

PART I
Chapter 4

Replacement Rates

This chapter shows gross and net pension replacement rates for the 30 OECD countries. For each country replacement rates are shown for people with different levels of earnings. Detailed results are shown in the country studies.

1. Gross replacement rates

Table 4.1 shows gross replacement rates by level of individual earnings for all countries. Figure 4.1 summarises the information for low, average and high earners, defined as workers earning half, once and twice average earnings, respectively.

The replacement rate at average earnings is perhaps the most familiar indicator in pension analysis. At this earnings level, the OECD average gross replacement rate is 57%, with substantial variation between member countries. Luxembourg is an outlier: the replacement rate for a full-career worker exceeds 100% (meaning that the pension is higher than earnings before retirement). Austria, Greece, Hungary, Italy, Spain and Turkey also provide generous pensions to full-career workers on average earnings: replacement rates exceed 75%. The gross replacement rate at average earnings is around 50% in France, Iceland, Japan, Norway and the Slovak Republic. Not surprisingly, Ireland – which has only basic and targeted pensions and no earnings-related scheme – has the lowest replacement rate at average earnings. In Mexico, the average earner receives only a pension from the defined-contribution scheme. The contribution rate to this plan is fairly low so eventual pensions are also low. Contribution rates in Australia, Hungary and Poland are somewhat higher. The last two countries also top up the defined-contribution pension with a public, earnings-related pension payment. In the United Kingdom, the earnings-related public scheme does not result in a high pension: it has a low accrual rate and does not cover the first slice of earnings (up to around one fifth of the average).¹

At low earnings, defined as half of the average, the pension entitlements of full-career workers vary less than they do at average earnings. Again, Luxembourg has the highest pensions, offering a replacement rate above 115%. But apart from Luxembourg and Turkey, another set of countries can be categorised as providing a relatively high pension to low-income workers while replacement rates were not to so high at average earnings. Portugal pays a higher accrual rate to low-income workers in its public scheme. Sweden has a relatively high income-tested pension.

The countries at the bottom of the scale are those with the lowest first-tier pensions. German social assistance, Mexican and Polish minimum pensions, the minimum credit in the Slovak Republic and the means-tested scheme in the United States all pay around one fifth of average economy-wide earnings. Countries with redistributive systems, such as Canada, New Zealand and the United Kingdom, pay little to workers on average earnings but they move more towards the middle of the scale when it comes to benefits for low earners. Dutch pensions appear to be relatively low for low earners (compared with the position of middle earners) despite the fact that the basic pension, worth more than a third of average earnings, is at a fairly high level. This is because of the “franchise”, a calculation

Table 4.1. **Gross replacement rates by earnings level, mandatory pension programmes, men**

Per cent of individual pre-retirement gross earnings

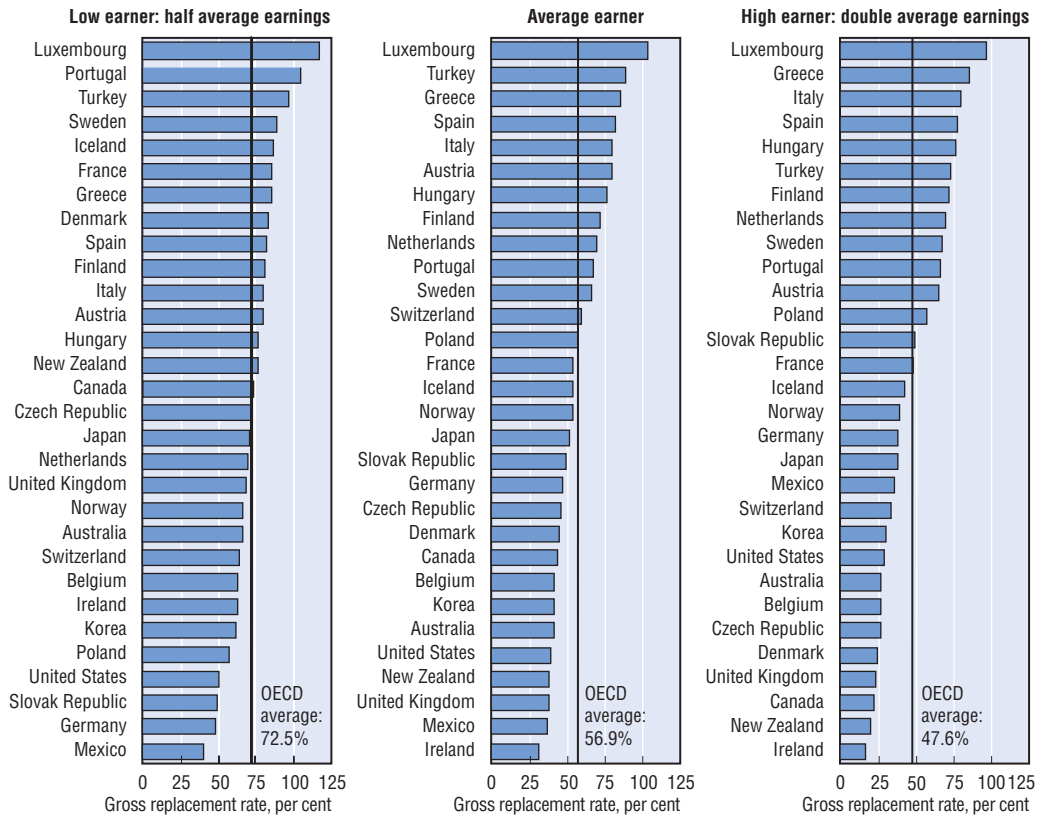
	Individual earnings, multiple of average					
	0.5	0.75	1	1.5	2	2.5
Australia	65.1	48.4	40.0	31.7	26.2	21.9
Austria	78.3	78.3	78.3	78.3	64.3	51.5
Belgium	61.6	41.1	40.7	34.9	26.2	20.9
Canada	72.4	52.4	42.5	28.4	21.3	17.0
Czech Republic	70.5	53.3	44.4	31.7	25.4	21.6
Denmark	82.4	56.4	43.3	30.3	23.8	19.8
Finland	80.0	71.5	71.5	71.5	71.5	71.5
France	84.2	56.1	52.9	50.7	47.4	45.4
Germany	47.3	45.8	45.8	45.8	37.6	30.1
Greece	84.0	84.0	84.0	84.0	84.0	84.0
Hungary	75.4	75.4	75.4	75.4	75.4	66.3
Iceland	85.5	63.7	52.8	42.8	41.3	40.3
Ireland	61.3	40.9	30.6	20.4	15.3	12.3
Italy	78.8	78.8	78.8	78.8	78.8	78.8
Japan	69.2	56.6	50.3	44.0	36.9	29.5
Korea	60.9	47.4	40.6	33.8	29.3	23.5
Luxembourg	115.5	106.5	101.9	97.4	95.2	89.8
Mexico	39.1	37.0	36.0	34.9	34.4	34.1
Netherlands	68.7	68.3	68.3	68.3	68.3	68.3
New Zealand	75.1	50.1	37.6	25.0	18.8	15.0
Norway	65.3	56.1	52.6	46.5	38.4	31.8
Poland	56.9	56.9	56.9	56.9	56.9	55.8
Portugal	103.1	68.8	66.7	65.9	65.5	64.7
Slovak Republic	48.6	48.6	48.6	48.6	48.6	48.6
Spain	81.2	81.2	81.2	81.2	76.7	61.3
Sweden	87.8	72.5	64.8	64.6	66.2	67.1
Switzerland	62.8	60.2	58.2	44.2	33.1	26.5
Turkey	96.2	90.2	87.2	84.1	71.9	57.5
United Kingdom	67.4	46.4	37.1	29.3	22.5	18.0
United States	49.6	42.3	38.6	33.2	28.1	25.1
OECD average	72.5	61.2	56.9	52.1	47.6	43.3
With voluntary schemes						
Canada	88.2	74.8	70.3	63.1	59.4	57.3
Denmark	113.3	85.0	70.8	56.6	51.1	48.9
United Kingdom	78.8	65.4	58.7	52.0	48.7	46.7
United States	90.4	81.9	77.7	73.4	67.9	64.3
Women, where different						
Austria	74.0	69.4	69.4	69.4	57.0	45.6
Mexico	38.8	25.9	21.7	21.1	20.7	20.5
Poland	48.4	41.4	41.4	41.4	41.4	40.6
Switzerland	63.0	60.7	58.8	44.7	33.5	26.8
Turkey	94.2	88.2	85.2	82.2	70.2	56.2

Source: OECD pension models.

mechanism applied in the Netherlands, which cuts occupational pension entitlements by the value of the basic pension received. At half-average earnings, the occupational benefit is zero as a result of this practice.

Figure 4.1. **Gross replacement rates at different earnings levels**

Percentage of individual pre-retirement earnings



Source: OECD pension models.

Finally, at high earnings (double the average), Luxembourg is yet again an outlier, although the replacement rate at this earnings level is a little short of 100%. It is followed by Greece and Italy, due to the very high ceilings on pensionable earnings in both countries. The other top slots are taken by the same countries that paid the highest pensions to average earners. The rankings mainly reflect the effect of ceilings; these are less than twice average earnings in Turkey and Hungary.

The countries with pure flat-rate systems – Ireland and New Zealand – are naturally the least generous to these high earners, even with New Zealand's exceptionally high basic pension of nearly 40% of average earnings. Canada and the United Kingdom – although they have earnings-related schemes – also provide benefits that are broadly flat-rate (see below).

Table 4.1 also shows replacement rates at different levels of earnings in voluntary, occupational pension schemes for four countries where these play a significant role. Unsurprisingly, these four countries all have mandatory pension provision towards the bottom of the scale, particularly for average and high earners. Including benefits from these voluntary schemes, replacement rates in the United Kingdom are a little higher than the OECD average across the earnings range while in Canada and the United States, the difference is significantly larger. In Denmark, pension entitlements are very high – on a par even with Luxembourg – for low earners and very generous higher up the earnings range once voluntary pensions are taken into account.²

Finally, Table 4.1 presents pension replacement rates for women in the five countries where these differ from those of men (due to a lower pension eligibility age for women than for men). The difference between the sexes in replacement rates is particularly stark in the two countries with defined-contribution schemes: Mexico and Poland. In both countries, normal pension age for women is 60 while for men it is 65. This means that women accumulate capital in the individual pension accounts over a shorter period. It also means that women spend a longer period in retirement over which pension capital must be spread. As a result, replacement rates at average earnings are around one third smaller for women than they are for men. The same effect arises in Poland's notional-accounts scheme.

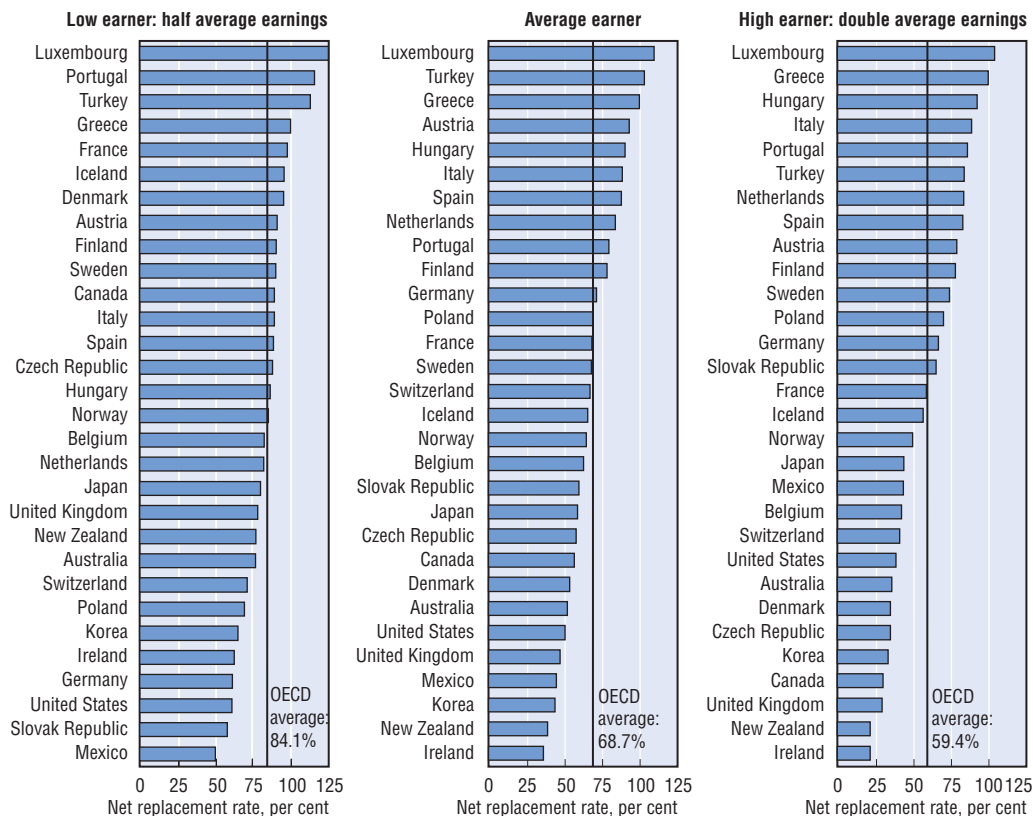
In Switzerland and Turkey, the difference in replacement rates between the sexes is much smaller because the difference in eligibility age is one and two years respectively (compared with five years for Mexico and Poland). In both cases the accrual rates vary. In Turkey, this favours early years of contributions over later years, reducing the difference between pension entitlements even though there is a difference in eligibility age. In Switzerland, the system is designed in a way that women receive a higher accrual than men at certain ages under the mandatory occupational scheme.

2. Net replacement rates

Figure 4.2 and Table 4.2 show net replacement rates: that is, individual net pensions relative to individual net earnings, taking account of personal income taxes and social

Figure 4.2. **Net replacement rates at different earnings levels**

Percentage of individual pre-retirement earnings



Source: OECD pension models.

Table 4.2. **Net replacement rates by earnings level, mandatory pension programmes, men**

Per cent of individual pre-retirement net earnings

	Individual earnings, multiple of average					
	0.5	0.75	1	1.5	2	2.5
Australia	77.0	61.2	52.4	43.1	36.5	31.3
Austria	91.2	93.4	93.2	93.5	79.3	63.2
Belgium	82.7	63.8	63.1	53.3	42.7	36.0
Canada	89.4	67.6	57.1	39.5	30.6	25.1
Czech Republic	88.3	68.3	58.2	42.9	35.3	31.0
Denmark	95.6	68.0	54.1	42.5	35.5	30.8
Finland	90.7	78.8	78.8	79.2	78.3	79.3
France	98.0	70.8	68.8	62.6	59.2	57.0
Germany	61.7	66.6	71.8	79.2	67.0	54.2
Greece	99.9	99.9	99.9	99.9	99.9	99.9
Hungary	86.6	90.9	90.5	99.1	92.6	81.8
Iceland	95.8	77.1	65.9	54.1	57.2	55.1
Ireland	63.0	47.0	36.6	27.4	21.9	18.3
Italy	89.3	88.0	88.8	88.4	89.1	89.0
Japan	80.1	66.3	59.1	51.9	44.3	35.8
Korea	65.3	51.4	44.3	38.1	34.0	27.8
Luxembourg	125.0	115.0	109.8	105.6	104.2	100.1
Mexico	50.4	46.4	45.1	44.3	44.1	44.2
Netherlands	82.5	88.2	84.1	85.8	83.8	82.8
New Zealand	77.1	52.0	39.5	27.9	22.0	18.1
Norway	85.5	73.1	65.1	58.2	50.1	42.8
Poland	69.6	69.7	69.7	69.8	70.5	71.0
Portugal	115.9	79.8	79.8	84.4	86.3	86.9
Slovak Republic	58.2	59.4	60.2	63.1	65.7	67.8
Spain	88.7	89.4	88.3	88.4	83.4	68.8
Sweden	90.2	76.4	68.2	70.1	74.3	75.0
Switzerland	71.4	68.9	67.3	53.0	41.4	34.3
Turkey	113.2	106.7	103.3	99.9	84.3	66.8
United Kingdom	78.4	57.7	47.6	38.2	29.8	24.7
United States	61.4	54.6	51.0	44.9	39.0	35.5
OECD average	84.1	73.2	68.7	64.3	59.4	54.5
With voluntary schemes						
Canada	108.9	96.4	94.6	78.8	68.8	63.7
Denmark	125.0	96.9	82.4	72.5	66.6	62.8
United Kingdom	90.3	77.5	70.1	62.2	57.5	55.7
United States	105.7	96.1	91.9	89.3	84.2	80.6
Women, where different						
Austria	86.1	84.8	84.6	84.6	72.5	57.8
Mexico	50.1	35.4	30.4	28.9	28.5	28.4
Poland	62.1	49.0	48.7	48.5	48.8	50.0
Switzerland	71.6	69.5	68.0	53.6	41.8	34.7
Turkey	111.0	104.5	101.1	97.8	82.4	65.4

Source: OECD pension models.

security contributions paid by workers and pensioners. The calculations are again carried out for individuals at different levels of gross earnings.

At average earnings, net replacement rates across the 30 OECD countries are, on average, 22% higher than gross replacement rates. The pattern of replacement rates across countries is also different on a net rather than a gross basis. The Belgian, French and German pension systems have higher net replacement rates than gross because of favourable treatment of pension income or pensioners under the personal income tax or social security contributions. In contrast, Korea moves lower down the chart on a net basis. This is because the low general level of direct taxation in Korea means that gross and net replacement rates are much closer together than they are in countries with a larger tax burden, such as most European countries.

The effect of taxes and contributions on net replacement rates for low earners (at half average earnings) is more muted. This is because low-income workers typically pay less in taxes and contributions than those on average earnings. In many cases, their retirement incomes are below the level of income-tax standard reliefs (allowances, credits, etc.). Thus, they are unable to benefit fully from these reliefs. Compared with the 22% differential between net and gross replacement rates at average earnings, the difference for low earners is about 17% on average. Belgium, Canada, the Czech Republic and Norway have much higher replacement rates for low earners measure on a net basis. The reverse is true in France, New Zealand, Sweden and the United Kingdom.

For high earners, personal income taxes and social security contributions play a greater role than for average earners: the differential between net and gross replacement rates is 27% compared with 22% at average pay. The tax system therefore reduces the progressivity of retirement-income systems.

Notes

1. In most of the countries with modest public schemes voluntary pensions are important. For the effects of voluntary pensions on replacement rates see below.
2. A full description of voluntary pension schemes and how they are modelled can be found in the country studies.

Bibliography

- Aldrich, J. (1982), "The Earnings Replacement Rate of Old-age Benefits in Twelve Countries: 1969-1980", *Social Security Bulletin*, Vol. 45, No. 11, pp. 3-11.
- Blanchard, O.J. (1993), "The Vanishing Equity Premium", in R. O'Brien (ed.), *Finance and the International Economy* 7, Oxford University Press.
- Bodie, Z. (1995), "On the Risk of Stocks in the Long Run", *Financial Analysts' Journal*, May-June, pp. 18-22.
- Casey, B., H. Oxley, E.R. Whitehouse, P. Antolín, R. Duval and W. Leibfritz (2003), "Policies for an Ageing Society: Recent Measures and Areas for Further Reform", Economics Department Working Paper No. 369, OECD, Paris.
- Cichon, M. (1999), "Notional Defined-contribution Schemes: Old Wine in new Bottles?", *International Social Security Review*, Vol. 52, No. 4, pp. 87-105.
- Constantinides, G., J. Donaldson and R. Mehra (1998), "Junior Can't Borrow' A New Perspective on the Equity Premium Puzzle", Working Paper No. 6617, National Bureau of Economic Research, Cambridge.
- Dang, T.T., P. Antolín and H. Oxley (2001), "Fiscal Implications of Ageing: Projections of Age-related Spending", Working Paper No. 305, Economics Department, OECD, Paris.
- Diamond, P.A. (1997), "Insulation of Pensions from Political Risk", in S. Valdés-Prieto (ed.), *The Economics of Pensions: Principles, Policies and International Experience*, Cambridge University Press.
- Disney, R.F. (1999), "Notional Accounts as a Pension Reform Strategy: an Evaluation", Pension Reform Primer Series, Social Protection Discussion Paper No. 9928, World Bank, Washington, D.C.
- Disney, R.F. and P.G. Johnson (eds.) (2001), *Pension Systems and Retirement Incomes Across OECD Countries*, Edward Elgar, Aldershot.
- Disney, R.F. and Whitehouse, E.R. (1994), "Choice of Private Pension and Pension Benefits in Britain", Working Paper No. 94/2, Institute for Fiscal Studies, London.
- Disney, R.F. and E.R. Whitehouse (1996), "What are Pension Plan Entitlements Worth in Britain?", *Economica*, Vol. 63, pp. 213-238.
- Disney, R.F. and E.R. Whitehouse (1999), "Pension Plans and Retirement Incentives", Pension Reform Primer Series, Social Protection Discussion Paper No. 9924, World Bank, Washington, D.C.
- Disney, R.F. and E.R. Whitehouse (2001), *Cross-Country Comparisons of Pensioners' Incomes*, Report Series No. 142, Department for Work and Pensions, London.
- Eurostat (1993), *Old Age Replacement Ratios*, Vol. 1, *Relation between Pensions and Income from Employment at the Moment of Retirement*, Statistical Office of the European Communities, Luxembourg.
- Finkelstein, A. and J. Poterba (2002), "Selection Effects in the United Kingdom Individual Annuities Market", *Economic Journal*, Vol. 112, No. 476, pp. 28-50.
- Finkelstein, A. and J. Poterba (2004), "Adverse Selection in Insurance Markets: Policyholder Evidence from the UK Annuity Market", *Journal of Political Economy*, Vol. 112, No. 1, pp. 183-208.
- Förster, M.F. and M. Mira d'Ercole (2005), "Income Distribution and Poverty in OECD Countries in the Second Half of the 1990s", Social, Employment and Migration Working Paper, No. 22, OECD, Paris.
- Hernanz, V., F. Malherbert and M. Pellizzari (2004), "Take-up of Welfare Benefits in OECD Countries: a Review of the Evidence", Social, Employment and Migration Working Paper No. 17, OECD, Paris.
- Ippolito, R. (1991), "Encouraging Long Tenure: Wage Tilt or Pensions", *Industrial and Labor Relations Review*, Vol. 44, No. 3.

- Jagannathan, R. and N. Kocherlakota (1996), "Why Should Older People Invest Less in Stocks than Younger People?", *Federal Reserve Bank of Minneapolis Quarterly Review*, Vol. 20, No. 3, Summer.
- Johnson, P.G. (1998), *Older Getting Wiser*, Institute of Chartered Accountants in Australia.
- Keenay, G. and E.R. Whitehouse (2002a), "Taxing Pensioners", in *Taxing Wages*, OECD, Paris.
- Keenay, G. and E.R. Whitehouse (2002b), "The Role of the Personal Tax System in Old-age Support: a Survey of 15 Countries", Discussion Paper No. 02/07, Centre for Pensions and Superannuation, University of New South Wales, Sydney.
- Keenay, G. and E.R. Whitehouse (2003a), "Financial Resources and Retirement in Nine OECD Countries: the Role of the Tax System", Social, Employment and Migration Working Paper No. 8, OECD, Paris.
- Keenay, G. and E.R. Whitehouse (2003b), "The Role of the Personal Tax System in Old-age Support: a Survey of 15 Countries", *Fiscal Studies*, Vol. 24, No. 1, pp. 1-21.
- Lazear, E. (1981), "Agency, Earnings Profiles, Productivity and Hours Restrictions", *American Economic Review*, Vol. 71, pp. 606-620.
- Lazear, E. (1985), "Incentive Effects of Pensions", in D. Wise (ed.), *Pensions, Labor and Individual Choice*, University of Chicago Press for National Bureau of Economic Research.
- McHale, J. (1999), "The Risk of Social Security Benefit Rule Changes: Some International Evidence", Working Paper No. 7031, National Bureau of Economic Research, Cambridge, Mass.
- Mehra, R. and E.C. Prescott (1985), "The Equity Premium: a puzzle", *Journal of Monetary Economics*, Vol. 15, pp. 145-161.
- Mitchell, O.S. and E.L. Dykes (2000), "New Trends in Pension Benefit and Retirement Provisions", Working Paper No. 2000-1, Pension Research Council, Wharton School, University of Pennsylvania, Philadelphia.
- OECD (1995), *Private Pensions in OECD Countries: Canada*, Social Policy Studies No. 15, Paris.
- OECD (2001), *Ageing and Income. Financial Resources and Retirement in Nine OECD Countries*, Paris.
- OECD (2003), *Taxing Wages*, Paris.
- OECD (2004), *OECD Classification and Glossary of Private Pensions*, Paris.
- OECD (2005), *Taxing Wages*, Paris.
- Palacios, R.J. and E.R. Whitehouse (2000), "Guarantees: Counting the Cost of Guaranteeing Defined Contribution Pensions", Pension Reform Primer briefing note, World Bank, Washington, D.C.
- Palacios, R.J. and E.R. Whitehouse (2005), "Civil-service Pension Schemes Around the World", Pension Reform Primer series, Social Protection Discussion Paper, World Bank, Washington, D.C., forthcoming.
- Pennachi, G.G. (1998), "Government Guarantees on Funded Pension Returns", Pension Reform Primer series, Social Protection Discussion Paper No. 9806, World Bank.
- Turner, J.A. and D.M. Rajnes (2000), "Limiting Worker Financial Risk Through Risk Sharing: Minimum Rate of Return Guarantees for Mandatory Defined Contribution Plans", International Labour Organisation, Geneva.
- United Kingdom, Department of Work and Pensions (2003), "Income Related Benefits Estimates of Take-up – 2000-2001", London.
- United Kingdom, Government Actuary's Department (2003), *Occupational Pension Schemes in 2000: Eleventh Survey by the Government Actuary*.
- United States, Department of Labor (1999), *Private Pension Plan Bulletin: Abstract of 1996 Form 5 500 Annual Reports*, Pension and Welfare Benefits Administration, Washington, D.C.
- Viscusi, W.K. (1985), "The Structure of Uncertainty and the Use of Pensions as a Mobility-reduction Device", in D. Wise (ed.), *Pensions, Labor and Individual Choice*, University of Chicago Press for National Bureau of Economic Research.
- Vordring, H. and Goudswaard, K. (1997), "Indexation of Public Pension Benefits on a Legal Basis: Some Experiences in European Countries", *International Social Security Review*, Vol. 50, No. 3, pp. 31-44.
- Weaver, R.K. (1988), *Automatic Government: The Politics of Indexation*, Brookings Institution, Washington, D.C.
- Whiteford, P. (1995), "The Use of Replacement Rates in International Comparisons of Benefit Systems", *International Social Security Review*, Vol. 48, No. 2.

- Whitehouse, E.R. (1998), "Pension Reform in Britain", Pension Reform primer series, Social Protection Discussion Paper No. 9810, World Bank, Washington, D.C.
- Whitehouse, E.R. (2000), "Administrative Charges for Funded Pensions: Measurement Concepts, International Comparison and Assessment", *Journal of Applied Social Science Studies*, Vol. 120, No. 3, pp. 311-361.
- Whitehouse, E.R. (2001), "Administrative Charges for Funded Pensions: Comparison and Assessment of 13 Countries", in *Private Pension Systems: Administrative Costs and Reforms, Private Pensions Series*, Vol. 3, OECD, Paris.
- Whitehouse, E.R. (2002), "Pension Systems in 15 Countries Compared: the Value of Entitlements", Discussion Paper No. 02/04, Centre for Pensions and Superannuation, University of New South Wales, Sydney.
- Whitehouse, E.R. (2005a), "Pension Policy Around the World: Vol. 1, High-income OECD Countries", Social Protection Discussion Paper, World Bank, Washington, D.C.
- Whitehouse, E.R. (2005b), "Pension Policy Around the World: Vol. 2, Eastern Europe and Central Asia", Social Protection Discussion Paper, World Bank, Washington, D.C.
- Whitehouse, E.R. (2005c), "Pension Policy Around the World: Vol. 3, Latin American and Caribbean", Social Protection Discussion Paper, World Bank, Washington, D.C.
- Whitehouse, E.R. and R.J. Palacios (2005), "Pension Policy Around the World: Vol. 5, South Asian Civil-service Schemes", Social Protection Discussion Paper, World Bank, Washington, D.C.
- Whitehouse, E.R. and D. Robalino (2005), "Pension Policy Around the World: Vol. 4, Middle East and North Africa", Social Protection Discussion Paper, World Bank, Washington, D.C.
- World Bank (1994), *Averting the Old-Age Crisis: Policies to Protect the Old and Promote Growth*, Oxford University Press.

Table of Contents

Preface: Why Pensions at a Glance?	9
Introduction	11
Executive Summary	15

Part I

Monitoring Pension Policies

Chapter 1. Pension-system Typology	21
1. First-tier, redistributive pensions	22
2. Second-tier, mandatory, insurance pensions	24
Notes	25
Chapter 2. Comparing Pension-system Parameters	27
1. First-tier, redistributive schemes	28
2. Second-tier, earnings-related schemes	28
3. Earnings measures and valorisation in earnings-related schemes	31
4. Defined-contribution schemes	33
5. Ceilings on pensionable earnings	33
6. Pension eligibility ages	34
7. Indexation of pensions in payment	34
8. Taxes and social security contributions	34
Notes	37
Chapter 3. Modelling Pension Entitlements	39
1. Future entitlements under today's parameters and rules	40
2. Coverage	40
3. Economic variables	41
4. Average earnings data	42
5. Taxes and social security contributions	42
6. Indicators and results	42
Notes	45
Chapter 4. Replacement Rates	47
1. Gross replacement rates	48
2. Net replacement rates	51
Notes	53

Chapter 5. Relative Pension Levels	55
Chapter 6. Pension Wealth	59
Notes	63
Chapter 7. Key Indicators	65
1. Weighted averages and the earnings distribution	66
2. Weighted average pension levels and pension wealth	67
3. Structure of the potential resource transfer to pensioners	68
Notes	70
Annex I.1. Differences between Defined-benefit, Points and Notional-accounts Pension Systems	71
Annex I.2. Sensitivity Analyses	73
Annex I.3. Progressivity of Pension Benefit Formulae	81
Bibliography	84

Part II

Country Studies

Introduction	89
Australia	91
Austria	95
Belgium	98
Canada	102
Czech Republic	105
Denmark	108
Finland	112
France	116
Germany	120
Greece	123
Hungary	127
Iceland	130
Ireland	133
Italy	136
Japan	140
Korea	143
Luxembourg	146
Mexico	149
Netherlands	152
New Zealand	155
Norway	158
Poland	161
Portugal	164
Slovak Republic	167
Spain	170
Sweden	173

Switzerland	177
Turkey	180
United Kingdom	183
United States	187
VOLUNTARY, OCCUPATIONAL PENSIONS	191
Canada	193
Denmark	196
United Kingdom	198
United States	200

List of Box

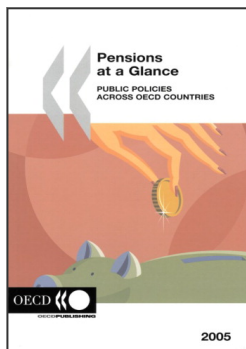
3.1. Modelling pensions	44
-----------------------------------	----

List of Tables

1.1. Structure of pension systems in OECD countries	23
2.1. Summary of pension system parameters	29
2.2. Earnings measure and valorisation: earnings-related schemes	32
2.3. Procedures for adjustment of pensions in payment by country and scheme	35
2.4. Categories of concession available to pensioners	37
3.1. Earnings of the average production worker, 2002	43
4.1. Gross replacement rates by earnings level, mandatory pension programmes, men	49
4.2. Net replacement rates by earnings level, mandatory pension programmes, men	52
6.1. Total life expectancy at age 65, 2040 projected mortality rates	61
6.2. Gross pension wealth by earnings level, mandatory pension programmes, men	63
7.1. Weighted average pension level and pension wealth	67
7.2. Contribution of different components of pension systems to total pension promise	69
I.3.1. Indicators of the progressivity of pension benefit formulae	82

List of Figures

4.1. Gross replacement rates at different earnings levels	50
4.2. Net replacement rates at different earnings levels	51
5.1. The link between pre-retirement earnings and pension entitlements	57
7.1. Distribution of earnings, average of 16 OECD countries	66
I.2.1. Total gross replacement rates for low, average and high earners by rate of return on defined-contribution pensions	74
I.2.2. Total gross replacement rates for low, average and high earners by rate of growth of economy-wide average earnings	77
I.2.3. Total gross replacement rates for low, average and high earners by rate of growth of individual earnings relative to average earnings	78
I.2.4. Total gross replacement rates for low, average and high earners by the number of jobs over the career	80



From:
OECD Pensions at a Glance 2005
Public Policies across OECD Countries

Access the complete publication at:
https://doi.org/10.1787/pension_glance-2005-en

Please cite this chapter as:

OECD (2006), "Replacement Rates", in *OECD Pensions at a Glance 2005: Public Policies across OECD Countries*, OECD Publishing, Paris.

DOI: https://doi.org/10.1787/pension_glance-2005-6-en

This work is published under the responsibility of the Secretary-General of the OECD. The opinions expressed and arguments employed herein do not necessarily reflect the official views of OECD member countries.

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.

You can copy, download or print OECD content for your own use, and you can include excerpts from OECD publications, databases and multimedia products in your own documents, presentations, blogs, websites and teaching materials, provided that suitable acknowledgment of OECD as source and copyright owner is given. All requests for public or commercial use and translation rights should be submitted to rights@oecd.org. Requests for permission to photocopy portions of this material for public or commercial use shall be addressed directly to the Copyright Clearance Center (CCC) at info@copyright.com or the Centre français d'exploitation du droit de copie (CFC) at contact@cfcopies.com.