Policy approaches to promote private and occupational old-age Provision in the Netherlands

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Part I:

Resources and Spending in Old Age

I.1 The pillars providing retirement income in the Netherlands

Pension schemes serve various objectives, including poverty-alleviation as well as insurance against longevity and income risks in old age. Depending on the particular objective, different pension schemes may be most appropriate. In particular, alleviating old-age poverty is best accomplished by a nation-wide public PAYG system that provides a minimum standard of living in old age. This system should be mandatory, redistributive, and can be financed from current tax revenues.

Another objective is insurance against longevity and income risks in old age. To avoid adverse selection in annuity markets and to facilitate intergenerational risksharing, this function may require compulsory insurance. This insurance can be provided by funded private schemes of the defined benefit type. These schemes are not explicitly aimed at poverty alleviation. Accordingly, contributions can be more closely linked to benefits than in public PAYG systems aimed at fighting old-age poverty.

Those workers who want to go beyond the mandatory level of pension insurance may use voluntary supplementary pension plans of the defined contribution type. These schemes can be particularly important for high income-earners who are better able to deal with the investment risks associated with defined contribution schemes.

The World Bank (1994) argues in favour of separating the various functions in three separate pillars. Such a three-pillar system does indeed seem an attractive model for old-age insurance.[1] A separation of tasks in three separate pillars can optimise the trade-off between providing economic incentives and ensuring solidarity by avoiding non-transparent and perverse redistribution. Another important reason for adopting a mix of pension systems is to diversify macro-economic risks; workers should not put all their eggs in one basket to avoid excessive exposure to the substantial political, investment, and human-capital risks over a long time horizon.

The Dutch pension system is close to a three-pillar system. The third pillar, however, is relatively small because the aspiration level of the second pillar, namely collective, occupational pensions, is quite high and comes on top of a first pillar that provides already half of overall retirement income. The importance of occupational schemes reflects a strong Dutch corporatist tradition. According to this tradition, apart from the state providing a basic minimum pension, pension provision is primarily viewed as a collective responsibility of employees and employers.

Table 1 contains the income sources of the elderly. The income share of the basic public pension is about 50 percent for both single elderly and for (married) couples. Occupational pension schemes provide about 30 percent of the income of the elderly. Occupational benefits are less important for older cohorts. Annuities provide a relatively small share of the income of the elderly (about 7%), reflecting the relatively small third pillar in the

[1] For other insurances, the combination of minimum public provisions and supplementary private insurance may result in overinsurance associated with excessive moral hazard. Intuitively, in setting its insurance policy, each insurer fails to internalise the adverse external effects of moral hazard on the other insurer (see Pauly (1974)). In old-age insurance, however, moral hazard is not relevant because eligibility conditions (i.e. age) are easily verified.

Netherlands. However, if one includes other asset income and income from owner-occupied housing in the third pillar, income from the third pillar amounts to about half the average size of the two other pillars.

Figures 1 to 3 provide macro-economic data on the three pillars of pension insurance. Figure 1 shows that assets in occupational pension schemes increased steadily. Also rising occupational pension benefits (Figure 2) reflect the gradual maturing of these funded pension plans. Despite the increasing share of occupational benefits in retirement income, premiums for these pensions fell as a share of GDP during the eighties. This was due in part to high interest rates during this period which raised capital income collected by pension funds. However, recently, the premiums for occupational pensions have increased again due to the lower rate of return (especially on the stock market) and the rise in wages.

Table 1. Composition of retirement income

	public pensions[a]	occupational pensions	asset income[b]	other income[c]
singles				
65-69 years	48	30	18	4
70-74 years	49	28	19	4
75-79 years	51	27	18	4
80 years and over	50	26	20	4
total	49	28	19	4
couples[d]				
65-69 years	44	32	16	8
70-74 years	48	29	20	3
75-79 years	49	28	19	4
80 years and over	51	24	20	5
total	48	29	19	4

Source: Besseling (1997)

[a] Excludes other public transfers.
[b] Includes income from owner occupied housing.
[c] Includes wages, profits and transfers.
[d] Both partners receive a public pension.

I.2. The first pillar: The public pension scheme

Benefits

The Dutch public sector provides a minimum pension benefit to residents aged 65 or over. Neither early retirement nor opting out of the compulsory public scheme is possible. The public benefit is flat; it does not depend on premiums paid during the working life and is not means tested. The entitlement to the public pension does not require retirement from the labour force. Hence, also housewives who have not participated in the formal labour market collect the public pension. The same holds true for groups with only a weak attachment to the labour market. Accordingly, with the public pension serving as an effective minimum pension, the elderly do not draw on welfare and thus do not burden social assistance.[2]

Single persons receive a higher benefit per individual than married persons do. Single persons collect a benefit that, in after-tax terms, amounts to 70% of the after-tax statutory minimum wage.[3] For elderly persons living in a common household, each individual collects a benefit that (in after-tax terms) amounts to only 50% of the after-tax minimum wage.

The public pension is effectively indexed to contractual wages because of a statutory link between the minimum wage and contractual wages. Nevertheless, during the last two decades, the value of the public pension has declined compared to the average standard of living (see Figure 4). The main reason for the public pension lagging actual wages is twofold. First, the minimum wage was frozen in nominal terms or indexed to prices rather than wages during most of the eighties in order to encourage wage moderation and reduce public spending on minimum social benefits, which are linked to the minimum wage. Second, contractual wages typically lag actual wages because these latter wages include promotions and other supplementary earnings that are not included in actual wage contracts. Moreover, average wages rise if the labour-force share of those earning higher wages increases. These changes in the composition of the labour force do not affect the index of contractual wages but do raise the average standard of living.[4]

Contributions

Whereas benefits are flat, contributions for the public pensions depend on taxable income. In particular, since a major tax reform in 2001, premiums are levied as part of the first two brackets of the personal income tax on income from labour and housing.[5] Contributions are levied on all components of personal income, including capital income. The premium is paid only by those younger than 65 years of age. The resulting lower rate in the first tax brackets enjoyed by the elderly provides an incentive to defer labour income through occupational or personal pensions because pensions are taxed on a cash-flow basis: premiums are deductible from taxable income (including the premium for the old-age pension) while benefits are subject

[2] The social minimum provided by social assistance coincides with the public pension. In particular, in after-tax terms, it amounts to 70% of the minimum wage for single-person households and 100% of the minimum wage for two-person households.

[3] The after-tax stautory minimum wage is the same for singles and married couples.

[4] The gap between actual and contracted wages is the so-called incidental wage component. The law allows for once-off increases in the minimum wage and minimum public benefits if they are too much out of line with the average standard of living. Indeed, minimum benefits were increased substantially in the sixties and seventies. In the eighties, however, the link between benefits and contractual wages has been suspended several times. Indeed, according to a law instated in 1992, this link can be suspended if the ratio of the number of inactive persons claiming social benefits to the number of people having a job exceeds 0.826.

[5] In 2001, the premium for the public old-age pension amounts to 17.9% of taxable income from labour and housing in the first two brackets. The length of these brackets together is 27009 Euro. For more information on the Dutch income tax system, see section II.1.

to the personal income tax. Accordingly, individuals with relatively low income can avoid the old-age pension premium by shifting their taxable income through pension saving toward retirement when they do not pay the premium for the public pension. Individuals with a relatively high income (i.e. a taxable income exceeding the first two tax brackets) cannot avoid the pension premium this way. However, they may have an incentive to shift taxable income toward retirement (when, in general, income is lower) because of the progressive tax scheme (see section II.1).

Pension contributions and the marginal tax wedge

The flat benefit in the public scheme is financed through a proportional tax on labour income. Without an individual link between benefits and premiums, the public scheme does not rely much on the insurance principle and involves redistribution from those with higher lifetime incomes to those with lower lifetime incomes. On the one hand, this progressive pension system implies a substantial marginal tax wedge, which reduces the number of hours worked in the formal sector[6] and discourages partners of breadwinners to participate in the labour market.[7] At the same time, however, the progressive system contains the premium burden on low-skilled workers with low incomes. This helps to maintain the access to work for these vulnerable groups, thereby reducing the number of people on social benefits. Moreover, the focus of the public scheme on poverty alleviation reduces the burden of social assistance in fighting old-age poverty.

Funding

Current public pension benefits are traditionally paid out of current contributions according to the familiar pay-as-you-go system. The 1997, the government modified the financing of public pensions in two major ways.

As a first modification, it intended to fix the pension premium at its 1997 level. As the population ages, a fixed premium rate implies that revenues from premiums will increasingly fall short of expenditures on public pension benefits. This revenue shortfall will then have to be covered from general tax revenues. This implies that the elderly start to contribute to the financing of public pensions from their supplementary incomes because the elderly, who are exempted from paying public pension premiums on their supplementary incomes, do pay taxes on these incomes. Despite these intentions the government has increased the public pension premium since 1997 in order to shift the burden of financing the public pension away from the elderly who are a politically powerful group. However, the current government introduced a new maximum for the public pension premium of 18.25 percent of taxable income in the first two brackets of the labour income tax.

The second modification to the PAYG system is the accumulation of a so-called AOW fund to deal with temporarily high spending on public pensions when the babyboom generations retire. According to the definition used for computing fiscal balances for the purposes of the Stability and Growth Pact within EMU, the build-up of the AOW fund counts as a cut in the fiscal deficit. Indeed, the resources in the AOW fund are invested in government bonds. Accordingly, the AOW fund can be viewed as a cut in public debt that is earmarked for the public pensions of the babyboom generations. Figure 7 shows current projections for the AOW fund. At the end of 2001, the fund contained 2.3 of annual GDP.

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[6] Estimates for the size of the informal sector show a wide range from 1% to almost 10% of GDP (Graafland and de Mooij (1998)).

7 Also occupational schemes add to the marginal tax wedge because the link between individual contributions and benefits is quite weak in final-pay occupational schemes.

I.3 Income from housing

Only a minority of the elderly in the Netherlands owns a house, in 1999 31.9 % of all households with at least one person over 65.[8] This number has been rising quite fast over the last decade, however, ten years ago it was 5 points lower. House ownership is highest among relatively young pensioners (41.2% of the pensioners between 65 and 70 years old owns a house whereas only 22.7% of those over 80 do so). Elderly's average income from housing has risen from 10% (1900 Euro) of gross income in 1990 to 12% (2900 Euro) in 1999.[9]

I.4 Resources needed for health care and long-term care in old age[10]

The Netherlands has a mixed system of health care insurance with both private and social ('sickness funds') insurers. Sickness funds provide mandatory coverage for people below the age of 65 with relatively low incomes (in 2001 maximum 29864 Euro). Private insurers cover most of the remainder on a voluntary basis. The premium for the sickness funds consists of a fixed part (160 Euro per year) and a part that is income dependent (7.95 percent of income[11]). The premium for private health insurances is independent of income, but of course depends on the risks that are insured. The Law on access to health insurance (WTZ) sets a maximum price and minimum coverage for contracts which insurers must offer to any customer. The statutory maximum price for a standard insurance for a person aged over 65 is 1720 Euro in 2001. Elderly with a relatively low income can also opt for the sickness fund, however, i.e. they can choose to pay the income-dependent premium to the sickness fund instead or to buy a private insurance. Table 2 gives an impression of the share of income that elderly spend on premiums for sickness funds and private insurances.

Table 2. Share of disposable income spend on sickness fund and private insurance[a]

	Single	Couple
only public pension	10	11
public pension + 4545 Euro	9	23
public pension + 13365 Euro	8	15

Source: *Vraag aan bod*, VWS (2001)

[a] Cost of premiums plus out of pocket expenses by privately insured on care that is insured by the sickness funds, as a percentage of disposable income.

These insurance schemes cover most health care provisions, including costs of general practitioners, medical specialists, hospital care, prescription pharmaceuticals, and dental care. However, long-term care and exceptional health care costs (including e.g. long-term nursing care, mental health care and family care) are covered by a special fund called 'AWBZ', which is

[8] Source: CBS.

[9] Imputed rent minus costs of mortgages etcetera, excluding maintenance costs. Source: CBS.

[10] The numbers in this paragraph are based on the *Zorgnota 2001* (VWS, 2000) and on *Vraag aan bod* (VWS, 2001).

[11] Up to an income of 103 Euro per day. Employees pay only 1.7 percent, the rest is paid for by the employers.

mandatory for all residents. The premium for the AWBZ is 10.25 percent of income in the first two tax brackets[12]. In total, the sickness funds, private insurances and AWBZ cover almost 90 percent of the total costs of health care (see Table 3). Private payments only cover 6% of total costs.

Table 3. Financing of health care[a]

Source	Share
AWBZ	38
Sickness funds	36
Private insurance	15
Government subsidies	5
Private payments	6

Source: *Zorgnota 2001*

[a] Share in percentage points of total health expenditures in 2001.

Disability of employees below the age of 65 is covered by the so-called WAO, a social insurance that grants a benefit between the social minimum and 70 percent of the last-earned wage, depending on age and employment history. On top of this, there are private insurances, often set in collective bargaining by employer's organisations and labour unions. These private insurances typically supplement the benefit to 70 percent of the last-earned wage for people who do not qualify for a WAO-benefit of this level. Disabled persons aged 65 or over do not receive disability benefits. They receive the normal public pension benefit plus possibly a benefit from the second or the third pillar.

Part II:

The Second and the Third Pillar

II.1 The second pillar: Occupational pensions

Occupational pensions are quite important in the Netherlands. This is primarily because the Dutch public pension scheme provides only a flat minimum benefit, which is relatively low for those earning middle- and higher incomes (see Figure 4). The Dutch occupational pension provisions are set in collective bargaining by employers' organisations and trade unions in the private sector. Hence, the private sector plays quite an important role in pension provision. Indeed, the social partners are generally viewed as the parties that are primarily responsible for providing supplementary pension benefits in excess of the minimum pension. At the same time, the government provides a legal framework and fiscal support.

[12] See section II.1.

Defined-benefit schemes

Occupational pension schemes are generally of the defined-benefit type. In particular, benefits are based on salary levels during the working life rather than on the discounted value of individual life-time contributions. Hence, the link between individual premiums and accrued benefits is typically rather weak. Depending on the strength of this link, pension contributions thus distort the labour-leisure decision.

In order to be able to pay these wage-linked benefits, defined benefit schemes rely not only on the accumulation of financial assets but also on an implicit contract between the firm, its workers, and retirees of different ages. If returns are high and wage increases are modest, the firm and younger workers benefit from lower pension premiums. If returns are low and wage increases are substantial, in contrast, these parties have to transfer resources to older generations.[13]They will not voluntarily do this. Hence, government regulation is needed to help occupational defined benefit schemes to perform inter- and intragenerational redistribution by making collective labour agreements compulsory for particular sectors. Moreover, to prevent adverse selection, workers in a particular firm must be forced to participate in defined benefit schemes.

Final-pay and average-pay schemes

The link between wages and benefits in defined benefit schemes can take various forms. The most common defined benefit scheme in the Netherlands is of the final-pay type. In such a scheme, the pension benefit is linked to the wages at the end of the career.[14] Indeed, among the employees covered by a supplementary pension scheme, about 63% participate in a final-pay scheme.[15] Most other employees (25%) participate in so-called average-pay schemes. In these schemes, benefits are linked to the average rather than the final pay during the career. In most cases, the accumulated pension rights rise with a price or wage index. In recent years, the average-pay system has gained ground at the expense of the final-pay scheme. As a direct consequence, the individual link between premiums and accumulated pension rights has become tighter. An increasing number of employees (currently about 10%) participate in a fund that offers a combination of different schemes, for example final-pay and average–pay or final-pay and defined contribution. The different schemes then apply to different stages in the accumulation of pension rights, depending on income or age.

Once retired, most current retirees benefit from indexation of occupational retirement benefits to inflation or even contractual wages. This indexation, however, is not a regulatory requirement but is typically conditional on the financial situation of the pension fund.[16] The conditional indexation of pension benefits is not consistent with the defined benefit character of the schemes but is nevertheless a necessary safety valve for firms that have to operate in competitive product and labour markets. Indeed, as competition on these markets intensifies, occupation schemes will acquire more of the features of the defined contribution schemes.

[13] In particular, wage increases result in considerable additional pension obligations with respect to older workers. The costs of these additional oblogations are spread over all workers through age-independent premiums.

[14] Most final-pay plans include provisions that discourage strategic wage setting just before retirement. To illustrate, the increase in pension benefits due to wage increases immediately before retirement is usually constrained by a ceiling.

[15] SER (2000).

[16] Since 1992, the Pensions and Savings Funds Act law requires pension funds to provide the same indexation to the pension rights of retirees and deferred beneficiaries (so-called 'sleepers' who are no longer paying premiums but are not yet retired).

Contributions

Contributions to occupational pension schemes are typically shared between employers and employees. Premiums are usually levied on wage income above a certain 'franchise.' Below this franchise, employees are covered by the public pension scheme (see section I.2). Figure 5 contains the premiums as a percentage of gross wages since 1970. These rates are an average across pension funds because the premiums differ across the various pension funds. Although the relative importance of the second pillar has actually increased during this period (see section I.1), the premium fell from the mid 1970s until the beginning of the 1990s. The decline in average premium was due to a combination of high interest rates and relatively low wage growth during this period.

Regulation

Under the Pensions and Savings Funds Act (PSW), a pension fund must be established as a legal entity that is separate from the sponsoring firm. Moreover, employees and employers must be represented on the board on a 50-50 basis.

The Pension and Insurance Board, a private agency that supervises pension funds and insurance companies, formulates additional prudential rules involving the degree of funding and the valuation of assets. Pension funds are legally obliged to provide the Pension and Insurance Board with detailed information on benefit payments and investments of the fund.

Regulations that make the negotiated supplementary pension provisions compulsory for all firms in a particular sector if requested by the employers' organisations and trade unions in that sector play an important role in facilitating intergenerational risksharing in defined benefit schemes.[17] Indeed, the compulsory participation of firms in sectoral pension funds allows these funds to keep the pension premiums relatively stable without endangering their pension promises. As a direct consequence of the compulsory participation of firms, most workers (91% in 1996) are covered by an occupation pension scheme. The disadvantage of this system is that, at the sectoral level, social partners and pension funds in sheltered sectors may feel little competitive pressure to keep costs under control. Moreover, compulsory participation of firms may reduce diversity of pension plans.

Tax treatment

Since January 2001, the Netherlands has a dual income tax scheme. On the one hand, labour income, pension benefits, income from owner occupied housing and entrepreneurial profits are taxed progressively (see Table 4).[18] Capital income, on the other hand, is taxed at a flat rate of 30 percent, while capital income is calculated via an imputed rate of 4 percent over the actual value of wealth.[19] There is a general tax credit of 1576 Euro and an additional tax credit for people earning labour income or entrepreneurial profits.

Through this tax system, the government provides fiscal benefits by taxing pension savings according to the so-called EET-regime (see Dilnot and Johnson (1993)): pension contributions are tax exempt, capital income of pension funds is tax exempt, and pension benefits are taxed. Non-pension saving, in contrast, is in principle taxed under the less favourable TTE regime**.** The EET regime for pension saving is especially advantageous

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[17] Indeed, industry-wide schemes are the most common occupational pension funds. A company can opt out of these industry pension funds and establish a company fund only if this company fund offers benefits that are at least as generous as those provided by the relevant industry-wide scheme.

[18] Income from owner occupied housing consists of the imputed rent (in principle 0.80 percent of the value of the house) minus costs. Deductible costs include the costs of mortgages used for financing the house but exclude maintenance costs. Interest on mortgages is tax deductible for 30 years at maximum.

[19] Excluding the value of owner occupied housing. Note that this amounts to a tax on wealth of 1.2 percent.

because the elderly aged 65 and over benefit from a low rate in the first tax brackets because they are exempted from paying public pension contributions (see subsection I.2 and Table 4). These tax benefits for pensions are available only if benefits are paid out in the form of annuities.[20] Hence, lump sum withdrawals are very unusual in the Netherlands. Moreover, the tax benefits are subject to certain limits. In particular, contributions for occupational pensions are tax deductible only if the yearly accrual of the pension rights does not exceed 2 percent of the wage sum in case of a final pay scheme or 2.25 percent in case of an average pay scheme. In case of a defined contribution scheme, the maximum contribution is determined by the requirement that, given a gradual accrual of pension rights over 35 years, benefits should not exceed 70 percent of the current wage.[21]

Table 4. The tax on labour income in 2001

	Length[a]	Tax rate[b]	Social insurance contributions under 65[b]	Social insurance contributions over 65[b]
First bracket	14870	2.95	29.4	11.5
Second bracket	12139	8.20	29.4	11.5
Third bracket	19300	42		
Fourth bracket		52		

[a] In Euro's.
[b] In percentage points of taxable income.

Portability of pension rights

Employers often adopt occupational pension schemes to address labour-market failures associated with asymmetric information and lack of commitment. In particular, long vesting periods, limited indexation of pension rights for those who end participation before retiring, and linking retirement benefits to the final wage motivates workers not to shirk (when effort is costly to monitor) and binds workers to the firm (see Lazear, 1986). This reduces costs associated with monitoring, training, hiring, and firing. Moreover, a stronger commitment of the worker to the firm encourages the stakeholders of the firm (e.g., shareholders and workers) to invest more in firm-specific capital.

In the Netherlands, however, vesting periods are shorter than one year. Moreover, many employees can transfer the value of their accrued pension rights to another employer. Accordingly, the pension system does not inhibit the mobility of labour and insures the worker against job-mobility risk and firm-specific shocks. At the same time, the pension system does not tie the worker to the firm. Hence, employers can not use defined benefit schemes as an instrument to alleviate imperfections in labour markets.

Funding

The flat minimum public pension together with compulsory participation in supplementary funded schemes and the fiscal benefits for pension saving has resulted in the accumulation of considerable capital in occupational pension funds (see Figure 1). At the end of 1997, the 80 industry pension funds and the about 900 company pension funds had accumulated capital funds amounting to about 92% of GDP. The Dutch (PSW) law stipulates that the pension assets backing occupational pension obligations must be held outside the sponsoring firm by indepen-

[20] Moreover, these annuities should start at latest at the age of 70.
[21] The calculations should be based on a real rate of interest of at least 4 percent and a standardised career pattern.

dent pension funds. This requirement may yield several advantages for the allocation of capital. First, the pension funds diversify their investments and hence reduce investment risk. Second, they stimulate the development of capital markets, thereby facilitating the reallocation of capital away from older, mature firms towards younger, growing firms. This may yield a more efficient allocation of capital across the economy. Dutch pension funds traditionally invested mainly in low-risk government bonds rather than equities, in part due to regulatory requirements of the Pension and Insurance Board. More recently, however, Dutch pension funds have significantly increased their holdings of domestic equities (see Figure 1). Indeed, the long horizon of funds with defined benefit obligations allows these pension funds to invest in high-yielding equities with volatile returns.

Currently, there are no detailed regulatory requirements for the asset composition of pension funds. The (PSW) law stipulates that pension risks should be prudently estimated and that investment should be solid. This leaves scope for discretionary policy by pension funds. The Pension and Insurance Board has the task to assess whether a fund's policy fits within this legal framework. To this end, the board uses some actuarial principles.[22] The basic idea is that the fund should at any moment possess at least sufficient capital to guarantee the present value of accumulated pension rights. The indexation of accumulated pension right is typically conditional upon the financial position of the pension fund. In this case, the actuarial principles prescribe a virtual rate of interest of 4 percent for present value calculations. The assets should be valued at the current market value. As the market value may vary over time, the fund should posses a buffer stock capital in addition to the present value of accumulated pension rights. The more volatile the assets in the fund's portfolio, the larger this buffer has to be.

There is no insurance mechanism for the case that a pension fund gets in financial trouble. The law stipulates that the statutes of a pension fund should describe the way in which pension rights are adjusted in case the financial position of a fund makes this necessary. The possibility to raise premiums and to lower accumulated rights imply that a pension fund cannot go bankrupt.

II.3 The Third Pillar: Individual Pensions

The third pillar of pension insurance includes voluntary pension insurance bought by individuals, especially those with insufficient occupational pension rights such self-employed. Personal pensions are of the defined-contribution type and are typically supplied by life insurance companies, but also pension funds are active on this market. Figure 3 shows premiums for individual contracts with life insurance companies. These contracts include not only annuities but also other insurance products, including life insurance.

Only if the benefits are paid out in the form of annuities, personal pensions can under certain conditions benefit from the same preferential tax treatment as occupational pensions.[23] The tax benefits are subject to certain limits, however. Every individual can deduct up to 1036 Euro per year. Individuals who build insufficient pension rights in a particular year can deduct up to a higher, income dependent ceiling in that specific year.[24]

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[22] These principles are described in Verzekeringskamer (1997) and Boshuizen and Pijpers (1998).

[23] In order for the premium to be tax deductible, the benefits should start no later than at the age of 70. Moreover, the insurer should be a legally registered insurance company or a pension fund. Just like pension funds, registered insurance companies are subject to supervision by the Pension and Insurance Board and comparable regulation applies. (see section II.2).

[24] This ceiling equals 17 percent of the pension base minus the accrual in pension rights (calculated in a prescribed way), where the pension base is defined as labour income plus profits minus 9896 Euro but at most 132771 Euro.

II.4 Interaction between pillars

The first two pillars

The first two pillars are closely related because the second pillar typically takes account of the first pillar in defining its aspiration level. In particular, many occupational pension schemes aim to achieve a collective pension (i.e. the sum of benefits from the first and the second pillars) of 70% of final earnings (before taxes) in case of a career of 40 years.[25]

Most pension funds achieve this aspiration level by using a so-called franchise on which no occupational pension rights are accumulated because the government provides the pension on these earnings through the minimum public pension. In practice, many workers do not achieve the 70% final-wage aspiration level because of incomplete careers. Furthermore, even in the case of full careers, many two-earner families and single people collect a collective pension of less than 70% of the final wage (in before-tax terms) because the franchise is typically based on a public pension for a two-person family with a single earner (the so-called breadwinner) of 100% of the minimum wage. Two-earner families and singles, however, receive a public pension of only, respectively, 50% and 70% of the minimum wage.

Table 5 contains gross and after-tax replacement rates of collective pensions (i.e. public and occupational pensions) for the generation born in 1930. Notice that on average workers do not realise the gross pension level of 70% of the gross average wage that most occupational pension systems aim at. The high replacement rate for single woman is due to (on average) low final wages rather than high pension rights. The relatively high replacement rate for a one-earner family indicates that the Dutch pension system discourages partners of breadwinners from participating in the labour market.

Over the last two decades, the relative importance of the occupational schemes has grown compared to that of the public scheme. This is in part because the public benefits lagged actual wage growth (see subsection I.2). Most private occupational schemes filled the gap left by the public scheme so as to ensure that collective pension benefits were maintained at 70% of the final wage (for a full career). By reducing the generosity of the public scheme, the government has thus in fact privatised part of pension provision.

[25] About 73% of the insured employees are in occupational schemes that aim for this aspiration level. In addition to these pension benefits, most occupational pension funds provide survivor benefits.

Table 5. Pension benefit as a percent of final wage for cohort born in 1930

	one-earner family[a]	single male	single female	two-earner family[b]
gross public pension[c]	40	28	79	29
gross overall pension[d]	60	48	88	46
after-tax overall pension[e]	76	65	104	61

Source: Bovenberg and Meijdam (1999).

[a] Assuming a male breadwinner.

[b] Working couple (man and woman).

[c] Gross public pension as percent of average gross final wage.

[d] Gross overall pension (including public and occupational pension) as percent of average gross final wage.

[e] After-tax average overall pension (including public and occupational pension) as percent of after-tax average final wage.

The first and the third pillar

The first pillar interacts with the third pillar in at least two ways. First, uncertainty about the sustainability of the public pension in the face of the ageing population has encouraged the take up personal pensions. Second, the premium for the old-age pension provides a subsidy to personal pension saving in the form of annuities. This is because premiums for annuities are (up to a certain maximum, se subsection II.1) deductible from the personal income tax (which is levied as part of the first bracket of the personal income tax, see subsection II.1 while the pension benefits are not subject to the premium for the public pension. Accordingly, individuals can avoid paying the premium for the old-age pension by deferring their taxable income until retirement through pension saving in the form of annuities.

II.5 Experience with the three pillar system

Public support for the first pillar

On the basis of a panel of almost thousand households, van der Heijden (1986) studied the public support for the public pension scheme. The results are reported in Table 6. Opinions concerning the contribution rate hardly differ among generations: between 55% and 65% of the respondents believe that the contribution rate is reasonable, while 20% to 25% believe it is high or very high. The results for the benefit levels are remarkably different. Only a small group of respondents believe that the public benefit is high or very high. In fact, about 60% of the middle-aged and the young think that the pension benefit for couples is low or very low, while 40% of the elderly persons think so.

Van der Heijden also asked the respondents for their opinion about the rates of return on contributions to the public pensions for the different generations. These were calculated to be 3.5 for the old, 2.4 for the middle-aged and 1.2 for the young, respectively. For all generations and all rates of return, the answer ‘not too high or too low’ is most frequent. Most respondents believe that the relatively high rate of return for the elderly is reasonable (about 80%). The same holds true for the average rate for return of the middle-aged (also about 80%). The relatively low rate of return for the young is judged reasonable by about 70% of the young and the middle-aged and 80% of the elderly.

Table 6. Opinion on the contribution rate and benefit level of public pensions[a]

	contribution rate			pension for couples			pension for single-pension households		
	old	middle -aged	young	old	middle -aged	young	old	middle -aged	young
No opinion	17	7	10	7	2	4	7	1	3
Very low	0	0.5	2	5.5	6.5	7	8	15	18
low	6	6	7	33	52	52	40	57	54
Reason-able / normal	56	63	56	54	37	34	44	25	23
High	20	21	24	0	2	3	0.5	1	1.5
Very High	1	0.5	1.5	0.5	0.5	0	0.5	1	0.5

Source: Van der Heijden (1996)
[a] As percentage of total number of participants per age group. The age group ‘old’ is age 65 or over, the age group ‘middle-aged’ is 45-65 years old and the ‘young’ are under 45 years.

Respondents also evaluated two scenarios that respond differently to ageing. In particular, the additional costs due to ageing are absorbed by either raising contribution rates and maintaining benefits or by maintaining contributions and reducing benefits. These scenarios were evaluated by assigning a grade between 1 (worst) and 10 (best). Table 7 shows that all generations prefer to maintain public pension benefits rather than maintaining contribution rates. The results are consistent with a panel survey by De Vos *et al*. (1997) who find that only 6% of the respondents favours a decrease in public pension benefits. These authors report also that 72% prefers partial funding of public pensions whereas 25% favours fixing the public pension premium and covering the revenue shortfall from general tax revenues.

Table 7. Evaluation of public pension scenarios[a]

	old	middle	young
ageing, maintaining contributions	4.6	4.2	4.2
ageing, maintaining benefits	5.9	6.0	5.4

Source: Van der Heijden (1996)
[a] Grades from 1.00 (worst) to 10.00 (best).

Public support for the second pillar
De Vos *et al*. (1997) showed that the Dutch are quite satisfied with not only the public pensions but also occupational pension schemes (see Table 8). In particular, a majority is satisfied with the premium level in relation to the expected pension benefit. Those who are not satisfied in most cases prefer a higher premium in order to accumulate more pension rights (24%). About half prefers a lower retirement age. However, when confronted with the rise in the premium rate that results if the retirement age falls by one year, only 19% still favour this decrease. The respondents tend to prefer defined-benefit schemes. Only 8% would like to see a transition to defined-contribution schemes. The transition to average pay systems attracts more support (30%) than a move towards defined-contribution schemes, but the group that opposes such a transition to average-pay schemes is equally large. Moreover, the compulsory participation in the pension system is broadly supported (74%). About 25% of the participants prefer to have the discretion to select their own pension fund.

Table 8. Preferences for supplementary pensions[a]

	positive	neutral	negative
level premium / benefit	59	10	31
Retirement age	36	13	51
Pension guaranteed	90	7	3
Participation compulsory	74	14	12
free choice pension fund	26	17	57
more risk	23	27	50
switch to average pay	29	42	29
switch to defined contribution	8	51	41

Source: de Vos *et al*. (1997)
[a] As a percentage of total number of respondents

Effects on the capital market

Dutch pension funds are increasingly investing in equity. This facilitates the investment of pension saving in high-yielding projects in the corporate sector, enhances capital mobility within the corporate sector, allows a higher expected return over a long horizon, makes the return less sensitive to unexpected price inflation, and may help to improve corporate governance. Indeed, the Dutch pension system facilitates both capital and labour mobility.

Contractual saving through pension funds and life insurance companies has increased substantially since the Second World War. At the same time, the overall level of private saving as a percentage of GDP has been quite stable (see Figure 8). This does not necessarily imply, however, that contractual saving has crowded out other private saving because the expanding public pension (see Figure 1) rather than the building up of private pensions may have reduced non-contractual private saving. Indeed, on the basis of micro-econometric research, Alessie, Kapteyn and Klijn (1997) find that social security wealth fully displaces private wealth. They do not find significant displacement of non-pension wealth by pension wealth.[26] Euwals (2000) does not find evidence for a significant displacement effect for most households either. Only for the highest-income-decile households pensions wealth has a significant negative effect on non-pension wealth. Although the effect of pension wealth itself is not significant, Euwals finds a significant negative effect of the number of contributed years to a pension fund. Moreover, he finds a significant negative impact of occupational pensions on savings motives.

Interaction between pensions and social programs

The programs providing income to the elderly imply a strong incentive to retire early. Employees who stop working can generally expect high replacement rates (see Kapteyn and de Vos (1997)). Indeed, the effective retirement age has declined to rather low levels over the past two decades (see Table 9). This section describes the most important schemes facilitating early retirement (see Table 10).

Table 9. Effective retirement age

	1950	1960	1970	1980	1990	1995
males	66.4	66.1	63.8	61.4	59.3	58.8
females	64.1	63.7	62.9	58.4	55.8	55.3

Source: OECD (1998)

Table 10. Persons aged 55-64 by labour-market status, 1990 [a]

	men		women	
	55-59	60-64	55-59	60-64
employed	54.9	21.1	12.7	4.3
disabled	31.3	37.7	10.5	10.8
partly disabled/unemployed	1.8	1	0.4	0.3
early retirement (VUT)	3.9	26.5	0.6	5.1
social assistance	0.4	0.4	2.4	2
unemployed	4.6	8.7	1.4	1.6

Source: OECD (1995)

[a] As a percentage of the population in that age category.

[26] The authors caution, however, that measurement error in pension wealth may have biased their results toward finding no significant crowding out.

Early retirement benefits

Early retirement schemes (VUT) negotiated in collective bargaining between the social partners are an important route for early retirement. Indeed, about 27% of the men aged between 60 and 65 collect early retirement benefits at present. These schemes generally provide a benefit equal to 80% of previous earnings between the age of 60 up to the statutory retirement age of 65. In contrast to occupational pensions provided after the statutory retirement age, early retirement is generally financed on a pay-as-you-go basis. As another difference with regular occupational pensions, one must completely withdraw from the labour market in order to be eligible for the benefit. Moreover, the benefit does not typically depend on the number of years of service except that one should have been employed in the firm or industry for at least ten years.

The costs of early retirement have increased substantially (see Figure 3). Moreover, the situation on the labour market has turned around since 1980 when the early retirement schemes were first introduced as a way to fight unemployment for younger workers. While at that time unemployment was rising rapidly, employers currently experience shortages on the labour market as the labour market is increasingly tight. Hence, many firms attempt to reduce entitlements and increase the age at which employees are eligible for early retirement. In a number of collective labour agreements, early retirement provisions for the elderly are gradually being phased out and replaced by individual saving schemes for younger workers that are more actuarially fair. In this way, early retirement can be expected to be increasingly financed through funded rather than pay-as-you-go schemes.

Disability benefits

In addition to private early retirement schemes, public schemes facilitate early retirement. The most popular public scheme for retiring from the labour force is the disability program, which does not distinguish between social and occupational risks. The percentage of males aged between 55 and 64 collecting a disability benefit increased from 12% in 1968 to 21% in 1975 to 37% in 1985. At present, about a third of the males between 55 and 64 receive a disability benefit (see Table 10).

Disability insurance has traditionally been an attractive route for early retirement. Disability benefits were typically more generous (before 1985 80% of the wage and since then 70% of the wage) and of longer duration than unemployment benefits. Moreover, while on disability benefits, one typically keeps accumulating pension rights. Furthermore, employers could get rid of elderly, less productive, employees without being constrained by the various legal obstacles that prevent employers from laying off these workers. In view of the rising costs of disability insurance, the government has tightened the eligibility criteria and the claim assessment procedure, reduced benefits[27], and introduced financial incentives for employers in the form of experience rating (see CPB (1997)).

Unemployment benefits

As a result of these measures involving the disability scheme, the unemployment scheme has become a more popular route for early retirement. Indeed, empirical research suggests that the various exit routes from the labour market are close substitutes (see e.g. Woittiez, Lindeboom and Theeuwes (1994)). The insurance character of unemployment benefits implies that elderly workers typically have accumulated substantial insurance rights. Indeed, most people aged 60 and over can expect to collect unemployment benefits equal to 70% of their previous earnings up to age 65 (in before-tax terms).[28] Another feature facilitating early retirement through the unemployment scheme is that unemployed workers older than 57 1/2 years do not have to apply for work in order to be eligible to unemployment benefits. Moreover, when laying off elderly workers, employers often provide supplementary severance payments to top up the unemployment benefits. In this way, by providing relatively

[27] However, additional supplementary benefits in collective labour contracts largely compensated for the cut in public benefits.

[28] Those earning low wages may face substantially higher replacement rates. In particular, social assistance benefits for breadwinners without other sources of income and wealth amount to 100% of the minimum wage.

small supplementary benefits, employers can assure that older laid-off workers can maintain their standard of living. Since the public sector pays for most of the benefits, the employer does not internalise the full costs of de facto early retirement.[29]

Part III. Financial education policies

III.1. Financial education programmes

There are no financial literacy programmes in the Netherlands. Until recently, retirement income planning programmes were only provided by insurance companies, especially for people with no or insufficient occupational pension rights like, for example, self employed The majority of the employees accumulate sufficient occupational pension rights. As the occupational pension system typically involves no elements of choice, there was no need for retirement income planning programmes for employees. Only in case of changes in the pension system, this kind of programmes has been offered on an ad hoc basis by employers. Such changes often involve elements of choice for those who have already built up pension rights and the aim of the courses was to assist people in making the right choice. At the moment, occupational pension systems tend to become more flexible (see section IV) and the demand for good information and income planning programmes is increasing. As a consequence, trade unions are also considering offering this kind of programmes. Moreover, the government is considering introducing new regulation regarding the information that pension funds should supply. The current regulation mainly prescribes that pension funds have to inform participants yearly about their accumulated pension rights.

III.2. Research on financial education and old-age income planning issues

De Vos et al. (1997) studied employees' knowledge of pension arrangements etcetera. They found that people are in general not well informed about the pension scheme they participate in. For example, most people do not know the percentage of the premium paid by the employer or the level of the survivor benefit. Less than half of the people know how much premium they pay themselves for their pension and more 25 percent do not know whether their pension scheme includes survivor benefits. Even if employees think that they are well informed, their answers to the questions posed often turned out to be incorrect.

Employees not being very well informed about their pension arrangements may be due to the fact that, given the extensive mandatory collective pension system, the incentive to acquire information is not very large. However, the same conclusion was also drawn in a study among people with a private (third pillar) pension[30]. This studied revealed that 63 percent of the respondents did not know all possibilities for tax deduction for savings for old age. Moreover, 23 percent did not know whether they would have sufficient income during old age[31] and 77 percent of all people who thought that they would have sufficient income turned out to have accumulated insufficient pension rights.

[29] This is an example of public and supplementary private insurance yielding excessive insurance and moral hazard because the private insurer fails to internalise the adverse external effects of additional moral hazard on the public insurer (see Pauly (1974)).

[30] Centrum voor Verzekeringsstatistiek (1998).

[31] Sufficient income during old age was defined as at least 70 percent of income at the age of 65.

Part IV: Personal assessment

IV.1 Assessment

The current three-pillar structure in the Netherlands is generally viewed as a good framework for pension insurance. An important reason for adopting a mix of pension systems is to diversify macroeconomic risks. Indeed, workers should not put all their eggs in one basket to avoid excessive exposure to the substantial political, investment, and human capital risks over a long time horizon.

The system has been quite successful in providing a pension. Currently, about 90 percent[32] of the employees accumulate occupational pension rights on top of the public base pension. The pension benefit varies over singles, one-earner households and two-earner households, but is typically quite high, especially in after-tax terms (see Table 5).

However, expected future trends may require modifying the current pension system, i.e. the selected mix and the particular features of each of the pillars. The ageing of the population which may, for example, require changes in the pay-as-you-go pensions provided by the public sector and demand a higher effective retirement age. Also, the more heterogeneous population, individualisation, and more flexible labour markets may lead to a demand for more flexibility in of collective insurance schemes. Below, we elaborate on the effects of ageing and the reform options that are currently in discussion.

IV.2 Ageing

Table 11 shows that the dependency ratio (measured as the ratio of persons aged 65 and older and persons aged between 20 and 65) is expected to more than double from its current value of 21 percent[33]. Compared to other OECD countries, fertility in the Netherlands stayed at a high level (above 3) until 1965 but then dropped rapidly during the next decade to 1.66 in 1975. As a direct consequence, the Dutch population is relatively young at the moment but will age more rapidly than the population in most other OECD countries during the first half of the 21st century. The labour force is ageing fast at the moment as the babyboom generation is entering the 50-64 age group. The rise in the population share of the elderly aged 65 and over will accelerate around 2010. This population share will peak around 2040.

Labour-force participation

The demographic factors that cause ageing provide some offsetting effects on the economic dependency ratio by raising labour supply. In particular, lower fertility tends to raise labour-force participation rate of women. At the same time, increased life expectancy should allow for a rise in the effective retirement age. Also market forces are likely to alleviate the negative effects of ageing on labour supply as higher wages induced by labour scarcity raise both labour productivity growth and labour supply.

Various CPB scenarios project increasing labour-force participation in the period up to 2020. In particular, the participation rate of women between 20 and 65 years, which has already risen rapidly during the past two decades, is expected to continue to rise further from about 50 percent in 1995 to about 70 percent in 2020. Indeed, whereas at present two-earner households are about as common as a household with a breadwinner and a non-participating partner, the two-earner family will become more important in the next century. At the same time, the share of single-person households will rise from 30% at the moment to about 40% in 2020. This boosts spending on public pensions as single elderly collect a higher public pension than elderly in two-person households do.

[32] Nelissen et al. (2000, p.57).

[33] This projection is based on the Medium variant in de Beer (1997). In the Low and the High variant the dependency rate rises to about 44 and 49, respectively.

Table 11. Demographic projections

	total population (million)	65+ year (million)	dependency ratio (65+ / 20 - 64)
1995	15.5	2.0	21.2
2000	15.8	2.2	21.9
2010	16.5	2.5	24.3
2020	16.9	3.2	31.6
2030	17.2	3.9	40.1
2040	17.2	4.3	46.3
2050	16.9	4.0	43.3

Source: de Beer (1997)

[a] The numbers in the table refer to the so-called Medium variant. De Beer (1997) also contains projections for a High and a Low variant.

Public pensions

Various projections for the costs of public pensions are contained in Table 12. Reflecting the development of the dependency ratio, these costs start to rise rapidly in 2010 and reach a peak in 2040. However, the costs of the public pensions (in terms of GDP) do not double between 1995 and 2040 as could have been expected from the doubling of the dependency rate during this period. This is due to three main factors. First, the increase in labour-force participation mitigates the rise in the economic dependency ratio. Second, as explained in subsection I.2, the public pension benefit lags the average standard of living because the pension benefit is linked to contractual rather than actual wages.[34] Third, the public pension is linked to the after-tax minimum wage. Accordingly, by cutting the after-tax wage, a higher pension premium decreases the costs of public pensions.

Table 12. Costs of public pensions, projections[a]

	1995	2010	2020	2030	2040	2050
base scenario	5.3	5.7	6.8	7.8	8.1	7.1
high participation[b]	5.3	5.5	6.4	7.2	7.4	6.3
no incidental wage increases[c]	5.3	5.9	7.2	8.4	8.9	8.0
less ageing[d]	5.3	5.6	6.5	7.3	7.4	6.3

Source: CPB (1996b)

[a] As a percentage of GDP.

[b] Participation rate (in persons) increases to 66.3% instead of 56.3% in 2060.

[c] Incidental wage increase of 0% instead of 0.25% per year.

[d] Dependency ratio increases to 28.0% instead of 33.0% in 2060.

Occupational pensions

Ageing affects also funded occupational schemes, albeit more indirectly than public pay-as-you go schemes. In particular, ageing makes the premiums levied by funded defined-benefit systems more sensitive to changes in the rate of return because it reduces the premium base compared to the insured pension rights. Moreover, ageing may depress the rate of return and raise wage growth as it makes labour more scarce compared to capital. Table 13

[34] As a result, projections for the costs of public pensions are rather sensitive to assumptions about incidental wage growth. At present, CPB expects this growth to be 0.25% a year.

shows that a permanent fall in the rate of return of 1 percentage point raises the required premium costs of the occupational pensions by about 4 percent of gross wages.[35]

Table 13. Costs of occupational pensions, projections[a]

	2010	2030	2050
real rate of return 4.3%	9.4	9.7	9.4
real rate of return 3.3%	13.0	14.7	13.7
real rate of return 2.3%	15.9	18.5	18.1

Source: Tamerus (1997)

[a] As a percentage of total gross wages

IV.3 Current reform options for public pensions

The impact of ageing on the public pension system can be addressed either by strengthening the financing of the public pension through broadening the contribution base or by reducing the generosity of the benefit through the adoption a less generous indexation method, a rise in the statutory retirement age, or a cut in benefits for single-person households.

Broadening the contribution base

To broaden the contribution base, also those older than 65 could be required to contribute to the public pension system by financing the public system entirely out of general tax revenues. Shifting the burden of financing the public pension system to the more affluent elderly[36] reduces the burden of the public pension system on workers, thereby alleviating labour-market distortions. In order to reduce the burden on existing retirees who have not been able to anticipate the contributions for the public pensions, the contributions by the elderly may have to be phased in gradually. As noted in section I.2, already in 1997 a first step in this direction was set by fixing the pension premium.

Indexation

The indexation mechanism promises to remain a controversial issue. Some have proposed to link public benefit to prices rather than contractual wages (Nyfer (1996)). This would gradually privatise pension provision as rising real wages would reduce the value of the public pension relative to the average standard of living. Others, in contrast, favour to raise benefits not only with contractual wages but also the incidental wage. This would maintain the relative standard of living of the elderly and contain the costs of supplementary pensions that have build in the public pension (Jansweijer (1996)).

[35]The growth of real wages is another important determinant of the costs of occupational defined-benefit pensions because benefits are directly linked to wages. In the Dutch institutional setting, the growth of incidental wages is a particularly important determinant of the costs of occupational pensions because incidental wage growth causes the public pension to lag average wages. This raises the costs of these latter scheme to the extent that the public pension is build into the occupation pension schemes. Hence, high incidental wage growth contains the costs of the public pension but boosts the costs of the private pensions.

[36] The less affluent elderly who rely mainly on the public pension as a source of income would not be hurt by this measure because the public pension benefit is linked to the after-tax minimum wage.

Statutory retirement age
A higher statutory retirement age is generally not seen as an attractive option in the short run. Before raising the statutory retirement age, the excessive retirement incentives in early retirement schemes (see section II.5) should be addressed. In the longer run, however, a higher statutory retirement age may be called for, especially if the ageing of the labour force causes labour to become increasingly scarce. Some have argued in favour of the government early announcing an increase in the statutory retirement age so that current workers can anticipate this by investing more in either human or financial capital (see e.g., Don (1996)).

Supplement for single-person households
In order to reduce the possibilities for fraud in an increasingly individualised society, it has been proposed to abolish the differentiation of the pension benefit across different household sizes (see, e.g., de Vries (1997)). This proposal, would either raise the costs of public pensions (if the public benefit was set close to the current level for single-person households) or reduce the living standard of single-person households who are often in greatest need of the public pension (if the public benefit was set close to the current level for two-persons households).[37]

IV.4 Current reform options for occupational pensions

Reducing the collective part of old-age insurance for the middle- and higher incomes
The previous government favoured a move away from final-pay to average-pay schemes to cut labour costs by reducing the ambition level of collective pensions. Indeed, in recent years many final-pay schemes were replaced by average-pay schemes. The mandatory, collective level of pension insurance is, however, still quite high in the Netherlands. As tastes have become more heterogeneous and the aspiration level has increased in after-tax terms, some workers may have become over-insured.[38] This calls for a reduction in the collective part of old-age insurance for the middle- and higher incomes as the earners of these incomes are typically better able to deal with old-age risks. Indeed, we observe an increase in the share of pension funds that offer a mix of defined-benefit and defined-contribution schemes (see section II.1). Also, in this connection, more possibilities for firms and individuals to opt out of industry-wide pension funds are sometimes discussed. However, a wholesale shift from occupational defined-benefit schemes to defined-contribution schemes does not attract much support in the Netherlands (see section II.5).

The franchise
Most occupational schemes employ the franchise (discussed in section II.4) to take into account the public pension in determining pension rights. More and more pension funds no longer directly link the franchise to the public pension, thereby shifting the political risk of lower public benefits to workers.

As documented in section II.4, the franchise in most occupational pension plans is linked to a public pension for a two-person household. It implies that two-earner households and singles do not reach the aspiration level of 70% of the final wage. To do more justice to the increasing importance of two-earner households, many favour a lower franchise.[39]

Flexibility
The trend involving a more heterogeneous population with diverse tastes and needs, the more flexible labour market, and the higher labour-force participation of women requires more flexibility in collective insurance schemes through occupational defined-benefit

[37] If the social minimum for social assistance was not adjusted in the same way, many single-person households would call on social assistance.

[38] The fact that many elderly save substantial parts of their incomes provides evidence for overinsurance.

[39] Proposals for a lower franchise are often combined with cost cutting measures such as a lower rate of accumulation of pension rights or lower survivor benefits.

schemes. For example, many schemes now include a choice between survivor benefits or higher pension benefits.[40] Also, many schemes allow for a gradual decrease in working time before the age of 65 without disadvantageous effects on the pension benefit. In order to still allow for the accumulation of sufficient pension rights, many schemes lowered the age at which employees start to accumulate. Currently, a new Pensions and Savings Act is being designed. Most probably, this act will prescribe that employees start to accumulate pension rights at latest at age 23. The above mentioned reduction of the ambition level of course leaves more discretion tot the individual in personal pension plans of the defined contribution type. Indeed, the third pillar of pension insurance, which is currently quite small in the Netherlands, is likely to gain in importance in the future.

[40] There is no special regulation concerning old age security of surviving spouses. They are, of course, entitled to the normal public pension benefit.

Part V

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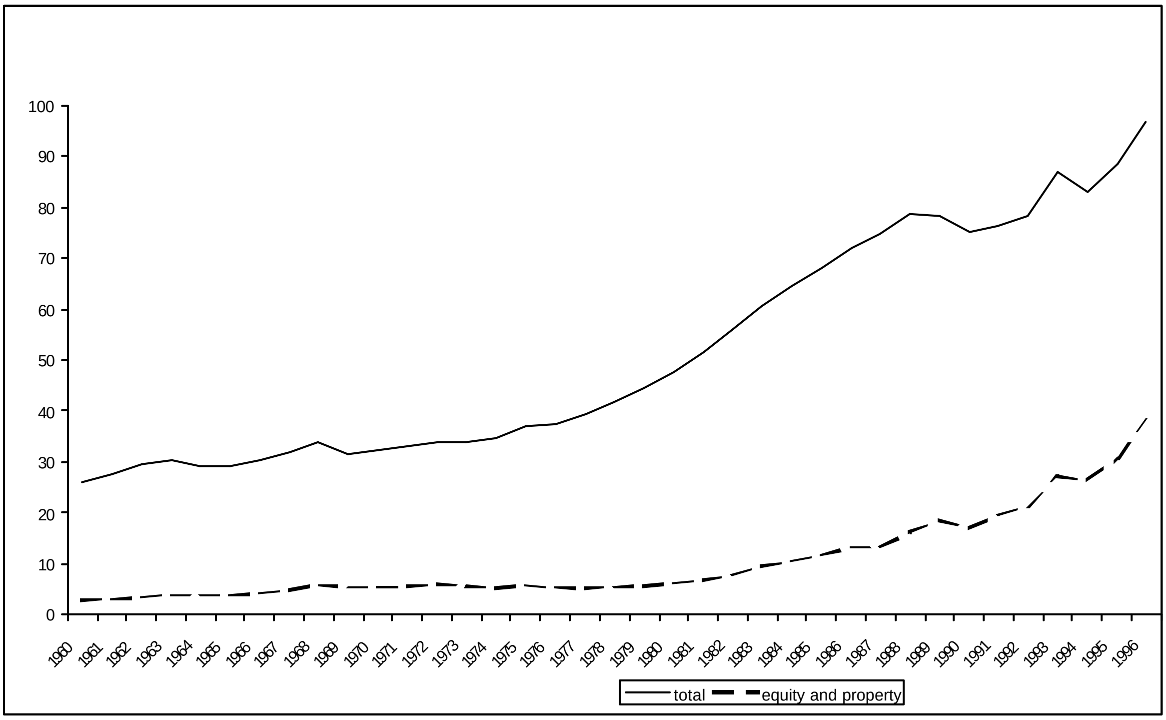
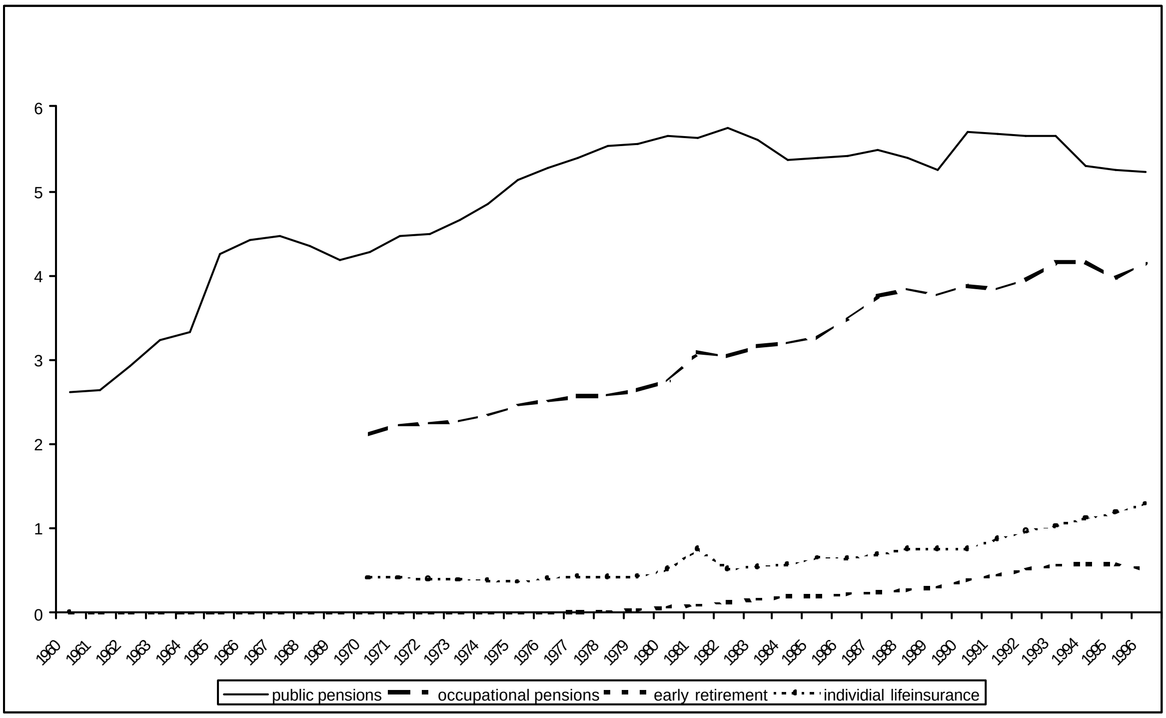
Figure 1. The portfolio of the pension funds as a percentage of GDP, 1960-1996[a]



Source: Statistics Netherlands

[a] Excluding the contracts that have been reinsured by insurance companies.

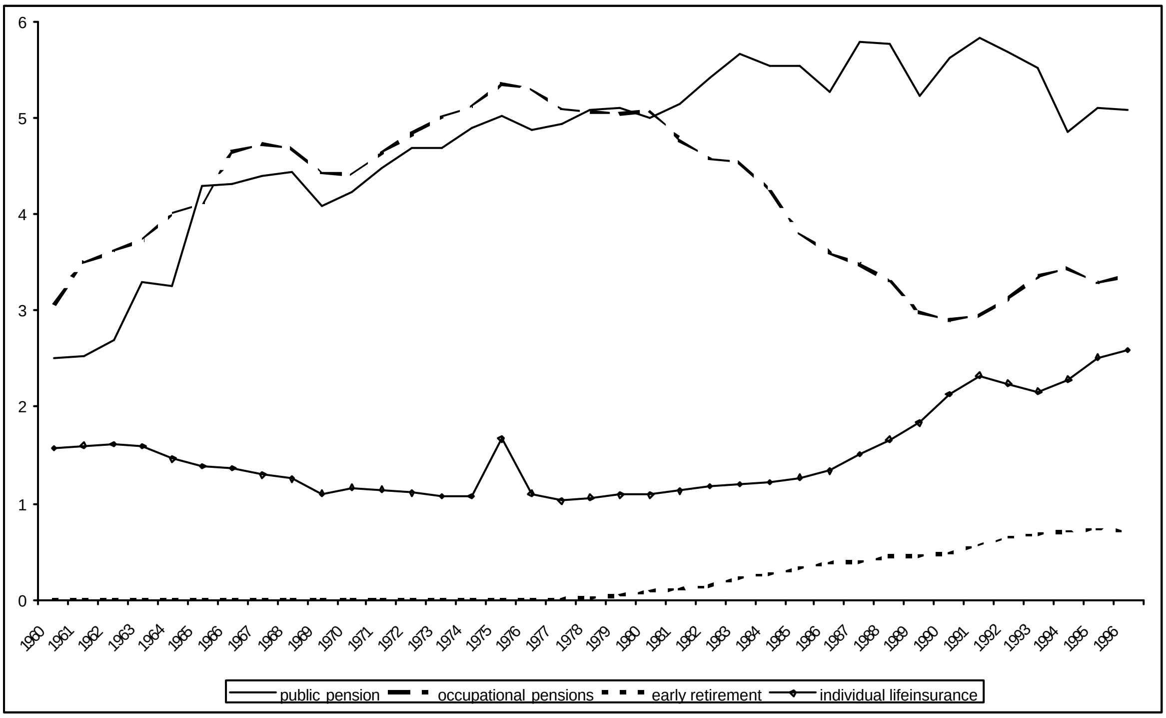
Figure 2. Pension benefits as percentage of GDP, 1960-1996[a]



Source: CPB, Statistics Netherlands

[a] No data available on individual life insurance and occupational pensions before 1970.

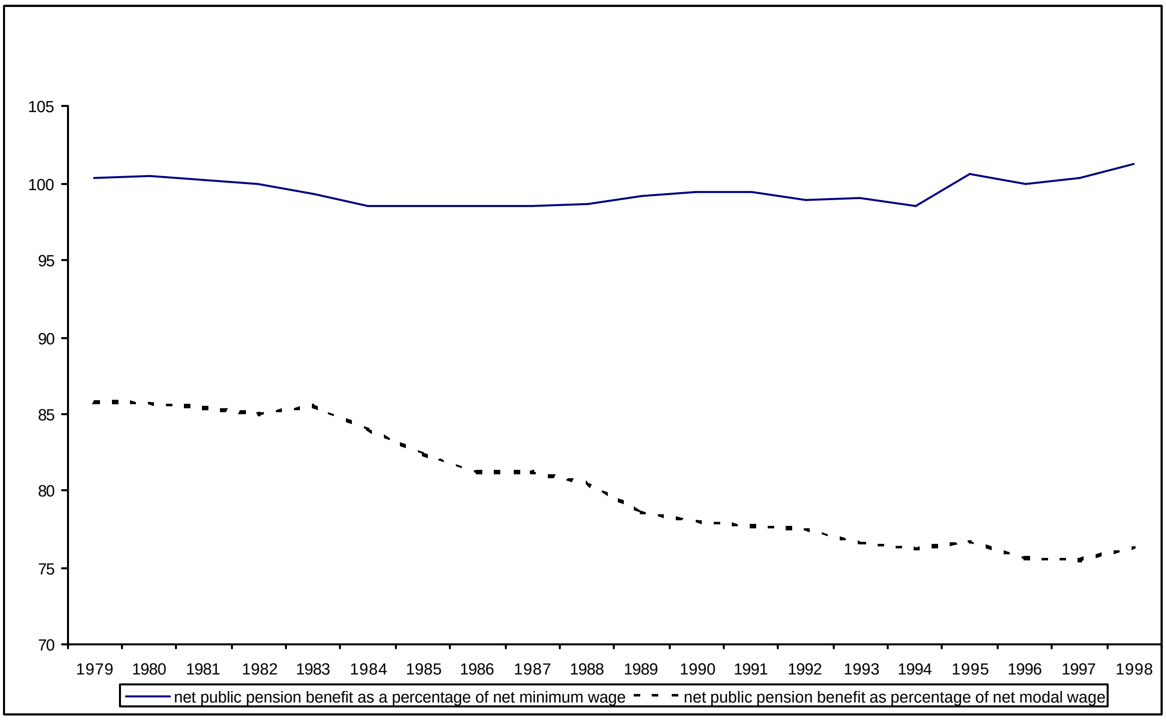
Figure 3. Pension premiums as a percentage of GDP, 1960-1996[a]



Source: Statistics Netherlands

[a] Individual life insurance includes not only annuities but also other life insurance products.

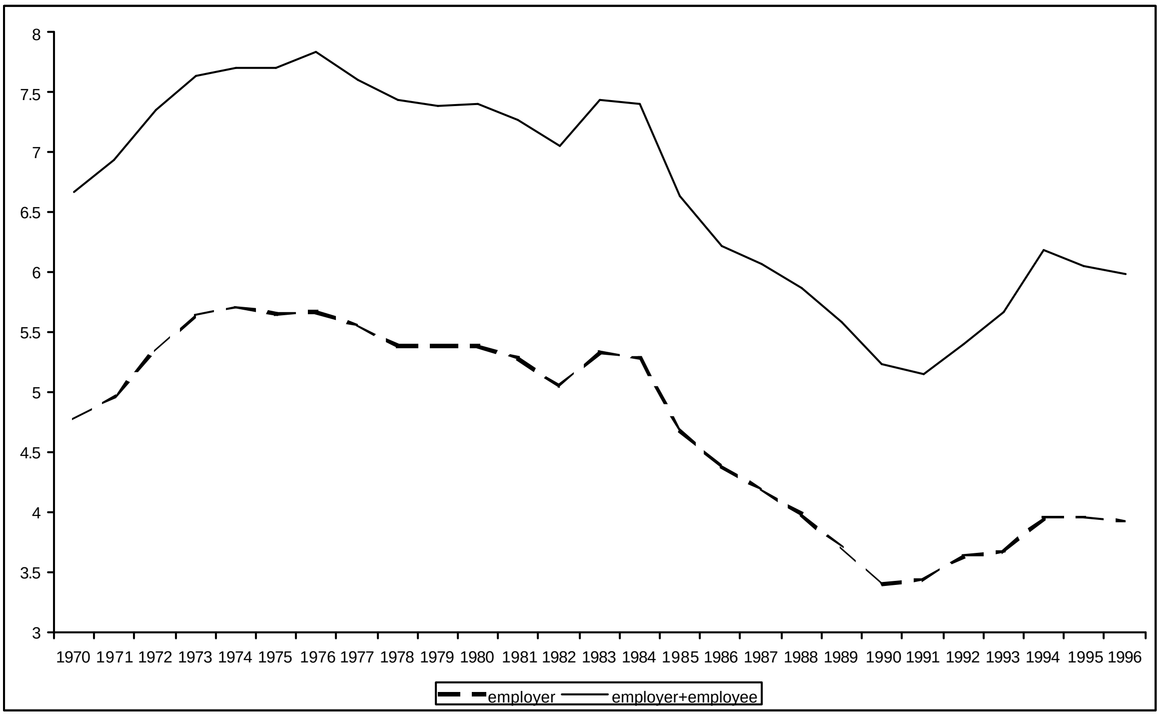
Figure 4. *After-tax replacement rates[a] of the public pension benefit for couples, 1979-1998*



Source: CPB/Ministry of Social Affairs and Employment

[a] The modal wage is approximated as 80% of the average wage.

Figure 5. Premium for occupational pensions as a percentage of gross wages[a], 1970-1998



Source: CPB

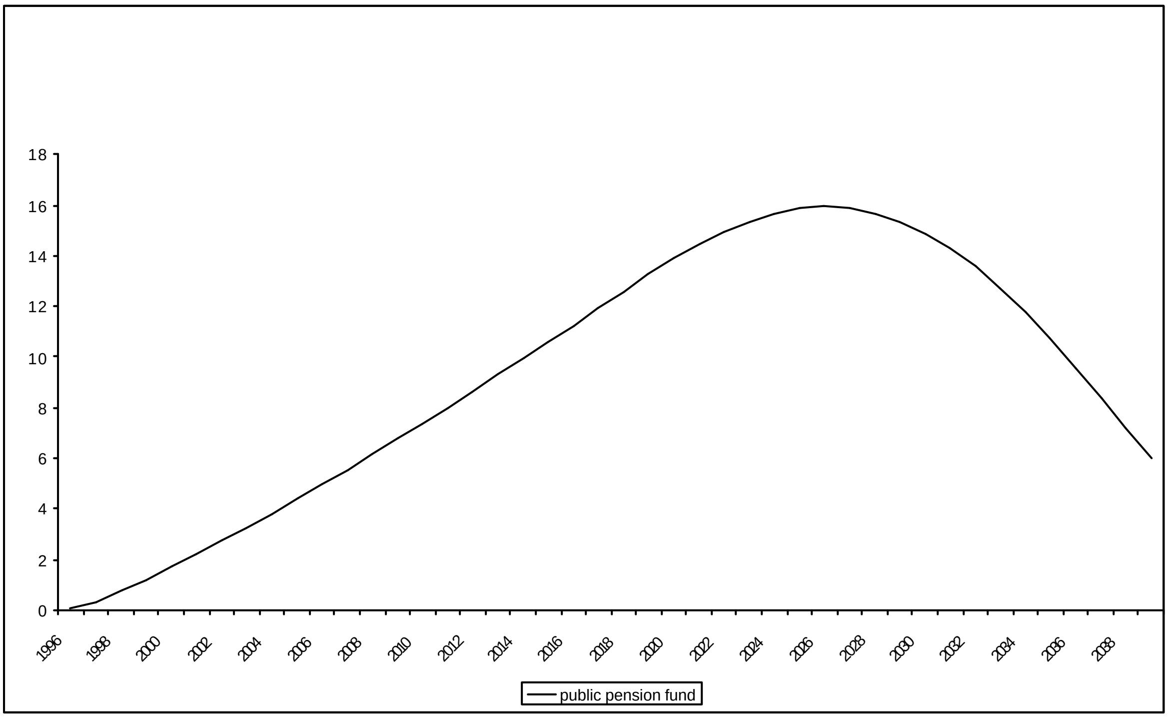
[a] Averaged over all pension funds.

Figure 6. Household savings as percentage of GDP, 1960-1996[a]

Source: Statistics Netherlands

[a] Contractual savings comprises savings trough occupational pensions and individual life insurances .

Figure 7. Projections of the public pension fund as a percentage of GDP, 1996-2040



Source: Ministry of Finance

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