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The fiscal subsidy on pension savings in the Netherlands

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Summary

The Netherlands belongs, with its three pension pillars and its substantial funding, to the leading group of countries in Europe with a solid pension system. But tax facilities for pension savings have become an expensive business for the Dutch government. It is now one of the largest 'tax expenditures'. Through the deduction of pension and annuity contributions the Treasury will lose an estimated $\square$ 9.6 billion in 2003 (2.1 percent of GDP). This is three times as much as in 1990. Balancing the pension contribution deductions, the pension benefits that will be paid out in the future will be subject to taxation. Pension incomes will however be taxed at a relatively low rate and, in addition, the delay in tax payment (investment returns of pension funds are exempt from taxation) provides an interest advantage. Our calculations for the year 2000 show that current taxation on a cash-flow basis means on balance a major loss to the Treasury (compared to the benchmark). At a relatively low real return on the pension capital, the fiscal subsidy in terms of net present value comes to $\square$ 7.7 billion (1.9 percent of the GDP). For the year 2003 we estimate an even higher amount.

Keywords

pensions and annuities, tax treatment of pension savings, revenue loss to the Treasury

JEL-classification: H24, H55, and J32

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The fiscal subsidy on pension savings in the Netherlands

*K. Caminada and K.P. Goudswaard **

The Netherlands belongs, with its three pension pillars and its sound funding, to the leading group of countries in Europe with a solid pension system (National Pension Debate Committee, 2002, p. 13). Ninety-one percent of employees build up a supplementary pension through their employer, in addition to a basic old-age pension scheme (OAP). If too little is built up, an annuity policy can be used to supplement the pension income shortfall on an individual basis. Because a large part of the pensions is funded, the Netherlands has a relatively large pension capital.

In the Netherlands pensions are the subject of great interest. Various studies have reviewed the ability of the pension system to survive in view of the increasing aging of the population (CPB, 2000). Are the supplementary pensions still safe now that the degree of coverage of pension funds has decreased as a result of the strong decline in share prices (National Pension Debate Committee, 2002; Van Ewijk and Van de Ven, 2003)?

An important aspect of pension financing is its tax treatment. Like several other countries, the Netherlands has a “fiscal subsidy” on pension savings, associated with the application of the cash-flow treatment of pensions under the personal income tax. Pension contributions and capital income of pension funds are tax-exempt, and pension benefits are taxed). That form of tax treatment can be described as EET, with E denoting an exemption or relief from tax and T denoting a point at which tax is payable. Tax treatment of pension saving can also have other forms. For example, under a comprehensive income tax system (TTE) all income is taxed when it is received, so savings are from taxed income, and interest income from savings is taxed, but proceeds of savings do not suffer further tax.¹

In a tax system that is neither progressive nor regressive, an expenditure tax produces an equivalent outcome to a comprehensive income tax, although the timing and the pattern of tax payments differ between the two. Current Dutch tax treatment implies fiscal benefits, because the elderly, aged 65 and over, are taxed at a relatively low tax rate (that is, they are exempted from paying public pension contributions). Moreover, an additional fiscal benefit is involved because the government delays the collection of the income tax until retirement age.

The purpose of this article is to provide an indication of the structural (budgetary) cost implications of the different pension tax treatments. The favourable tax treatment in the Netherlands is related to the application of a specified form of EET instead of applying TTE. Theoretical literature does not point at an appropriate tax treatment for pension savings (benchmark). So, given the lack of economic coherence, the only way the budgetary costs of different tax regimes can be compared is by full present-value or accumulated-value calculations (*cf.* Booth and Cooper, 2002, p. 84). We consider a specified form of a comprehensive income tax system as an appropriate benchmark (see

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section IV). Using that benchmark, the (budgetary) cost of the current tax treatment of pension savings in the Netherlands can be quantified. We first discuss several features of the Dutch pension system in the international perspective and of the tax treatment of pension savings. Also, we quantify the direct revenue loss through the deduction of pension contributions and estimate the size of the fiscal claim on future pension benefits.

I. Several Features of the Dutch Pension System²

There are three pillars of the Dutch pension system: (1) the basic old-age pension scheme or AOW (OAP); (2) the supplementary pension scheme arranged by employers and employees; and (3) the individual buildup or addition to old-age provision.

- ③ The basic pension scheme provides, through statutory national insurance, a flat pension benefit for all residents at a level related to the level of the statutory minimum income level. Contributions for public pensions depend on taxable income;. Only those younger than 65 pay the premium. The basic pension is financed through an unfunded pay-as-you-go (PAYG) scheme. Because the current working generation provides the contributions for the current OAP benefit payments (with the expectation that younger generations will do the same for them later), the solidarity between generations plays a major role in the basic pension scheme. Nearly every OECD country has a public basic pension scheme financed as an unfunded scheme. In some countries the public PAYG system provides a minimum standard of living in old age or a means-tested benefit (the Netherlands, Ireland, the United Kingdom, Denmark, and Australia). Most other countries have a wage-linked arrangement.
- ③ In the Netherlands 91 percent of employees have, on attaining the age of 65, a supplementary pension insurance in addition to the OAP scheme. That supplementary pension insurance is financed through a funded system. Anyone who is a member of a pension fund is actually saving for his or her own pension or equivalent. Contributions to occupational pension schemes are typically shared between employers and employees. Premiums are usually levied on wage income above a certain level of income. Below that level of income, employees are covered by the OAP. Participants usually build up their supplementary pension over a 40-year period. On retirement, they receive a pension for an average of 15 years. In Europe the Netherlands has, along with the United Kingdom, Denmark and Sweden, funded a relatively large proportion of future pension claims with capital.³ Those countries seem, because of that, to be better prepared for an increase in the

1 The United Kingdom's Inland Revenue states TTE as an appropriate benchmark for the calculation of tax expenditures; see Booth and Cooper (2002, p. 84).

2 This section uses material from the National Pension Debate Committee (2002, p. 14-34), the Ministry of Social Affairs and Employment (2000), and Bovenberg (2003). For a very detailed comparison of pension systems in Europe, please refer to the joint report of the Commission and the Council of the European Communities (2002).

3 In Sweden (90 percent) and Denmark (80 percent), and to a lesser extent the United Kingdom (48 percent), a relatively large proportion of employees participate in a pension scheme.

aging population than other countries.⁴ Countries such as Belgium, Germany and Italy make no use of funding.

- ③ In the Netherlands about 56 percent of the supplementary pensions in the second pillar is based on a final-pay pension scheme in which the amount of the gross pension benefit depends on the gross wage at the end of the career. A so-called average-pay pension scheme is seen less often (33 percent), in which the amount of the gross pension benefit depends on the average gross wage during the career.⁵ The average-pay pension scheme is, however, gaining ground partly as a result of the financial problems of the pension funds.
- ③ Wage-linked pension systems dominate in most European countries – that is, defined benefits. In Germany, the Netherlands, the United Kingdom, and Japan more than 95 percent of retirees in the second pillar have a form of wage-linked pension benefit. In the United States, on the other hand, nearly half of the pensions have the features of defined contribution. In the defined contribution system, the result is not fixed, but the pension scheme determines the amount or the percentage of wages employers and employees deposit annually in the pension fund as a contribution. In that case the amounts to be deposited are determined. The contribution payment and the investment results obtained in later years determine how much pension capital will be available for the participants in due course. The final pension result is therefore uncertain. There are also combinations of defined benefits and defined contributions in, among other places, Belgium.
- ③ The third pillar forms the final piece of the pension system. The third pillar of pension insurance includes voluntary pension insurance bought by individuals. Personal pensions are of the defined-contribution type and are typically supplied by life insurance companies. In the third pillar, everyone has the opportunity to enter into an individual pension insurance scheme with an insurer. The payments from that insurance (annuities) may be used as a supplement to the basic pension or as a supplementary company pension.

Two reasons can be given for why the second pillar plays a relatively major role in the Dutch pension system. First, from the corporate viewpoint, in the Netherlands the employer and the employee often agree on an additional collective pension. Second, it may be assumed that the strong fiscal stimulus to build up an additional pension via the second (and third) pillars has contributed to a large second pillar.

The Tax Treatment of Pensions Act, better known as the Witteveen Framework, has been effective since 1 July 1999. The Act encompasses the framework for the income tax treatment of OAP savings. The framework assumes a maximum pension buildup of 2 percent per year in a final-pay pension scheme (2.25 percent for an average-pay pension scheme). A pension benefit of 70 percent of the final wage can be built up over a period of 35 years. The total pension buildup has been maximised at 100 percent of the final wage. The earliest age at which the pension may begin is 60, the so-called pivotal age. A separate tax framework applies for early retirement savings.

⁴ See also the report by the National Pension Debate Committee (2002).

⁵ Figures from Van Ewijk and Van de Ven (2003).

The pension buildup in the third pillar, annuities, traditionally receives fiscal support, although the annuity regime has become less generous in recent years. Up to a ceiling, annuities benefit from the same preferential tax treatment as occupational pension savings. Those who lack sufficient pension rights (that is, the right to receive a certain amount of pension at retirement) may deduct contributions from their taxes to supplement it. There is usually a lack of pension rights when the pension (including the OAP) is lower than 70 percent of the final wage. The Income Tax Act of 2001 has not changed that, in principle, although the amounts of pension contributions that can be deducted from income have been limited. Until recently, there was a basic deduction (also in the new taxation system) of € 1,000 for annuity premiums which were not checked against a possible lack of pension rights. That basic deduction was already much less than the so-called first tranche in the old tax system (€ 2,804 in 2000) for which there was also no check. However, since 2003 the basic annuity deduction facility has been abolished and only those with a lack in pension rights may use the fiscal facility to supplement their income. That obviously makes the implementation of the Income Tax Act for retirement purposes more difficult, because a lack of pension rights must always be demonstrated to the tax authorities. Moreover, the insight of many people into their pension buildup or lack of pension rights remains patchy.

II Deductibility of Pension Contributions and Budgetary Claim

Pension buildup via the second and third pillars has quickly become popular in the Netherlands. Table 1 contains a summary of the development of the size of the annuity contribution deduction over 1990-2000. We used Dutch income statistics, which contain extensive information on the distribution of annuity contributions across income groups.⁶ That makes it possible to classify holders of annuities by tax bracket and to determine the reduction in tax levies and the direct budgetary effect of the annuity contribution deduction - in other words, the revenue loss to the Treasury in that year.⁷ To do that, for each user of the deduction we multiply the relevant marginal tax rate by the deduction applied and aggregate that across the users.⁸ The tax reduction is calculated on the basis of the tax regime for 1990-2000 (tax rates, tax bracket, thresholds, and so forth).

Unfortunately, no figures are available on the distribution of pension contributions because pension contributions are not visible on the tax return and are not in the Dutch incomes statistics. We estimated a marginal effective tax rate for the deduction of pension contributions, which lies 2 points lower than was calculated for annuity contributions.⁹

6 The Income Statistics are from an extensive income panel survey of Statistics Netherlands, which covers 217,000 income recipients. Sample data have been combined with data from the tax and social security administrations. As a result, the survey contains the personal distribution of incomes (pretax, taxable and after-tax), the distribution of tax liabilities and almost all deductions for several socio-economic groups. The panel data are now available for a number of years up to 2000.

7 The analysis is limited to income tax; corporate tax (the profit of insurers on annuity policies) is not taken into considered. No account is taken either of the fact that pension and annuity payments will be taxed in the future (this is addressed in sections III and IV).

8 An account has been taken in these calculations of the so-called threshold effect: taxpayers may go into a lower tax bracket because of the use of the tax deduction. On this see Caminada and Goudswaard (1996).

9 This estimation is based on our previous empirical work. *I.e.* we distributed the pension contributions to the relevant socio-economic groups using relevant computation rules; see for details Caminada and Goudswaard (2001a and 2001b); see also Caminada and Goudswaard (1996).

Table 1 The Development of Contributions for Annuities and Pensions, 1990-2003

	1990	1992	1995	1997	2000	2001*	2003*
Deducted contributions x billions of euros							
Pensions	4.9	6.2	7.7	8.1	10.9	12.8	18.8
Annuities	1.5	1.3	2.0	2.7	4.0	4.0	3.3
Total	6.4	7.5	9.7	10.8	14.9	16.8	22.1
Marginal effective tax rate							
Deduction of pension contributions	49.6	51.6	49.9	46.9	44.6	42.6	43.2
Deduction of annuities contributions	51.7	53.7	52.0	49.0	46.7	44.7	45.3
Weighted average	50.0	52.0	50.0	47.5	45.1	43.1	43.5
Budgetary effect of deductions x billions of euros							
Pension	2.4	3.2	3.8	3.8	4.9	5.5	8.1
Annuities	0.8	0.7	1.0	1.3	1.9	1.8	1.5
Total	3.2	3.9	4.8	5.1	6.7	7.2	9.6
Budgetary effect of deductions as % of GDP							
Pension	0.98%	1.20%	1.27%	1.18%	1.21%	1.27%	1.73%
Annuities	0.31%	0.27%	0.33%	0.42%	0.46%	0.42%	0.32%
Total	1.29%	1.47%	1.60%	1.60%	1.67%	1.69%	2.05%

explanatory note and sources:

Pension contributions 1990-2000: Pension & Insurance Supervisory Board (2003). The figures relate to the supplementary old age pension in the second pillar in as far as a pension fund is an intermediary.

Annuity contributions 1990-2000: Dutch Income Statistics, Statline 1990-2000 (CBS IPO).

Estimate 2001 and 2003: own calculations on the basis of realised figures for 2000, a lower expected annuity contribution deduction and higher pension contribution in accordance with the CEP 2003 (employer's part) of CPB Netherlands Bureau of Economic Policy Analysis. To determine the marginal effective rate for the contributions calculations were made with the rates and tax brackets for 2001 and 2003.

A. Development of Pension Contributions 1990-2000

The amount of pension contributions more than doubled from 1990 to 2000. In 1990 employers and employees deposited $\square$ 4.9 billion (2.0 percent of the GDP) in contributions for supplementary pensions rising to $\square$ 10.9 billions (2.7 percent of the GDP) in 2000. The tax reduction – the direct budgetary effect - also rose in that period, albeit less rapidly as the marginal tax rates declined.

B. Development of annuity contributions 1990-2000

From 1990 to 2000 the number of taxpayers with annuity contribution deductions has risen rapidly, especially since 1992. At that time 338,000 people deducted annuity contributions for their income tax. In 1997 the limit of 1 million taxpayers was passed, and in 2000 there were 1.486 million. The total amount of deductions has tripled over the last 10 years, from $\square$ 1.3 billion in 1990 to $\square$ 4.0 billion in 2000.

The revenue loss to the Treasury due to the deductions of the annuity contributions in 1990 amounts to about $\square$ 0.8 billion (0.3 percent of the GDP) rising to about $\square$ 1.9 billion (0.5

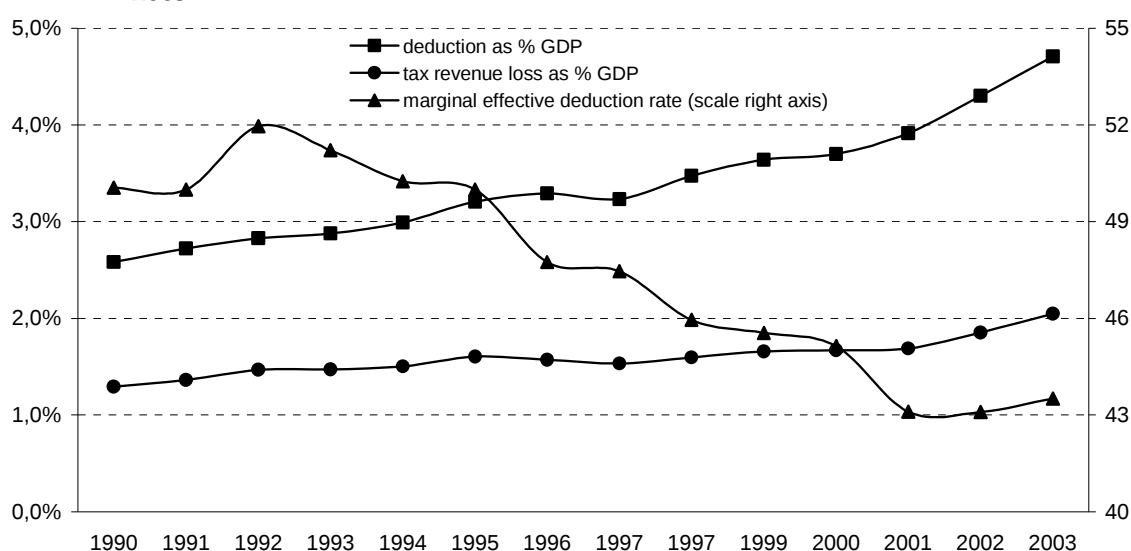
percent of the GDP) in 2000. The weighted deduction rate for annuity contributions decreased in that period from 51.7 percent in 1990 to 46.7 percent in 2000.¹⁰

C. Estimate for 2001 and 2003

We have estimated the pension and annuity contribution deductions and their direct budgetary impact for 2001 and 2003. Through the introduction of the Income Tax Act of 2001, marginal tax rates have decreased. Partially, that change has brought about a decrease in the budgetary loss. Also, the annuity regime has become less generous, which shows in the lower contribution deduction for 2003 compared to 2000. However, the contributions for supplementary pensions have risen sharply since 2000.

On balance, the rise in pension contributions is greater and the budgetary loss due to pension contribution deduction is rising. Our estimate for 2003 shows a deduction of € 22.1 billion euros (4.7 percent of the GDP), which is settled against a weighted tax rate of 43.5 percent. That implies a direct budgetary loss of € 9.6 billion euros (2.0 percent of the GDP).

Figure 1 Summary of the development of total pension contribution deductions, 1990-2003



explanatory note and sources: see under Table 1

¹⁰ Further analysis shows that medium and higher incomes - in particular those in the sixth, seventh, eighth and ninth income decile - increasingly have made use of annuities. In this way the deductibility (shares) have become less unequally distributed across income groups. Thus, the share of the top 10 percent income earners in the total deduction has decreased from 76 percent in 1990 to 52 percent in 2000. Because of this, the weighted marginal effective settlement rate for annuity contributions deductions decreased in the period of 1990 to 2000. This reduction was, by the way, mitigated a little, because in this period fewer and fewer taxpayers were taxed at the top rate.

III Tax Claim on Pension Benefits

In the previous section, the direct budgetary effect of the deduction of pension contributions and annuity contributions was determined. The Dutch tax treatment of pensions on a cash-flow basis under the personal income tax, however, implies that pensions that are supported with those contributions and the realised investment returns will be taxed in due course under the EET form. A sizeable amount of capital has been accumulated with pension funds and life insurers that will be taxed only when it is paid out as benefits. In other words, the fiscal authority has a sizeable claim on future pension payments, which have not yet been realised. The total amount cannot be established. However, an attempt may be made to establish what the future tax claim of the government will be on recently deducted pension and annuity contributions.

We estimate the size of that fiscal claim on the basis of the supplementary pension contributions and annuity contribution deductions that were made in the year 2000 - $\square$ 10.9 billion and $\square$ 4.0 billion, respectively (see Table 1). Pension contracts and annuities have varying periods. It is unknown over which period of time the contributions paid in 2000 will be paid out as benefits. The calculation is done using different average durations. All amounts for the years have been made comparable in terms of net present values using a discount rate of 3 percent, equal to the statutory discount rate for annuities.

To illustrate the method, we first assume an interest capital growth of 5 percent per year. In that event, measured over 15 years, the capital deposited in 2000 will have grown to $\square$ 31.0 billion (no account has been taken of management costs and so forth). The pension capital is paid to the insured through pensions and annuity payments. In our calculations, we initially use 12-year terms of $\square$ 2.6 billion, because as the average age on death is 77 and benefits starts at the age of 65. At an average tax rate of 25 percent on supplementary pension payments, $\square$ 7.7 billion will be due in tax.¹¹ In euros for 2000 (in terms of net present value), a tax claim of $\square$ 4.2 billion is involved.

That result is obviously influenced by the assumptions made for the investment return on pension savings and the periods of time. Table 2 shows to what extent the future tax claim of the government is sensitive to the assumptions made.

11 The CPB Netherlands Bureau of Economic Policy Analysis also uses a tax rate of 25 percent. *See* Besseling and Bovenberg (1998, p. 8).

Table 2 Tax Claim on Total Pension Contributions Paid in 2000: Sensitivity Analysis

	<i>Investment return</i> 7%	<i>Investment return</i> 5%	<i>Investment return</i> 3%
<i>Period of pension capital growth: 15 years</i>			
<i>number of pension payment periods</i>			
10 years	5.8	4.4	3.3
12 years	5.6	4.2	3.2
14 years	5.5	4.1	3.1
<i>Period of pension capital growth: 22½ years</i>			
<i>number of pension payment periods</i>			
10 years	7.7	5.0	3.3
12 years	7.5	4.9	3.2
14 years	7.3	4.8	3.1
<i>Period of pension capital growth: 30 years</i>			
<i>Number of pension payment periods</i>			
10 years	10.3	5.8	3.3
12 years	10.0	5.7	3.1
14 years	9.7	5.5	3.1

explanatory note:

All amounts x billion euros in net present value so that the amounts relating to the various different years have been made comparable; a discount rate of 3 percent has been used.

source: own calculations

The size of the tax claim appears to be primarily dependent on the actual growth of the pension capital (the investment return), the length of the investment period before the capital deposited in 2000 is due for payment, and, to a much lesser extent, on the number of years during which the pension is paid out as benefits.

IV Revenue Effects Under Different Tax Regimes¹²

In this section we try to indicate of the budgetary cost implication of different tax treatments of pension savings. Theoretical literature does not point at an appropriate tax system for pension savings. We consider a specified form of a comprehensive income tax system (see below) as an appropriate benchmark (*cf.* Booth and Cooper, 2002, p. 84).

A. Tax rule 1 (benchmark)

We compare the costs of tax treatment of pension savings in the Netherlands with a specific comprehensive income tax in which no relief is given for the investment and the proceeds of the investment are taxed, but pension benefits are exempt from tax.

¹² No distinction is made in this article for the legal entity that offers the annuity policies (pension funds or insurance companies). The analysis is consequently limited to income tax; corporation tax has not been taken into account.

B. Tax rule 2 (The Netherlands)

The favourable tax concession from pension savings in the Netherlands (and in other countries) is associated with the application of the cash-flow treatment of pensions under the personal income tax (pension contributions and capital income of pension funds are tax-exempt and pension benefits are taxed). (See Bovenberg (2003).)

We have used of a method of calculation that can be explained as follows.¹³ The pension capital buildup via the second and third pillars consists of two components: pension contribution payments and capital growth. When the benchmark rule applies, each of those two components would be taxed at the time of the buildup. When tax rule 2 is applied, the levy takes place only on the pension benefit payments, which often start over the age of over 65. This means there are two aspects to the fiscal advantage of using the current Dutch tax rule (compared to the benchmark rule):

- the difference in the marginal tax rates from rate progression and because those over 65 pay no OAP contributions under the income tax; and
- the later moment in time of the tax payment.

Table 3 summarises the results of our calculation exercise. The basis is again the amount of pension contributions in 2000 (€ 10.9 billion) and of annuity contributions (€ 4.0 billion), which were deducted. Because the pension contracts and the annuities entered into in 2000 have varying periods of time, the calculation has been made using different durations. After all, it makes quite a difference if a duration of 15 or of 30 years is used for the calculation, because a later tax levy results in an ever-greater interest advantage when tax rule 2 is applied.

We have made several assumptions. We assume, for the sake of simplicity, that the buildup capital will be paid from the age of 65 and the buildup capital will be fully available to the premium payers through pension benefits.¹⁴ The average age on death is 77 years. Pensioners 65 and older have 80 percent of their income in the first or second tax bracket, 15 percent in the third tax bracket, and the rest in the highest tax bracket.¹⁵ This gives a weighted seniors' tax rate of about 25 percent.

The tax due is calculated when applying the benchmark rule and when using the current Dutch tax rule. The structural budgetary effect can be calculated in terms of net present value for application of the current Dutch tax rule and of the benchmark rule. No account is taken of the possible behavioural effects of implementing the benchmark rule. The difference in the tax yield when using the benchmark rule and when using the current Dutch tax rule is called the fiscal subsidy associated with the current Dutch tax rule. Table 3 shows the results of several simulations.

13 Based on the method described in Caminada (2000). Bovenberg and Besseling (1998) performed a similar analysis, but with a different method of calculation.

14 Not all of the contributions paid, by the way, is intended for private pension build-up; part is intended as compensation for costs incurred by the insurer. In addition, when determining the pension payment we assume no further interest accumulation. The reason is that, even when the benchmark rule is applied, the interest growth after the age of 65 would have to be taxed in some way. The liability for tax of the interest growth after the age of 65 is no different whether the benchmark rule or the current Dutch tax rule is applied.

15 This assumption is based on the current distribution of taxable income over tax brackets.

Table 3 Budgetary Effects of Different Tax Treatments of Pension Saving

	investment return 5%		Investment return 3%	
Duration 30 years	<i>Current euros</i>		<i>Current euros</i>	
Build-up capital = benefit payment	64.4		36.2	
- contribution payment	14.9		14.9	
- capital growth	49.5		21.3	
	<i>Current euros</i>	<i>euros in NPV</i>	<i>Current euros</i>	<i>euros in NPV</i>
Tax benchmark rule (1)	29.0	19.6	16.3	12.4
Tax current Dutch tax rule (2)	16.1	5.7	9.0	3.2
Fiscal subsidy current tax rule (1-2)	-	+14.0	-	+9.2
(a) partial effect low senior tax rate	-	+4.6	-	+2.5
(b) partial effect deferral tax payment	-	+9.4	-	+6.7
Duration 22½ years	<i>Current euros</i>		<i>Current euros</i>	
Build-up capital = benefit payment	44.7		29.0	
- contribution payment	14.9		14.9	
- capital growth	29.8		14.1	
	<i>Current euros</i>	<i>euros in NPV</i>	<i>Current euros</i>	<i>euros in NPV</i>
Tax benchmark rule (1)	20.1	15.6	13.1	10.9
Tax current Dutch tax rule (2)	11.2	4.9	7.2	3.2
Fiscal subsidy current tax rule (1-2)	-	+10.7	-	+7.7
(a) partial effect low senior tax rate	-	+3.9	-	+2.5
(b) partial effect deferral tax payment	-	+6.8	-	+5.2
Duration 15 years	<i>Current euros</i>		<i>Current euros</i>	
Build-up capital = benefit payment	31.0		23.2	
- contribution payment	14.9		14.9	
- capital growth	16.1		8.3	
	<i>Current euros</i>	<i>euros in NPV</i>	<i>Current euros</i>	<i>euros in NPV</i>
Tax benchmark rule (1)	14.0	12.1	10.5	9.5
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(b) partial effect deferral tax payment	-	+4.5	-	+3.7

explanatory note:

All amounts x billion euros. Euros in net present value (NPV) so that the amounts relating to the various different years have been made comparable; a discount rate of 3 percent has been used.

source: own calculations

C. Investment Return

At an annual return on the pension capital of 3 percent, the tax paid - in terms of net present value and measured over a period of 30 years - is, when the current Dutch tax rule is applied, □ 3.2 billion and, when the benchmark rule is applied, □ 12.4 billion. The actual tax paid therefore amounts to only 26 percent of what would be owed if the benchmark rule were to be applied. In other words, application of the current tax rule for pensions and annuities gives a fiscal subsidy of □ 9.2 billion in terms of net present value.¹⁶

At a higher investment return the fiscal subsidy would increase further. In an annual 5 percent return on investment, the current tax rule gives a fiscal subsidy of □ 14.0 billion.

D. Duration

It is unknown over what period of time the pension and annuity contributions paid in 2000 will be paid out as benefits. Pension capital can, of course, be built up over a longer period. That will increase the advantage of tax deference (interest benefit). At an investment return of 3 percent the use of the current Dutch tax rule - measured over a 15-year period - gives a subsidy of “only” € 6.0 billion (in terms of net present value) compared to the benchmark rule. A doubling of the duration from 15 to 30 years generates an additional capital growth of € 13.0 billion (€ 21.3 minus € 8.3 billion (current euros)). That capital growth remains untaxed during the buildup period of the pension capital under the current tax regime. Also, the higher annual pension benefit payments from that will be taxed only at a relatively low senior rate. In other words, the fiscal subsidy on pension savings increases when annuities and pension schemes have a longer duration before they start to pay out pension benefits.

E. Partial Effects of Low Senior Rate and Deferral of Tax Payment

The relatively low tax rate for seniors and the deferral of tax payment together generate the fiscal advantage associated with the current Dutch tax rule. In all simulations reported in table 3 the partial effect of the deferral of tax payment gives more weight to the total fiscal subsidy than the lower senior rate. The partial effect of the low senior rate amounts from 27 to 43 percent of the total fiscal subsidy, depending on the investment returns and duration of pension capital buildup assumed. The partial effect of the low senior rates diminishes when annuities and pension schemes have a longer duration before they start to pay out pension benefits.

F. Fiscal subsidy 1990-2000

The calculations for 2000 show that the current Dutch tax rule means, on balance, a major revenue loss to the Treasury (compared to the benchmark). Structurally, the fiscal subsidy on pension savings at an actual return on the pension capital of 3 percent and a duration of 22½ years in net present value terms comes to about € 7.7 billion (1.9 percent GDP).¹⁷ At an annual investment return of 5 percent, the fiscal subsidy on pension savings rises further to € 10.7 billion (2.7 percent GDP).

Figure 2 shows the estimates for all the years in 1990-2000 calculated in the same way as explained above for 2000. The fiscal subsidy rises in the period in question by 24 percent. Using a 3 percent yield, the fiscal subsidy rises from 1.5 to 1.9 percent of the GDP; if a yield of 5 percent is used for the calculation, the fiscal benefit rises from 2.2 percent in 1990 to 2.7 percent of the GDP in 2000.

16 We used a discount rate of 3 percent for calculations. Further research shows that the result is not very sensitive to the discount rate used.

17 Besseling and Bovenberg (1998, p. 14) calculate a fiscal subsidy of 12 billion guilders (€ 5.4 billion), but they calculate slightly lower premiums and lower tax rates. As rule of thumb, they indicate that the fiscal subsidy roughly corresponds to the direct tax benefit of the premium deduction. In other words, the tax claim on the benefits payments is neutralised by not taxing the yield. Our calculation of the fiscal subsidy is somewhat higher than the tax benefit of the premium deduction (€ 7.7 billion against € 6.7 billion), but that result is particularly dependent on the tax rates and the supposed yields and duration.

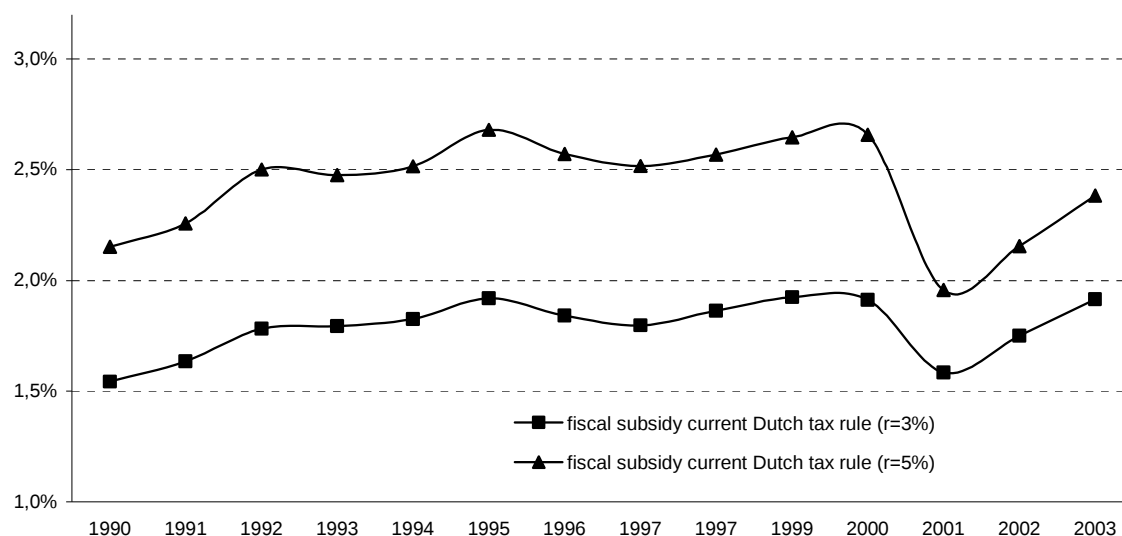
G. Estimates for 2001 - 2003

The analysis thus far refers to the situation for 2000. Under the new Income Tax Act of 2001, accumulation of capital – if the benchmark rule is applied – should be taxed at a lower rate than was the case in 2000.¹⁸ Also, the other relevant tax rates have been reduced. This new tax regime has partially brought about a decrease in the fiscal subsidy on pension savings. On the other hand, the amount of contributions for pensions and annuities have risen sharply since 2000. Although the tax concession on pension savings can, on balance, only be calculated if the realisation figures for the years from 2001 onwards are available, a global estimate of the tax concession on pension savings under the new fiscal regime can be made.

Figure 2 shows the estimates for 2001-2003, calculated in the same way as explained above for 2000. The trend effect of the higher contribution input for pensions in recent years is quantitatively of greater importance than the (one-time) effect of lower rates under the Income Tax of 2001.

In 2003 the fiscal subsidy on pension savings under the current Dutch tax rule amounts to € 9.0 billion (1.9 percent GDP). At an annual investment return of 5 percent, the amount rises to € 10.7 billion (2.4 percent of GDP). See Figure 2.

Figure 2 Fiscal subsidy associated with current Dutch tax rule, 1990-2003 (% GDP)



source: own calculations

¹⁸ A 30 percent tax is levied on income from savings and investments, based on the assumption that a taxable return of 4 percent is made on the net assets, irrespective of the actual returns.

V Conclusion

The tax treatment of pension savings in the Netherlands is cash-flow based and fiscally attractive. The deduction of pension and annuity contributions means a large and rapidly increasing revenue loss to the Treasury. The direct budgetary effect of the total contribution deduction in the second and third pension pillars has risen from $\square$ 3.2 billion (1.3 percent of the GDP) in 1990 to an estimated $\square$ 9.6 billion (2.1 percent of the GDP) in 2003. In view of the rising pension contributions, a further increase may be expected in the coming years.

Balancing the pension contributions deductions, the pensions and annuities paid out as benefits in the future will be subject to taxation. The tax authorities therefore have a claim on future benefit payments. According to our calculations there is, for example, a claim on the contributions paid in the year 2000 of between $\square$ 3 billion and $\square$ 5 billion in terms of net present value.

Pension incomes are usually taxed at a relatively low rate because those over 65 pay no OAP premium. Also, the deferral of tax payment (the investment gains of pension funds are untaxed) provides an interest benefit. A calculation for 2000 shows that the current Dutch tax rule means a major revenue loss to the Treasury compared to a specific form of a comprehensive income tax that we consider the benchmark. Structurally, the fiscal subsidy on pension savings at an annual investment return on the pension capital of 3 percent and a duration of 22½ years comes to about $\square$ 7.7 billion or 1.9 percent GDP (in net present value terms). At an annual investment return of 5 percent, the amount of tax concession rises to 2.7 percent of GDP.

We conclude that fiscal support for pension savings has become an expensive business for the Dutch government. It is now one of the largest 'tax expenditures'. However, for now the abolishment of the current tax treatment of pension saving is not recommended. The already considerable problems in pension funding would be further aggravated. Also, bringing forward the tax revenue in time demands additional discipline from the government for budgetary policy with an ageing population. In the longer term, introduction of other tax rules could, in our judgement, be considered. By scrapping the current rule, a substantial broadening of the tax base could be achieved so that a large decrease in tax rates would be possible. The current (four) tax rates could, for example, - *ceteris paribus* - be lowered in a budgetary neutral fashion by roughly 5 percentage points each.

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