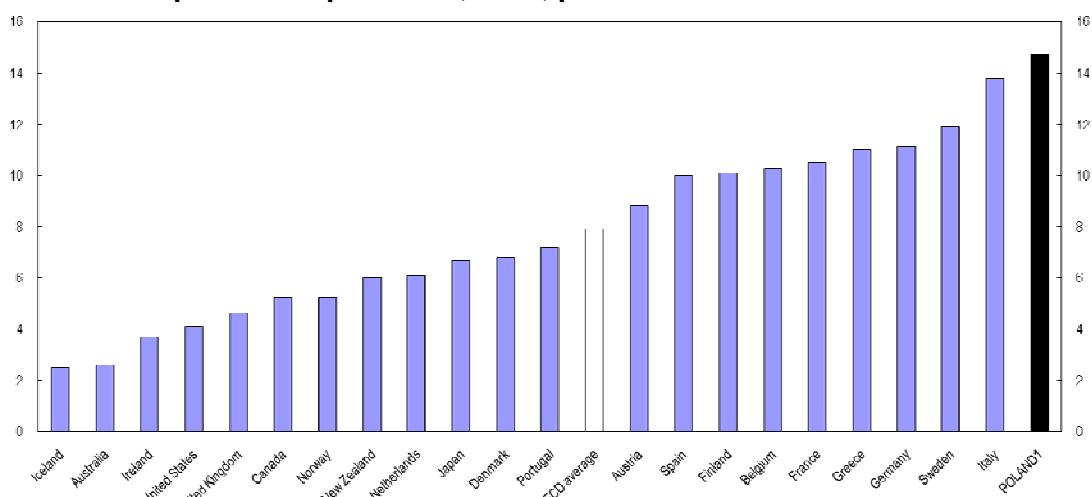
In terms of the age of eligibility for an old-age pension Poland was not unusual, neither with reference to the average of other OECD countries, nor in the fact that the female entitlement age was lower (by five years) than the corresponding age for men (Table 3). But there were all kinds of exceptions for certain occupations and for those meeting contribution minima of 25 or 30 years, with the result that the effective retirement age was 59 years for men and 55 years for women, compared to OECD averages of 62 and 61 years, respectively.

² The definition of the replacement rate used here is the value of a pension compared to revalued lifetime earnings of the pensioner, with revaluation equal to the economy-wide average. In this context we are dealing with the average pensioner. The replacement rate thus calculated will be lower than the alternative where the final salary is used if earnings are assumed to rise more rapidly over the career than the economy-wide average. See OECD (2009).

Table 2. Public spending on old-age and survivors' pensions

	Public expenditure on cash benefits for old-age and survivors								Total inc. non-cash (% of GDP)	
	Level (% of GDP)					Change (%)	Level (% of total government spending)			
	1990	1995	2000	2005	2007		1990	2007		
Australia	3.0	3.6	3.8	3.3	3.4	11.2	8.6	10.1	3.3	4.5
Austria	11.4	12.3	12.3	12.5	12.3	7.8	22.1	25.3	10.6	12.7
Belgium	9.1	9.4	8.9	9.0	8.9	-2.9	17.4	18.3	8.0	9.0
Canada	4.2	4.7	4.3	4.2	4.2	-1.2	8.5	10.6	3.9	4.2
Chile		6.9	7.5	5.9	5.2					5.2
Czech Republic	6.1	6.3	7.5	7.3	7.4	21.8		17.5	7.4	7.7
Denmark	5.1	6.2	5.3	5.4	5.6	8.6	9.2	10.9	4.1	7.3
Estonia			6.0	5.3	5.2				15.2	5.3
Finland	7.3	8.8	7.7	8.4	8.3	13.3	15.1	17.5	6.8	9.2
France	10.6	12.0	11.8	12.3	12.5	17.5	21.5	23.9	11.7	12.8
Germany	9.0	10.7	11.2	11.5	10.7	19.1		24.5	10.4	10.7
Greece	9.9	9.6	10.7	11.7	11.9	20.9		26.3		12.0
Hungary			7.4	8.6	9.1			18.3		9.6
Iceland	2.2	2.4	2.2	2.0	1.9	-14.7		4.5	1.8	2.3
Ireland	3.9	3.5	3.1	3.4	3.6	-7.7	9.0	9.7	3.4	3.9
Israel			4.7	4.9	5.1	4.8		10.7		5.0
Italy	10.1	11.3	13.6	14.0	14.1	38.9	19.1	29.4	12.4	14.1
Japan	4.9	6.1	7.4	8.7	8.8	80.5		27.0	8.4	10.1
Korea	0.7	1.2	1.4	1.5	1.7	130.5	3.7	5.7	1.7	1.9
Luxembourg	8.2	8.8	7.5	7.2	6.5	-19.8	21.6	18.1	5.9	6.6
Mexico	0.5	0.7	0.9	1.2	1.4	202.0		7.2	1.4	1.4
Netherlands	6.7	5.8	5.0	5.0	4.7	-29.8	12.2	10.4	4.1	5.5
New Zealand	7.4	5.7	5.0	4.3	4.3	-41.8	14.0	10.9	3.5	4.3
Norway	5.6	5.5	4.8	4.8	4.7	-16.6		11.4	3.8	6.5
Poland	5.1	9.4	10.5	11.4	10.6	107.0		25.2	9.7	10.7
Portugal	4.9	7.2	7.9	10.3	10.8	119.8			10.2	10.8
Slovak Republic		6.3	6.3	6.2	5.8			17.0	5.8	6.2
Slovenia			10.6	9.9	9.6			22.7		9.7
Spain	7.9	9.0	8.6	8.1	8.0	1.5		20.5	7.4	8.5
Sweden	7.7	8.2	7.2	7.6	7.2	-6.8		14.1	5.3	9.5
Switzerland	5.6	6.7	6.6	6.8	6.4	14.2	18.6	19.9		6.7
Turkey	2.4	2.7	4.9	5.9	6.1	159.2				6.2
United Kingdom	4.8	5.4	5.3	5.6	5.4	11.0	11.6	12.0	5.1	5.9
United States	6.1	6.3	5.9	5.9	6.0	-1.5	16.4	16.3	5.6	6.0
OECD	6.1	6.7	6.9	7.1	7.0	14.5		16.5	6.2	7.4

Source: OECD

Figure 1: Public pension expenditure, 1995, per cent of GDP

Source: OECD (1998).

Table 3: Standard age of entitlement to public old-age pensions, 1995

Country	Males	Females
Australia	65	60
Austria	65	60
Belgium	60	60
Canada	65	65
Czech Republic	60	53-57
Denmark	67	67
Finland	65	65
France	60	60
Germany	65	65
Greece	62	57
Hungary	60	56
Iceland	67	67
Ireland	66	66
Italy	62	57
Japan	60	58
Korea	60	60
Luxembourg	65	65
Mexico	65	65
Netherlands	65	65
New Zealand	62	62
Norway	67	67
Poland	65	60
Portugal	65	62.5
Spain	65	65
Sweden	65	65
Switzerland	65	62
Turkey	46-60	41-55
United Kingdom	65	60
United States	65	65

Source: OECD (1998).

4. The 1999 reform

Key features

It was widely recognized that the system was completely unsustainable from a budgetary point of view, and a massive reform was legislated in 1998 and implemented in 1999. The defined-benefit system was replaced by a system comprising notional defined contribution first-pillar plan plus a mandatory system of privately managed pension funds plus a voluntary third pillar without tax advantages.³ The intellectual inspiration for the new system was the Swedish model; since then Italy has also adopted a similar set-up. In the first pillar workers

³ Thus, the third pillar has remained small, covering only 775 000 people with accumulated assets of PLN 7.7 billion (Bielecki, 2011).



and their employers make earnings-based contributions of 7.3 and 12.2%, respectively, and these accrue notional returns based on the growth in the economy-wide wage bill. Upon retirement the retiree's pension rights are annuitized using a formula whereby the accumulated pension capital is divided by population-wide average life expectancy at that age.

The designers of the reform had intended that the pension entitlement age be standardized at 62 for both sexes, but that idea was abandoned by the government in 1998. Later consideration was given to just raising the eligibility age for women to the male age (65), but that too was never implemented.

The other key feature of the reform was the enormous reduction (37%, according to OECD calculations) in the replacement rates for covered workers. Under the reformed system the replacement rate was around 50% in total with about half of that from the first pillar and half from the defined-contribution pension funds (using historical average data on investment returns). In addition, a contribution ceiling of 2.5 times average earnings was instituted, lowering government revenues in the short term by an estimated 0.4% of GDP. Redistribution was also eliminated, as replacement rates are constant across the earnings distribution.

Despite the radical cut in pension replacement rates the system was still not fully financed by contributions. With contributions at 19.52% of earnings ever since the reformed system was set up in 1999 (half on the employer and the other half borne by the employee)⁴, official estimates point to a cumulative cost of 94% of GDP by 2060 (Bielecki, 2011). That took the form of annual transfers from the budget to the second-pillar funds that were some 0.7% of GDP per year in the early years and were foreseen to peak at about 1.5% of GDP after around 15 years. The intent was to deal with the remaining financial imbalance by devoting the proceeds of privatisation to the pension system. But even though such asset sales had generated over PLN 100 billion by end-2010, that was far less than the government's transfers to the OFEs (some PLN 156 billion).

⁴ This is precisely the OECD average total contribution rate (OECD, 2011, p. 153), though far lower than what is charged by Hungary and the Czech Republic.



OECD assessment at the time

The OECD judged the reform as likely to be highly successful. The economy was expected to benefit from greater diversity of pension income sources, higher national saving, later retirement, a smaller underground economy and, last but not least, deeper capital markets (and thus easier privatization). Most of these expectations have not been disappointed, though low national saving rates have persisted over the past decade. Our advice to the government was to closely monitor the new pension funds, to unify the retirement age across the sexes and to unify first-pillar rules and regulations across different regimes, with exceptions allowed only in medically justifiable cases.

Pension reforms elsewhere

Sixteen other OECD countries were also reforming their pension systems in one way or another at around that time, mostly also with a view to cutting replacement rates so as to improve financial sustainability. The average reduction in lifetime benefits over these reforms was 22% for men and 25% for women. Poland's reform made its system like those of Austria, Germany, Hungary, Italy, Slovakia and Turkey in that all have no progressivity (Table 4). However, compared to these countries it can be seen that its common replacement rate across the earnings distribution is fairly low; only Germany's and Slovakia's are lower. On the other hand looking only at the high earners the 75% rate is relatively high.

Table 4: Gross and net replacement rates under pre- and post-reform rules, in percentage

<i>Individual earnings:</i>	Gross replacement rates						Net replacement rates					
	Pre-reform			Post-reform			Pre-reform			Post-reform		
	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5	0.5	1	1.5
Australia	46.2	23.1	15.4	67	41.6	33.1	55.3	30.4	21.8	80.2	53.1	41.8
Austria	90	90	85.9	80.1	80.1	76.4	98.4	99.2	95.1	90.5	90.3	86.3
Belgium	54.8	40.4	31.4	58.1	42	32.5	74.2	62.1	50.6	78.7	63.7	51.7
Czech Republic	72.1	45	32.9	79.2	49.7	36.4	86.7	58.1	44.6	95.3	64.1	49.4
Finland	69.9	66.2	65.2	66.5	56.2	56.2	75.9	71.4	72.4	73.2	62.4	63.8
France	64.7	64.7	58.4	61.7	53.3	48.5	79.7	78.2	70.8	76.2	65.7	60.2
Germany	47.9	47.9	46.5	43	43	42.6	56.4	66.6	66.4	59.2	61.3	60.3
Hungary	69.9	57.7	53.6	76.9	76.9	76.9	85.9	83.2	79.1	94.3	105.5	99.2
Italy	90	90	90	67.9	67.9	67.9	99.1	99.1	99.2	74.8	74.8	77.1
Japan	56.5	40.6	35.3	47.1	33.9	29.4	55.8	41	37	51.4	38.7	33.9
Korea	100	69.3	56	64.1	42.1	33.6	105.9	74.9	61.6	68.8	46.6	38.7
Mexico	72.5	72.5	72.5	55.3	36.1	34.5	73.4	76.5	83.2	56	38	39.6
Norway	62.5	51.9	41.9	66.2	59.3	49.8	80.4	62	52.3	76.7	69.3	60.6



	Gross replacement rates						Net replacement rates					
	Pre-reform			Post-reform			Pre-reform			Post-reform		
	New Zealand	77.5	38.7	25.8	79.3	41.1	29	77.5	38.7	25.8	79.3	41.1
Poland	81.2	62.9	56.8	61.2	61.2	61.2	97.1	76.9	69.7	74.4	74.9	75
Portugal	91.3	89.9	88.5	63.0	53.9	53.1	106.1	112	110.8	73.2	69.6	72
Slovakia	65	58.9	39.3	56.4	56.4	56.4	76.4	75.9	52.2	66.3	72.7	74.9
Sweden	82.5	78.6	76.5	76.6	61.5	75.6	84.5	80.3	81.9	79.3	64.1	81.2
Turkey	107.6	107.6	107.6	86.9	86.9	86.9	150	154.4	157.9	121.2	124.7	127.1
UK	41.1	29.7	20.6	51	30.8	21.3	51.9	39.8	28.3	63.8	40.9	29.2

Source: OECD pension models; see also OECD (2007), *Pension at a Glance*, Part II.1.

5. Developments since the 1999 reform

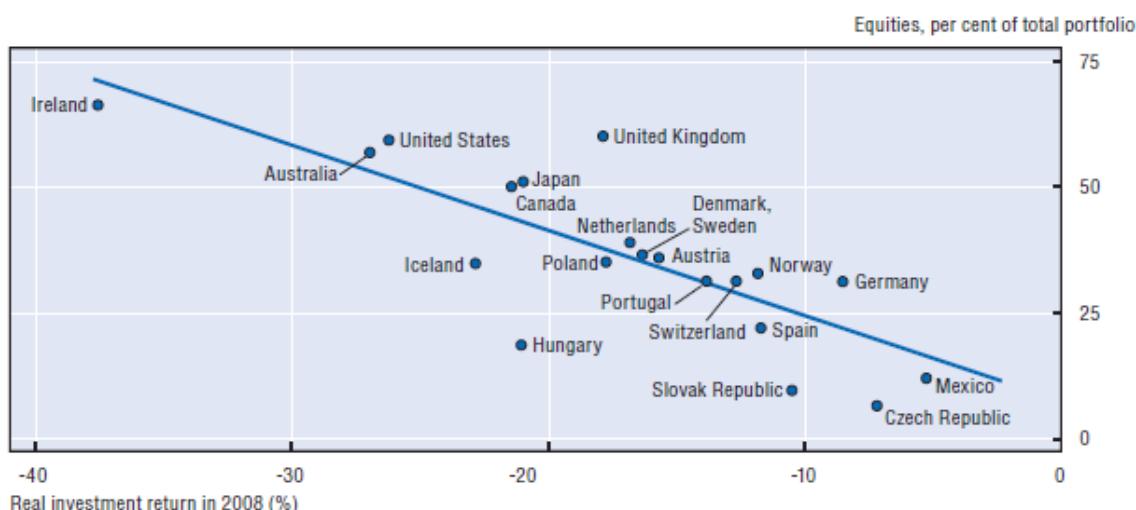
A great deal of water has flowed under the bridge since 1999. Policy makers have not exactly stood still, even though they have indeed failed to unify the eligibility age across the sexes. Most importantly they did manage to shrink the bridge pensions quite radically in 2009. But that was offset to some extent by earlier backtracking moves: exclusion from the standard regime of (i.e. preferential treatment for) the uniformed services (military, police and judges) in 2003 and miners in 2004; and higher pension indexation in 2004 and 2007. Also notable was the fact that despite the easing of the implicit public pension liabilities the European Union's Maastricht definition of gross public debt trended inexorably upward from below 40% until 2001 to above 55% most recently, as true fiscal consolidation (defined as an improvement in the underlying primary or non-interest balance of the general government) was limited to just a couple of years in the middle of the 2000s (2005 and 2007, to be specific). Despite saving some 2 percentage points of GDP in terms of net debt interest payments, total government outlays were fairly flat as a share of GDP and revenues if anything experienced a slight downtrend. This set the stage for the recent attempts to stave off violation of the Polish legal and constitutional limits of 55 and 60% of GDP, respectively, in the form of the (domestic definition of) gross government debt, which would bring about a series of fairly unpleasant measures.

In that regard ever since Poland joined the EU in 2004 there has been conflict between Warsaw (backed up by several other new EU member countries) and Brussels surrounding the accounting treatment that should be applied to the second-pillar pension funds. The argument is over whether the countries that have set up such funds and thereby explicitly

recognised their pension liabilities should be penalised by the European Commission who consider the assets of those funds to be in the private sector. The result is that there is a significant difference between the standardised (OECD) definition of gross liabilities (64.3% of GDP at end-2010), the EU's Maastricht definition (55.2%) and the national definition, which arbitrarily excludes certain funds such as the National Road Fund (53%). A very recent IMF paper (Soto et al., 2011) attempts to get around this problem by proposing a new "pension-adjusted budget balance".

In the event there were indeed transfers from the budget to the second-pillar funds (OFEs) that reached PLN 22.5 billion in 2010 and cumulatively PLN 156 billion since the system began. Since the funds were worth a total of only PLN 221 billion at end-2010⁵, the average gross returns earned by those funds were meagre, something like 7% per year, compared with an average long-term government bond rate of closer to 7% and the 7 ¼ per cent indexing for the first pillar (based on the wage bill) (Bielecki, 2011). The OFEs put some 30% of their portfolios in equities and were prevented from investing more than 5% in foreign assets. In April 2011 this constraint was attacked by EU officials as being an illegal constraint on internal capital movements. But, in any case, the stock markets world wide have done poorly, especially at the beginning and end of the 2000s.

Figure 2: Pension funds' real investment returns in 2008 and equity exposure in 2007



Source: OECD

⁵ At end-1999 pension fund assets were 13.5% of Poland's GDP, far smaller than the 67.6% OECD weighted average. But there about 20 countries with smaller shares, including all the other CEECs (OECD, 2011, page 179).



But the OFEs were not especially inept in terms of their returns: prior to the crisis their performance was best in the region (Schwarz, 2011). Then, in 2008, for example, they lost 18% on average, an outcome that was not far from what other such funds around the world were experiencing (Figure 2). And the correlation with the equities share of total portfolios is fairly robust. Most of those experiencing a better average outcome that year had a smaller equities share. This is not to say that allocating 100% of pensions fund assets to equities is the best strategy, even if it raises expected returns over time, since it would entail huge risks being assumed by future pensioners in the event of any unforeseeable stock market collapse. For 2009 the sample of countries is less complete, but the performance of Polish OFEs was better than most others', and equities shares no longer played such a clear role (Table 5). And in 2010 World Bank figures (Schwarz, 2011) show real returns of around 9%, tops in the region.

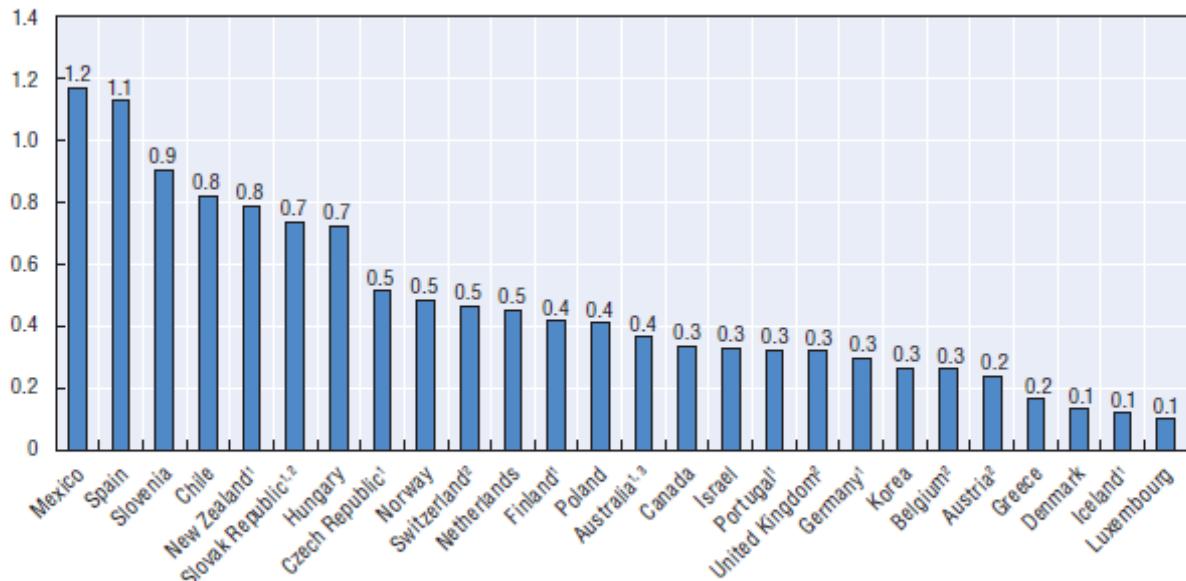
Table 5. Pension funds' real investment returns and equities exposure, 2009

Country	Real net investment return	Equities share
Czech Republic	0.25	2.3
Slovakia	n.a.	3.2
Germany	7.40	6.1
Hungary	17.17	17.7
Poland	9.52	30.2
UK	n.a.	39.7
US	4.37	45.4
Simple OECD average	8.92	21.7
Weighted OECD average	6.51	39.3

Source: OECD

Figure 3.

**Pension funds' operating expenses as a share of total investments
in selected OECD countries, 2009 (%)**



1. Data do not include investment management costs.

2. Data refer to 2008.

3. Data do not include self-managed superannuation funds.

Source: OECD Global Pension Statistics.

One of the original complaints of the government in the current round of re-examining the pension system was their allegedly heavy fees and expenses. The available evidence (Figure 3) shows that the OFEs' were not out of line with those of their foreign counterparts in 2009, though there was some substantial room for improvement, compared to the best performers (such as Luxembourg, which no doubt benefits from substantial economies of scale).⁶

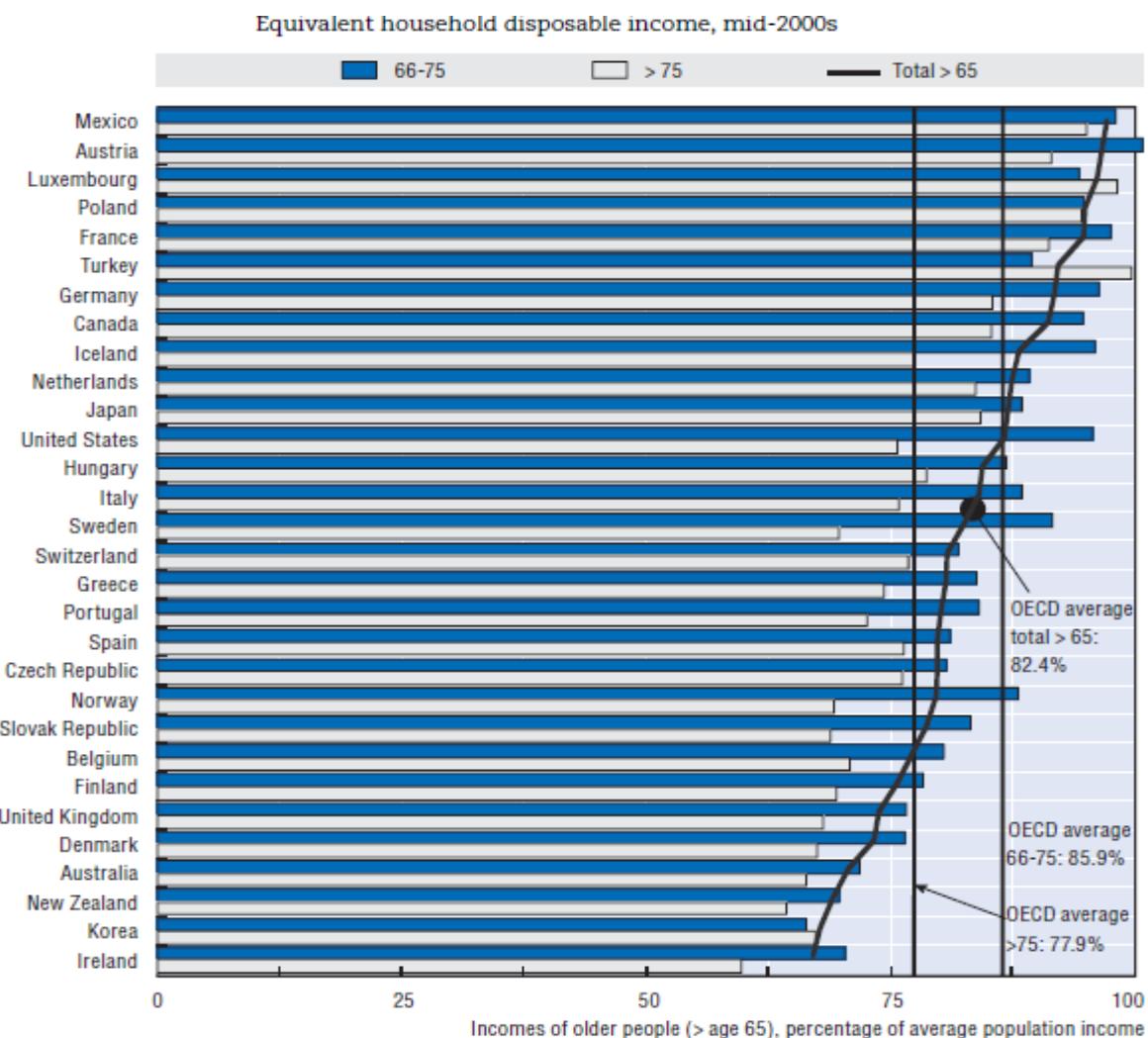
6. The question of pension adequacy

One of the key requirements of a good old-age pension system is that it provide adequate pension levels to retirees so that their standard of living is sustained through their senior years. Incomes of those over 65 as a percentage of the population average do not have to be at 100% for this criterion to be met, however, since older people have fewer material

⁶ However, it appears that the OECD figures for Poland cover only fees for assets under management, whereas so-called "distribution fees" are an order of magnitude greater. Bielecki (2011) shows a time series that starts at 9.1% of monthly contributions in 2000 and falls to around 6% a few years later and stays there until 2010 when the regulatory cap on such fees was lowered to 3.5%.

needs (they often own their own home, they need fewer durable and semi-durable goods, they normally do not have children to support). Indeed, the average OECD country with available data showed relative income of older people at 82.4% in the mid-2000s (Figure 4).

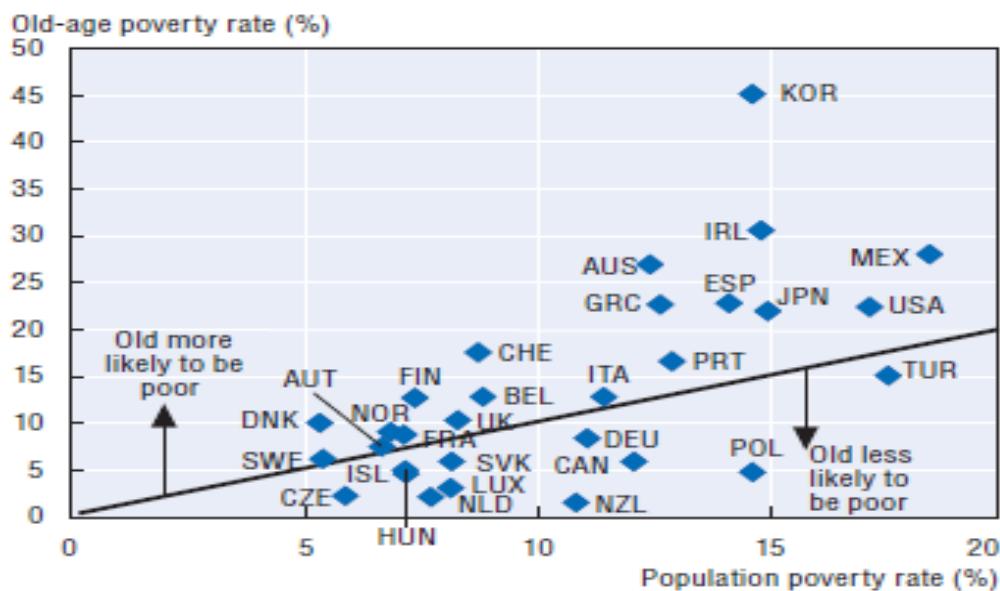
Figure 4. Relative incomes of older people



Note: Countries are ranked by the relative incomes of all aged over 65.

Source: OECD Income Distribution Database; see OECD (2008), *Growing Unequal?*, Figure 2.4.

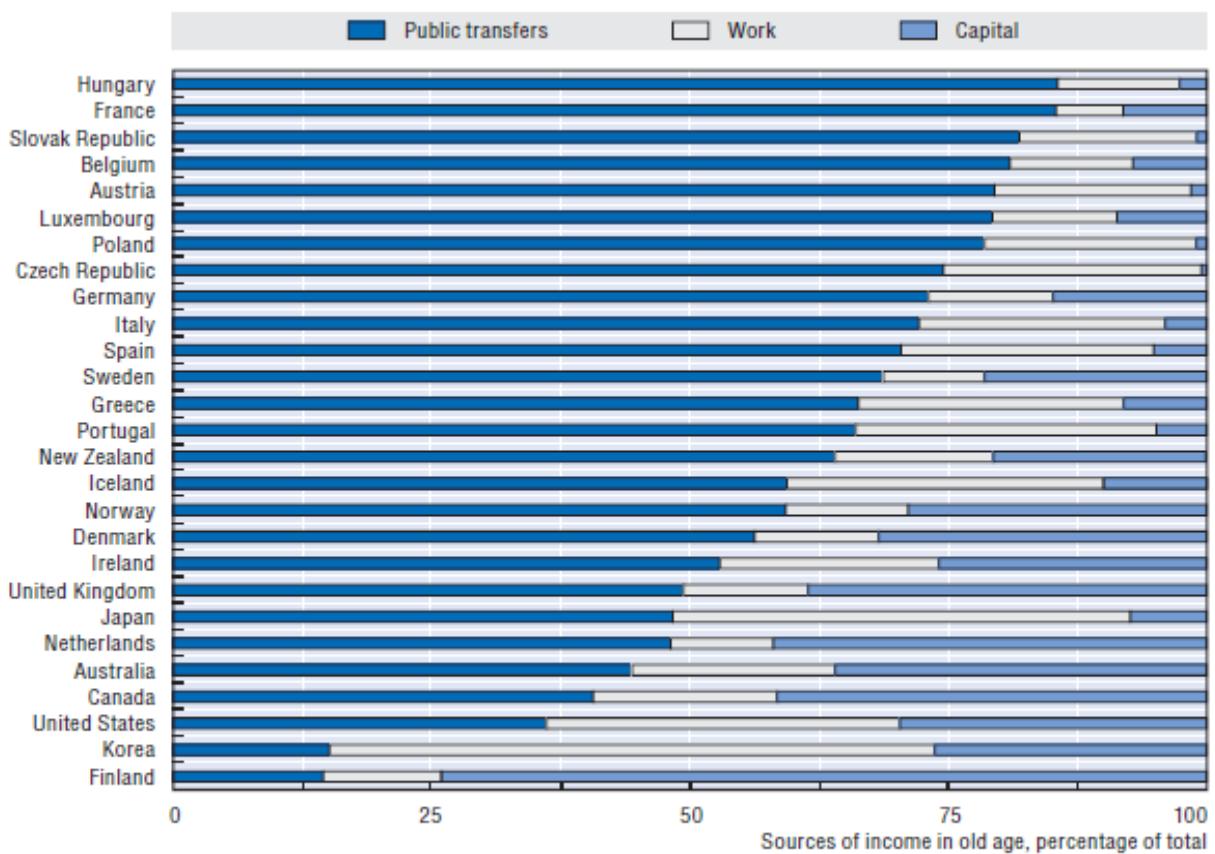
At that point Poland's system was comforting, as their relative incomes were much higher (94.7%). Only a few countries were doing better in this dimension. A similar message comes from looking at (income) poverty rates (defined as having income less than 50% of the median) by age brackets. In many OECD countries the elderly are more likely to be poor than the average person (most notably in Korea), but not so in Poland where the elderly poverty rate of 4.8% in the mid-2000s was dwarfed by the overall figure of 14.6% (Figure 5).

Figure 5: Income poverty rates by age, mid-2000s

Source: OECD Income-Distribution Database; see OECD (2008), *Growing Unequal?*, Tables 5.1 and 5.3

It is also known that it is not market incomes of the elderly that assure this outcome: more than three-quarters of the income of the elderly is from public transfers, a share exceeded in only a few other OECD countries, notably Hungary, France, Slovakia (Figure 6). The adequacy issue can also be looked at in terms of what are called replacement rates. These can be calculated in either gross or net (after-tax) terms. The message is that in Poland such rates are higher than in most other OECD countries for both average and high earners, but well below what is found elsewhere for those on low incomes. This is true for both gross and net measures (Figure 7; only net shown). For women the outcome is even worse, with the net replacement rate at median earnings at 50.7%, compared to an OECD average for men of 72%. The corresponding shortfall for low-income women is even larger at nearly 30 percentage points. Yet another representation of pension adequacy can be provided by looking at pension wealth as a multiple of average annual earnings. At less than 7 for Poland this is very low (OECD, 2011, p. 60).

Figure 6: Sources of incomes of older people. Percentage of household disposable income, mid-2000s

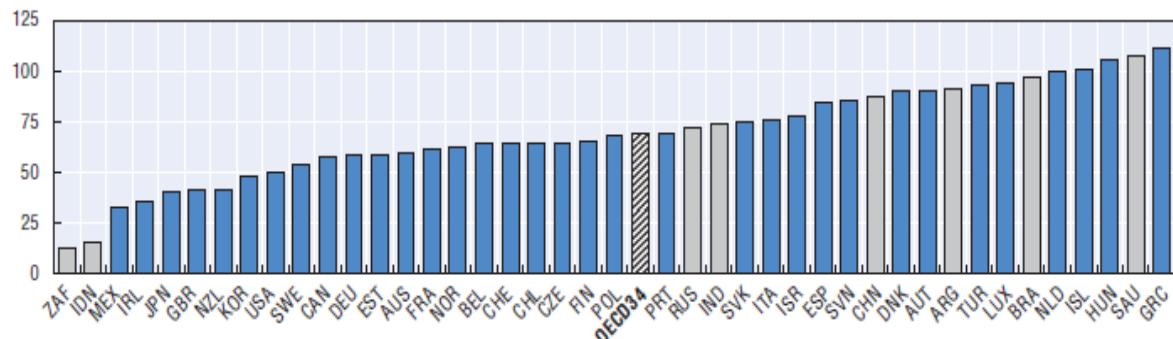


Note: Income from work includes both earnings (employment income) and income from self-employment. Capital income includes private pensions as well as income from the returns on non-pension savings.

Source: OECD Income-Distribution Database

Figure 7: Net replacement rates

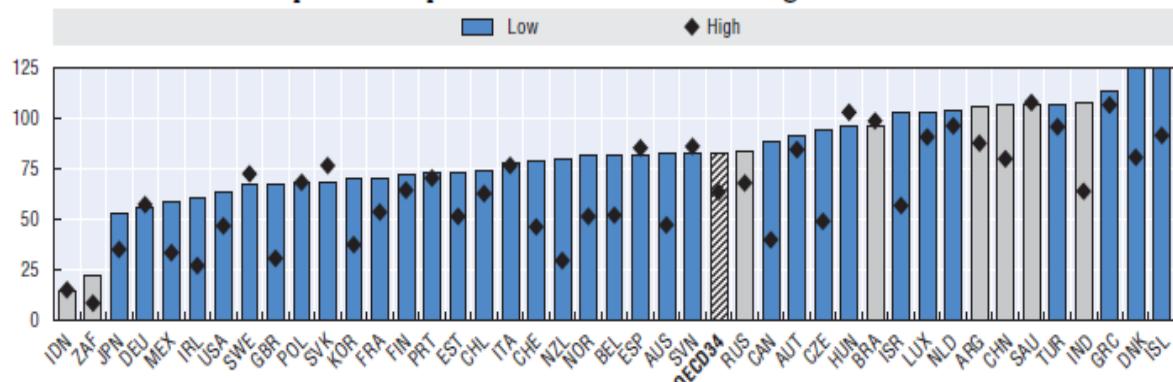
Net pension replacement rates: Average earners



Source: OECD pension models.

StatLink  <http://dx.doi.org/10.1787/888932370873>

Net pension replacement rates: Low and high earners



Source: OECD pension models

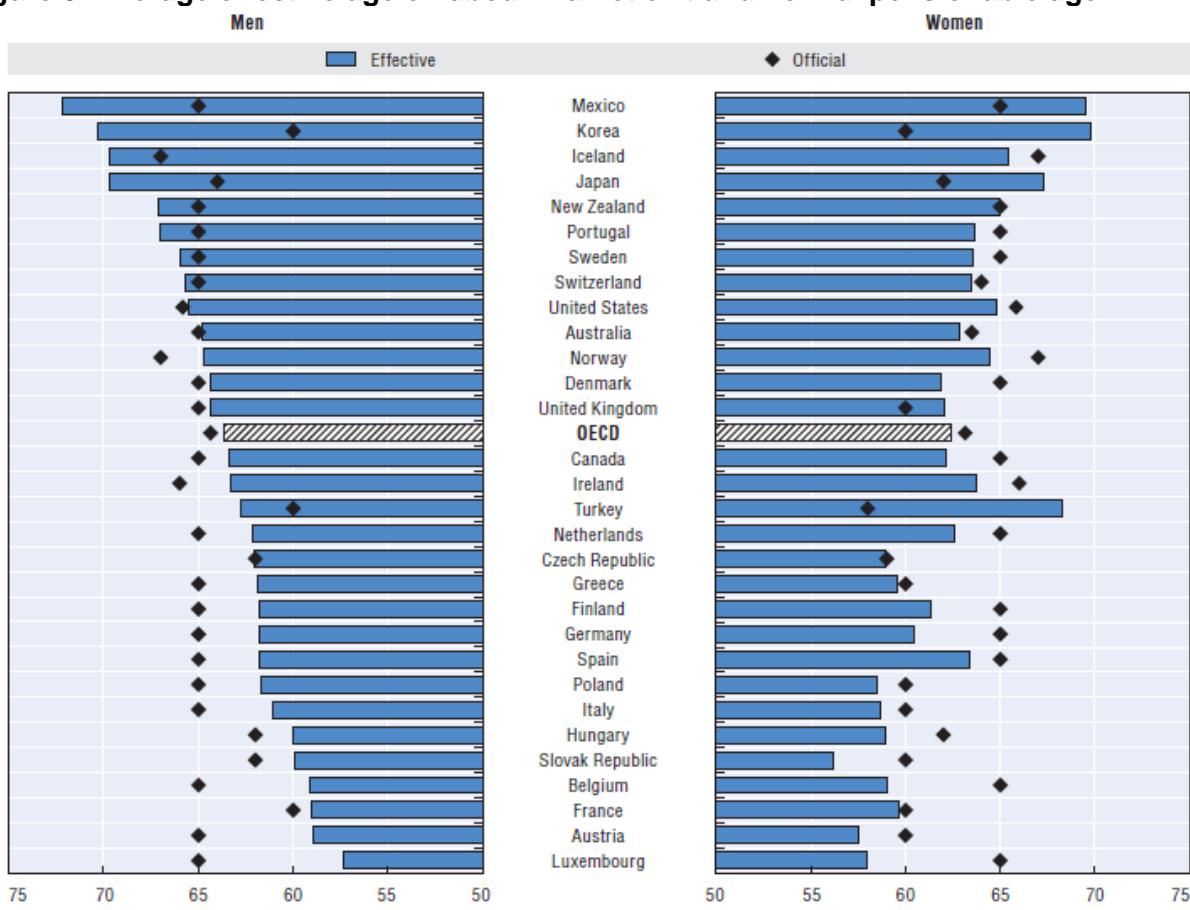
7. Other aspects of pension-system design

Another important aspect of pension design is the linkage of the entitlement age with life expectancy, since that has been rising trend-wise for many generations. Most recently, life expectancy at 65 was still relatively low in Poland at 14.5 years for men and 18.8 years for women, compared to 16.7 and 20.1 years in the average OECD country (recall that the female eligibility age is only 60). The OECD advises its member countries to make the link automatic, which few countries have done thus far. But Poland's combination of notional defined-contribution accounts and mandatory defined-contribution pension funds does a reasonably good job of providing an indirect linkage, because the former are based on lifetime earnings and are thus fairer than final-salary pensions.



As intimated above governments have the option of making their pension systems redistributive by focusing them on the most vulnerable, as Canada, New Zealand and the Netherlands do. The problem with that is the savings disincentive effect created. Poland eliminated all the redistribution in its system with the 1999 reform, with a constant replacement rate across the earnings distribution (as in Italy, Hungary and the Slovakia).

Another feature of good pension-system design is so-called “actuarial neutrality”. That is the impact of the system on incentives to retire. Ideally those incentives should be neutral unless it can be demonstrated that there are externalities to society in retiring earlier or later. One way of looking at such incentives by means of a single summary measure is to derive changes in gross pension wealth from working an additional year between ages 60 and 65. In the average OECD country this was actually negative for men, indicating the prevalence of the problem of having strong financial incentives built into the system to take early retirement. Fortunately, in Poland’s case, there is a fairly sizeable pay-off to remaining in work, 8th highest in the OECD, at 14.6% of one year’s gross earnings. In after-tax terms the return is slightly lower. But Poland’s Czech neighbours have an even stronger incentive to continuing to work. Nevertheless, there is clear evidence that the incentives are having the expected effect, as the effective retirement age in Poland has been rising fairly quickly: from 2006 to 2010 it rose by four years, reaching 59.6, an age that is still nearly two years younger than the EU average, thanks in large part no doubt to the 2009 bridge pension reform that excluded the majority of previously eligible occupations from early pension eligibility. Yet, there is still a great deal more ground to catch up, since average effective age of labour-market exit remains one of the lowest in the OECD (Figure 8), and the participation rate for those over 50 was still lower than anywhere else in the OECD (except Turkey) in 2008, whereas in 1970 Poland had occupied the top spot (OECD, 2011, p. 41).

Figure 8. Average effective age of labour-market exit and normal pensionable age

Note: Effective retirement age shown is for five-year period 2004-09; pensionable age is shown for 2010.

Finally, the most important pre-requisite for good pension-system design is financial sustainability: the ability to maintain the system in its current set-up without politically unbearable or economically costly contribution rates or other forms of financing.

8. Recent moves to reverse pension reform in Central and Eastern European countries

Besides the 2011 reform in Poland, Estonia, Hungary and Slovakia have all at least partially reversed their earlier moves towards compulsory defined-contribution schemes.⁷ All had previously had pay-as-you go first pillars with contribution rates varying from 9% of payroll (in Slovakia) to 25.5% in Hungary, along with compulsory second-pillar funds and voluntary

⁷ Going beyond OECD Member countries, partial or complete reversals have also been implemented in Latvia, Lithuania and Romania. See Schwarz (2011).



schemes that covered a small minority of the working-age population. All were transferring funds from the State's receipts of workers' contributions to the funds at the same time as they were running annual deficits. Briefly, the Hungarian government has been the most radical, effectively nationalising the mandatory 2nd pillar so as to improve its short-term financial situation. The result, according to OECD calculations (Whitehouse, 2011), is that all reversals will cut the value of pensions, even though they will raise the value of the public pension component. Estonia suspended its contributions to the second pillar in the second half of 2009 and the whole of 2010 before phasing them back in this year and next, saving up to 1% of GDP last year. The motivation was to satisfy requirements to enter the euro area. Finally, Poland's Slovak neighbours temporarily allowed 2nd-pillar participants to move back to the 1st pillar (less than 10% did) and then made participation voluntary for all new labour market entrants (only 2% have taken up the option to participate). Our calculations (Whitehouse, 2011) show that total pensions for retiring Poles on average earnings will fall 22% following the reversal, similar to the cut in Hungary (21%), greater than the decline predicted in Slovakia (10%), but less than the slash expected in Estonia (29%). The result will be gross replacement rates for men of 59% and for women of 43%, again better than Estonia's 41% but well below the 58% in Slovakia and the 76% in Hungary.

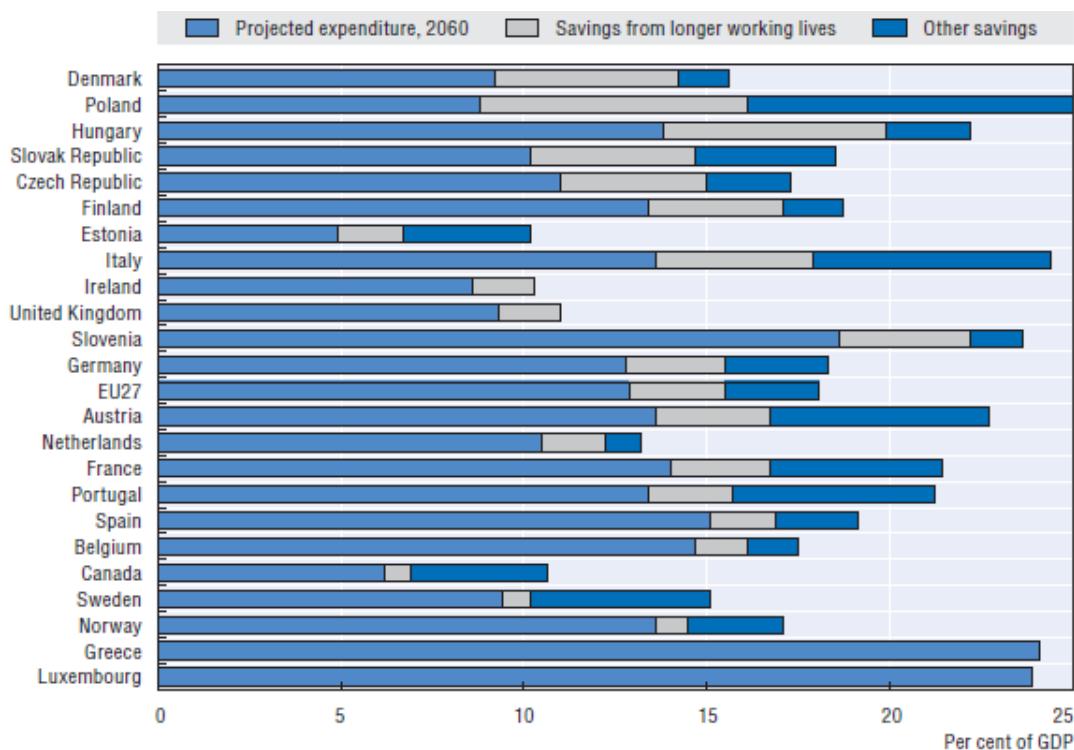
9. Looking forward to the next half century

A few years ago the European Commission projected pension expenditure out to 2060 for all EU member countries. Their projections were given for a 50-year horizon and showed Polish public pensions at 8.8% of GDP at the end (that is the dark blue bar on the left in Figure 9), lowest in the EU after Estonia.

Without changes in the system that would have been 25% of GDP, the highest in the EU. The reasons for this huge saving are two-fold: first, Poles are assumed to lengthen their working lives more than anybody else in the EU; and, second, there are what is labelled as “other savings”, which comprise the introduction of the second-pillar OFEs and reduced first-pillar pension levels. Indeed, their projections show the benefit ratio of first-pillar pensions falling from nearly 60% in 2010 to 23.6% in 2060. The ability to hold down such spending is in no way attributable to favourable demographics: indeed, the old-age dependency ratio



(those over 65 compared to those of working age) is projected to rise by 50 percentage points from 2007 to 2060, a jump exceeded only by the deterioration in Slovakia. And, despite that handicap, Poland was expected to cut public pension spending by around 3 percentage points of GDP over that horizon, when no other EU member country was seen to manage a cut of even 1 percentage point and the unweighted mean was an increase of around 3 points or more. Besides the saving to the public purse coming from the introduction of the OFEs, the reason for the surprising saving is that the value of public pensions was slashed under the reformed system. Indeed, according to Chlon-Dominczak and Stachura (2007), the benefit ratio cut would save 7.5 percentage points of GDP in 2050 relative to the 2005 outcome. The total benefit ratio would have been 37.6%, a cut of some 37% (compared to cuts of 20% for Estonia, 26% for Hungary and 50% for Slovakia).

Figure 9. European Commission's projection for pension outlays in 2060

Note: Luxembourg alone reports increased spending as a result of the coverage-ratio and employment-rate effects.

Greece, Ireland, Luxembourg and the United Kingdom report increased spending result from the benefit-ratio effect.

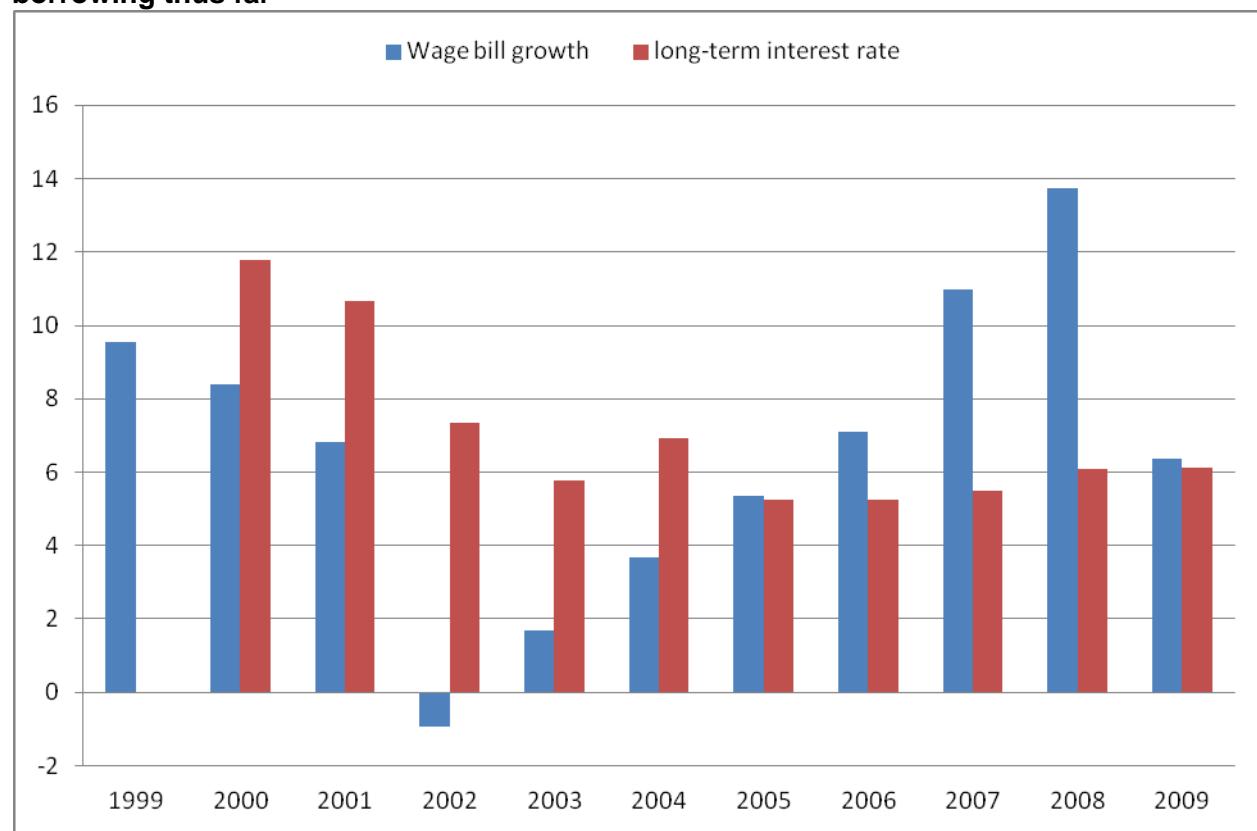
Source: OECD calculations based on European Commission (2009) and information provided by the Office of the Chief Actuary, Office of the Superintendent of Financial Institutions, Canada.

The impact on government finances

One of the key determinants of what will happen to public pension finances in the longer term is what happens to the revalorisation factor relative to the effective interest rate on government debt. That is because the government is effectively borrowing from workers during their working lives and incurring implicit commitments to pay future first-pillar pensions. If it borrows at a low rate of implicit interest, relative to actual market rates, then it is making a good deal, and, conversely, if it pays too much, it is making a bad deal, even though implicit and explicit debt are not equivalent (because of the government's ability to levy taxes and the welfare improvement that comes from increased old-age security (Barr and Diamond, 2009)). The revalorisation factor for the first pillar in Poland is the growth rate of the average wage bill. The evolution of that series along with the long-term government bond rate are provided below (Figure 10). The average shortfall of revalorisation compared to the bond rate has been $\frac{3}{4}$ percentage point, so it seems that it has been a good deal for the government thus far.

But the five percentage points that are being taken back from the OFEs are being treated differently in terms of revalorisation. Those contributions will be linked to nominal GDP growth. And in the past decade or so this has risen on average one quarter of a percentage point faster than the level of the long-term bond rate. In other words this revalorisation method seems more generous than the one based on the wage bill. That is because the income distribution has been shifting away from labour and towards capital.

Figure 10. Pension revalorisation has been lower than the cost of government borrowing thus far



Source: OECD

The impact of the 2011 reform reversal

As we know, the government decided that it could no longer afford the considerable transfers being made to the OFEs in the context where it had to face consolidating public finances so as to avoid government debt reaching the 55% of GDP threshold that requires automatic cutbacks.

The government's social security institution (ZUS) and the Ministry of Finance have modelled the expected evolution of pension finances over the next 50 years with and without the reversal. According to the numbers presented in the 2009 European Commission sustainability report, if no policy changes had been made, public debt would have reached 318% of GDP by 2060. To prevent that from happening, the structural primary balance would have to be permanently tightened by 3.2 percentage points of GDP in the long term while still meeting the Maastricht debt target of 60% of GDP. The government's proposed shift of contributions from the OFEs to the first pillar will reduce that shortfall to 2.4% of GDP; according to Bielecki (2011) the cost of the pension transition was lowered by 50 percentage points of GDP (from 94 to 44%). In more figures made public that I have not shown the time series of that improvement shows it to be greatest in the short term and then waning but without disappearing entirely. This seems counter-intuitive: indeed, Schwarz (2011) shows that full dismantling of the second pillar will generate savings for the public system only until around 2040 for a prototypical country in the region, with extra costs of some 1.5% of GDP thereafter. Moreover, it is unclear if the official simulation results properly take into account the probability that more poor retirees will be pushed into the safety-net pension as a result of the reduced benefit ratio and of the revenue costs of the incentives being offered for voluntary third-pillar saving. The OECD intends to examine this question in its next Economic Survey of Poland that should be published around March 2012 (OECD, 2012). In any case, as Barr and Diamond (2009) have emphasized, such a move inevitably redistributes from future to present generations, even if it increases inter-generational risk sharing. But government officials do admit that even before the latest changes gross replacement rates (in relation to final salary) will be much reduced for cohorts born more recently than for today's retirees due to demographic ageing (Bielecki, 2011).⁸

⁸ Those born in 1951 could have expected replacement rates of 63% for men and 53% for women, while those born in 1990 would get merely 31% and 24%. Government estimates are that its tax incentives for voluntary pension saving will raise the latter rates to 39 and 30%, respectively (Bielecki, 2011).



10. Summary of conclusions and recommendations for Poland

- Trying to solve the problem of public finance sustainability by radically shrinking the second tier of the pension system has obvious costs in terms of poverty among old-age pensioners. Their incomes will fall sharply relative to those of working-age Poles, with replacement rates of around 50%, compared to 58% in Slovakia and 76% in Hungary (only Estonia at 41% among those fully or partly reversing reforms is worse).
- Partially reversing pension reform will also cost Poland in terms of risk spreading and capital market development (including prices received for future privatisations). It will also undermine the population's trust in the system, since the first pensions paid by the OFEs have just started to be paid.
- There is no alternative for achieving public finance sustainability but to restrain current spending and/or raise taxes, preferably by eliminating tax expenditures (on farming activities, the lump-sum income tax, social security contributions of the self-employed), establishing market-value based property taxes, taxing capital gains on rented properties and raising taxes on environmental externalities such as through a carbon tax.
- The pensionable age should be raised further (probably to 70 by mid-century), even in the general scheme, to deal with the long-run demographic challenge and equalized across the two sexes (as Estonia is doing by 2016). While Poland is one of ten of the pre-2010 30 OECD Member countries that maintains a lower age for women than men, the number of such countries has already shrunk from 13 and is scheduled to drop to six by 2020, five by 2030 and three by 2040 (only Switzerland and Turkey still have no plans to eliminate the gap, and they will be only 1 and 22 years, respectively). Indeed, the lower age is not really an unqualified blessing for women themselves, since the result is substantially lower replacement rates.
- The authorities should move to unify pension provision systems, in particular by phasing out the farmers' regime (KRUS) and making pensions for miners and others with special regimes closer to actuarially neutral.



- The OFEs should not be blamed for poor investment performance (which is not out of line with that of their foreign peers), but regulate their management fees based on international comparisons (recognising that lower charges may mean less in the way of sales efforts and service) and allow them to invest more abroad to gain the benefits of portfolio diversification, scale economies and low transactions costs that the financial markets in more developed countries can generate (Kotlikoff, 1999).
- Care should be taken in designing the details of the tax support for voluntary, third-pillar pension saving so as to avoid adding to regressivity, since the poorest workers will be unable to save at all.



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