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# A Study of Tax Implications in Pension Funds Management

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## Abstract

Pension funds are an important part of private savings flows, the main supplier of capital to industry and play a large and growing role in the providing retirement incomes in countries with mature funded pension systems. Reforms which increase the emphasis on privately managed, funded pensions must get the tax treatment right. Pension do not exit to increase the national savings or to provide jobs for actuaries, tax payers, accountants, fund managers and regulators. Their purpose is to allow the elderly and disabled to retire from work with dignity. This paper sets out the options for taxing pensions, and the arguments between them.

## Introduction

The tax treatment of pensions is a critical policy choice in the transition from a public sector, pay-as-you-go system to one in which all or part of pensions are provided through individual, privately-managed pension accounts. A generous tax treatment will promote pension saving but may be costly in terms of revenues forgone and encourage tax avoidance. The distributional consequences may also be undesirable if higher income individuals are better able to take advantage of tax reliefs. In countries with mature funded pension systems — such as the Netherlands, Switzerland, the United Kingdom and the United States — pension funds are worth an average of 85 per cent of GDP. Private pensions account for a major part of private-sector savings flows, are an important supplier of capital to industry and play a large and growing role in providing retirement incomes. This study calls for careful treatment to be given to various tax issues in managing pension funds.

## Alternative pension's taxation régimes

Three transactions constitute the process of saving via a funded pension scheme, each of which provides an occasion at which taxation is possible:

- when money is contributed to the fund, normally

- by employers and employees;
- when investment income and capital gains accrue to the fund; and
- when retired scheme members receive benefits.

If pensions are pay-as-you-go financed (i.e., out of current contributions) then the second point at which taxation may occur is lost. Given three points at which it is possible to levy tax, there are eight basic tax combinations. There are examples of many of these in practice, but some are more common and characterize theoretical ideals for the tax system. Table 1 illustrates four hypothetical régimes. The Table shows the net pension resulting from a contribution of 100 made five years before retirement. A proportional tax of 25 per cent and a rate of return on investment of 10 per cent per annum are assumed. The effect of inflation is ignored for the moment.

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The first régime exempts contributions from tax, does not tax fund income, but does tax the pension in payment. This can be termed an exempt, exempt, taxable (EET) system. The second involves saving out of taxed income, no tax on the fund's investment return and tax-free withdrawal of pension benefits, i.e., a TEE system. In this simple framework with a flat tax rate, these two systems are equivalent in effect. They both confer a post-tax rate of return to saving equal to the pre-tax rate of return. They are neutral between consumption now and consumption in retirement. Faced with either régime, an individual earning 100 now can consume now, paying 25 in tax and buying goods worth 75, or they can save, allowing consumption of 120.79 in five years. But 120.79 is simply the amount available for consumption now, increased at a 10 per

cent rate of compound interest, i.e.  $75 \times (1.1)^5$ . This also means these régimes are equitable in their treatment of different individuals: people who save for future consumption pay the same tax as those who consume now. Finally, the two systems also deliver the same net present value of revenues to the government. However, the timing is different: revenues are deferred until retirement under EET, but received immediately under TEE. In practice, the EET and TEE systems may not have the same effect because of the point at which the tax exemption occurs. If an individual pays a different marginal income tax rate while in work from the tax rate paid in retirement, then pre- and post-tax rates of return will no longer be equalized. The individual will benefit more from a régime granting tax relief when his or her marginal rate is higher.

**Table 1. Alternative pensions taxation régimes**

	<i>EET</i>	<i>TEE</i>	<i>TTE</i>	<i>ETT</i>
Contribution	100	100	100	100
Tax	-	25	25	-
Fund	100	75	75	100
Net investment return	61.05	45.79	32.67	43.56
Fund at retirement	161.05	120.79	107.67	143.56
Tax on pension	40.26	-	-	35.89
Net pension	120.79	120.79	107.67	107.67
Net present value of tax	25	33.14	25	33.14

**Note: Assumes 10 per cent annual real return, 25 per cent tax rate and five-year investment term**

The last two systems involve taxation at two points. Under the third régime, savings are made out of taxed income, income earned by the fund is then taxed but benefits received are exempted (TTE). The tax exemption in the last system occurs at the point of contribution, while fund income and benefits are taxable (ETT). The effects of these two systems are the same in this simple model. However, the post-tax rate of return is now below the pre-tax rate (7.5 per cent rather than 10 per cent:  $107.67 = 75 \times (1.075)^5$ ). These two systems result in a disincentive to saving, because consumption now is worth more than consumption in the future. The EET and TEE régimes are equivalent to the 'expenditure tax' of the public finance literature, while the ETT and TTE systems correspond to a 'comprehensive income tax'. The origin

of these names is clear. The first two régimes tax only consumption (or expenditure) and at the same rate whether consumption is undertaken now or in the future. In contrast, the last two systems tax all accruals to income, whether from earnings or investments, irrespective of whether they are saved or consumed. These two benchmark tax systems are different ways of interpreting 'fiscal neutrality' with respect to savings. Equalizing pre- and post-tax rates of return is neutral between present and future consumption. A comprehensive income tax is neutral between consumption and saving, treating savings in exactly the same way as any other form of consumption. However, savings are not a commodity like any other good or service. They are a means to future consumption, and this is particularly obvious where

saving for retirement is concerned. Neutrality between consumption now and consumption in retirement is the relevant concept for taxing pensions, and that is the form of neutrality achieved by the expenditure tax.

### An international comparison of the tax treatment of pensions

Having examined the taxation of pensions in theory, this section compares pension's taxation in practice in a range of countries. Table 2 summaries the tax treatment of pensions in OECD countries at three stages identified in the previous section: when contributions are made, investment returns accrue and when the pension is paid out. The first column relates to the personal income tax treatment of contributions made out of earned income. In most countries — exceptions include Australia, Iceland and Japan — contributions to a pension are made out of pre-tax income or attract a tax rebate. The extent of this

deductibility is limited in most countries. The next three columns relate to the treatment of investment returns. In most countries, income accruing in the pension fund accumulates tax-free, although Australia and Sweden apply a special tax rate (15 and 10 per cent respectively) to pension fund investment returns that is lower than marginal income tax rates. Denmark taxes only real investment returns, in line with the 'pure' comprehensive income tax. The final two columns of Table 2 cover taxation of the pension in payment. The tax treatment of withdrawals from the fund, either as an annuity or a lump sum, varies considerably. All countries bar New Zealand extract some tax at this point, although there are often tax concessions available. Australia, Ireland, Japan and the United Kingdom, for example, allow withdrawal of a tax-free lump sum to be from the fund. In most countries, withdrawals from the fund before retirement age are not permissible, although in some, such as Austria and the United States, this is possible subject to a tax penalty.

Table 2. Tax treatment of personal pension plans

Country	Contributions PIT	Pension fund			Pension payment	
		PIT		Other taxes	PIT/CGT	
		Fund Income	Fund Income	Fund value	Pension Original	
					Income	Value
India	E	E	E	E	E	T
Australia	T	E	T	E	T	E
Austria	E	E	E	E	T	T
Belgium	E	E	E	T	T	T
Canada	E	E	E	E	T	T
Denmark	E	E	T	E	T	T
Finland	E	E	E	E	T	T
Germany	E	E	E	E	T	T
Iceland	T	E	E	E	T	T
Ireland	E	E	E	E	T	T
Japan	T	E	E	E	T	E
Luxembourg	E	E	E	E	T	T
Netherlands	E	E	E	E	T	T
New Zealand	T	E	T	E	E	E
Norway	E	E	E	E	T	T
Portugal	E	E	E	E	T	T
Spain	E	E	E	E	T	T
Sweden	E	E	T	E	T	T
Switzerland	E	E	E	E	T	T
United Kingdom	E	E	E	E	T	T
United States	E	E	E	E	T	T

Source: Derived from OECD (2004a), Table 4.4.

**Table 3** shows tax treatment in a range of countries, most of which have recently moved, or are proposing to move, towards a funded pension system. In the majority of Latin American countries, the tax treatment is of the traditional expenditure tax kind (EET). The only exception is Peru, which has a pre-paid expenditure tax (TEE). Hungary and Poland have both adopted the expenditure tax for their new mandatory

pension funds. Poland operates a pre-paid expenditure tax régime for voluntary pension contributions. Hungary gives a much more generous treatment exempting investment returns and pensions in payment as well as giving a tax credit on contributions which exceeds even the highest tax rate (see the box in the next section). The Czech Republic taxes its voluntary funds in a similar way, matching contributions up to a limit.

**Table 3: Tax treatment of personal pension plans**

	Contributions	Returns	Benefits
<b>Latin America</b>			
Argentina	E	E	T
Chile	E	E	T
Colombia	E	E	T
Costa Rica	E	E	?
Mexico	E	E	T
Peru	T	E	E
Uruguay	E	E	T
<b>Eastern Europe</b>			
Czech Republic	C	E	T
Hungary	E	E	T
Poland	E	T	T
<b>Asia</b>			
India	E	E	T
Indonesia	E	T	T
Korea	E	E	E
Philippines	T	T	E

**Note** T = taxed, E = exempt, C = tax credit

**Source:** Dilnot, A.W. (1992), *Taxation of Private pensions: cost and consequences*, in OECD, *Private pensions and public policy* Paris.

**Tables 2 and 3** show that most countries' systems for taxing pensions approximate to the expenditure tax treatment, that is allowing income tax deduction of contributions, exempting funds' investment returns and with tax due on pensions in payment. Twenty-three of 35 countries shown broadly follow this pattern, although most of them have minor deviations from a pure expenditure tax. It is also worth noting that these apparently generous schemes have typically been in place for lengthy periods. Countries that have recently reformed their pensions tax system have tended to make them less generous. For example, New Zealand has moved from EET to TTE, and Australia

now extracts some tax at all three possible points. In New Zealand, this has led to a dramatic reduction in pension saving. In all countries, there are enormous differences between pensions taxation and the taxation of other forms of savings. For example, housing is often offered a similar (e.g., Canada, United States) or even more generous (e.g., Germany, United Kingdom) treatment than pensions. Direct investment in equities or bank deposits is taxed more heavily than housing or pensions almost everywhere. Individuals choose where to put their savings not on economic grounds, such as expected return and risk, but on fiscal grounds. Many countries have moved recently to reduce

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differences in tax treatment. Denmark, Finland, Norway and Sweden have implemented the most extensive reforms, moving towards a flat-rate tax on capital income. Finland, for example, has introduced a separate flat tax of 25 per cent on capital income and abolished tax-exempt savings deposits. Norway taxes interest, imputed income from owner-occupation, dividends *etc.* at a flat 28 per cent. In Portugal, the tax reform of 1989 introduced reliefs for retirement and housing savings accounts and stock option plans.. Germany, the Netherlands and Spain simply exempt a fixed amount of interest income from all sources. Schemes offering limited deduction for equity investments are available in Austria, Belgium, Canada, France, Germany, Iceland, Ireland, Luxembourg and Norway. In the United Kingdom, special schemes for tax-free deposits and equity investments have recently been merged into a new individual savings account.

#### **Empirical analysis of pension saving incentives:**

The diversity of taxes, allowances and deductions shown in Tables 2 and 3 gives little guidance to the incentive effects of the taxation of pensions. This section uses a simplified model of the saving decision to summarize the effect of different taxes. The approach is adapted from the King and Fullerton method used to calculate investment incentives in the corporate sector. The model looks at a saver's incentives at the margin that is a small additional investment in an asset already held, which generates returns just sufficient to make the saving worthwhile. The analysis assumes a fixed pre-tax real rate of return of 5 per cent. The fund is invested 40 per cent in bonds and 60 per cent in equities, and dividends account for one third of the real return on equities, with two thirds from capital gains. Two savers are considered: one paying the marginal tax rate applicable at the earnings level of the average production worker in the country concerned, the second at the highest rate of all relevant taxes.. The marginal effective tax rates under the two benchmark systems described above — the expenditure tax and the comprehensive income tax — are shown for comparison. The effective tax rate under an expenditure tax would be zero, since the pre-tax return equals the post-tax return. Under a comprehensive income tax, it would be the top income tax rate or the marginal rate on average earnings respectively. The figures rank countries by the value of the marginal

effective tax rate.

The Figures show the enormous range of tax treatments. The most generous scheme offers a tax subsidy of 12 per cent at the tax rate levied on average earnings, rising to 26 per cent at top tax rates. The least generous has a marginal effective tax rate of 73 per cent.

**Table 4** investigates the last of these further using the simple framework of Table 1. The first four columns look at an individual who pays a higher tax rate, assumed to be 40 per cent, during both their working life and retirement. The first column shows the standard expenditure-tax treatment. Since contributions are deductible at the higher rate, the result up to retirement is the same as for the standard rate taxpayer in Table 1. After retirement, however, 40 per cent tax is payable, so the net pension is just 96.63. Again, the tax is neutral over the timing of consumption: the individual can consume 60 now or  $96.63 = 60 \times (1.1)^5$ . Again, the classical expenditure tax has the same effect as the pre-paid expenditure tax, shown in the second column. The deductibility of pension contributions is restricted to the standard rate of tax — assumed to be 25 per cent — in the third column. Partial deductibility means the gross contribution of 100 is reduced by 15 (the difference between the higher and standard rates). The result is a lower pension — 82.14 or 15 per cent lower — than the unrestricted expenditure tax. However, although the pension is 14 lower, the net present value of tax receipts is only nine higher. The partial taxation of contributions means there is less to tax when the pension is paid.

The fourth column shows a comprehensive income tax at a 40 per cent rate. This shows that restricting the deductibility of contributions is close to introducing a comprehensive income tax. Moreover, the arguments for and against this treatment can also be applied to the argument that contributions should not be deductible at higher rates of income tax.

The final four columns show a similar analysis for a person who pays the higher rate of tax when contributions are paid and investment returns accrue, but pays the standard rate of tax during retirement. Column five shows that the classical expenditure-tax treatment delivers the same pension and tax receipts

as for people who pay the standard rate of tax during their working life (compare Table 1). But the pre-paid expenditure tax raises more revenue than the classical tax from people who are higher-rate taxpayers when working and standard-rate taxpayers when they draw their pension. Again, restricting the deductibility of

contributions to the basic rate (column seven) reduces the pension compared with unrestricted deductibility. It also raises the tax take, but the initial gain from restricted deductibility is offset by the loss from the lower revenues on the lower pension. The net effect is again close to the comprehensive income tax

**Table 4. Alternative tax treatments for higher-rate taxpayers**

	<i>Higher rate in work and retirement</i>			<i>Higher rate in work, basic rate in retirement</i>				
	<i>EET</i>	<i>TEE</i>	<i>with limit</i>	<i>ETT</i>	<i>EET</i>	<i>TEE</i>	<i>with limit</i>	<i>ETT</i>
Contribution	100	100	100	100	100	100	100	100
Tax	0	40	15	0	0	40	15	0
Fund	100	60	85	100	100	60	85	100
Net investment return	61.05	36.63	51.89	43.56	61.05	36.63	51.89	43.56
Fund at retirement	161.05	96.63	136.89	133.82	161.05	96.63	136.89	133.82
Tax on pension	64.42	0	54.76	53.53	40.26	0	34.22	33.46
Net pension	96.63	96.63	82.14	80.29	120.79	96.63	102.67	100.37
Net present value of tax	40	40	49	50.14	25	40	36.25	37.68

The final four columns show a similar analysis for a person who pays the higher rate of tax when contributions are paid and investment returns accrue, but pays the standard rate of tax during retirement. Column five shows that the classical expenditure-tax treatment delivers the same pension and tax receipts as for people who pay the standard rate of tax during their working life (compare Table 1). But the pre-paid expenditure tax raises more revenue than the classical tax from people who are higher-rate taxpayers when working and standard-rate taxpayers when they draw their pension. Again, restricting the deductibility of contributions to the basic rate (column seven) reduces the pension compared with unrestricted deductibility. It also raises the tax take, but the initial gain from restricted deductibility is offset by the loss from the lower revenues on the lower pension. The net effect is again close to the comprehensive income tax

**An international comparison of pension funds**

Table 5 gives an indication of the scale of

pension funds in a selection of OECD countries. In eight of them — Canada, Finland, Ireland, Japan, the Netherlands, Switzerland, the United Kingdom and the United States — pension funds' assets exceeded 40 per cent of GDP in 2005. In seven others — Austria, Belgium, the Czech Republic, Hungary, Italy, Korea and Spain — pension fund assets are much smaller, less than 5 per cent of GDP. These differences reflect varied levels of private pension provision and differences in pension financing. In the countries with the largest pension fund sectors, coverage of employees in employer-provided pension plans varies between 50 per cent in the United Kingdom and 90 per cent in Switzerland. In Belgium, for example, coverage is less than 5 per cent, whereas in France, although coverage is broad, most schemes are pay-as-you-go.

In the eight countries with the largest pension funds, there has been rapid growth in their assets: by an average of 56 per cent over the nine-year period. This growth reflects the maturing of private pension schemes in many countries. In the United Kingdom,

for example, private sector pension funds had five contributors for every pensioner falling to fewer than two. Pension funds also grew because of high real rates of return. In Ireland, these were 11 per cent a year between 1993 and 2005, 8 per cent in the Netherlands, 4 per cent in Switzerland, 10 per cent in the United Kingdom and 9 per cent in the United States. In many of these countries, pension funds are an

important source of capital. They own a third of equities in the United Kingdom and United States. In the Netherlands and the United States, pension funds own around 40 per cent of corporate bonds. Ownership of financial assets is also concentrated in some countries which have introduced funded pension systems more recently. For example, Chilean funds account for 43 per cent of stock-market capitalization, and Argentine funds for 15 per cent.

**Table 5. Pension-fund assets as a percentage of GDP, 1994-2003**

<i>Country</i>	<i>1994</i>	<i>1997</i>	<i>2000</i>	<i>2003</i>
Switzerland	75	73	82	117
Netherlands	46	78	84	87
United Kingdom	62	60	72	75
United States	36	38	53	58
Ireland	—	32	40	45
Canada	26	30	36	43
Japan	38	37	41	42
Finland	20	25	38	41
Sweden	33	31	27	33
Australia	—	18	30	31
Denmark	11	12	19	24
Luxembourg	20	20	18	20
Greece	—	7	8	13
Portugal	—	2	6	10
Norway	4	5	6	7
Germany	3	3	6	6
France	—	3	3	6
Belgium	2	3	3	4
Spain	—	2	2	4
Korea	3	3	3	3
Italy	—	—	2	3
Austria	—	—	1	1
Czech Republic	—	—	—	1
Hungary	—	—	—	0

**Source: OECD (2004a), Table V.1, P. 57**

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which have introduced funded pension systems more recently. For example, Chilean funds account for 43 per cent of stock-market capitalization, and Argentine funds for 15 per cent.

**Table 6** shows pension fund assets in a range of Latin American countries that have recently introduced funded defined-contribution pension systems. Chile, which reformed its system in 1981, now has \$33bn in its pension funds, or 44 per cent of GDP. Of the others, Argentina, which reformed its system in 2001, has the largest funds at \$9bn, almost 3 per cent of GDP. However, growth in Argentina has been slower than in Chile, where funds exceeded 8 per cent of GDP three years after reform.

**Table 6. Pension fund assets as a percentage of GDP, December 2004**

<i>Country</i>	<i>Assets, % of GDP</i>
Chile	44.1
Argentina	2.8
Peru	2.1
Colombia	1.3
Uruguay	1.0
Mexico	0.2

**Source:** Diamond, P.(1998) A framework for social security analysis, *Journal of Public Economics*, vol. 8, pp. 298.

There is a reasonable negative correlation between the size of public and private pension systems. Italy and Austria, for example, with the largest public pension expenditures, have among the smallest private pension funds. But countries with the smallest public pension systems, with the exceptions of Australia and Ireland, also tend to have small private pension funds. This is probably because the five lowest-spending countries — Australia, Ireland, Korea, Mexico, Turkey — also have the lowest aged dependency ratio of the OECD countries.

Private pensions perform an important and growing role in providing incomes in old age as well as a sizeable asset base in many of these countries. **Table 7** shows the proportion of pensioners' incomes derived from public pensions in a selection of OECD countries. Private income sources range from over half in the United

**Table 7  
Public pensions as a percentage of total pensioner income**

<i>Country</i>	<i>Per cent</i>
Germany	78
Australia	77
Sweden	75
France	68
Netherlands	66
United Kingdom	62
Italy	61
Japan	52
United States	46

**Source:** Börsch-Supan (2004), vol.II, p.14

States to a little over a fifth in Germany. In many countries, the importance of private sources has been growing. In the United Kingdom, for example, private income sources were under 40 per cent of total incomes in 1979, rising recently to more than half. This trend is likely to continue: among recently retired pensioners (in the first five years over state pension age), private income sources are 60 per cent of the total.

### **Objectives for the tax system**

The first section of the paper argued that the expenditure tax was the most appropriate treatment for pension savings because it is neutral in the allocation of consumption between the working life and retirement. There are further reasons, including ones of equity and simplicity, for thinking that an expenditure tax might offer the best way of taxing pensions. First, identifying investment returns, especially those in the form of unrealized capital gains, can be difficult. Taxing gains on realization rather than as they are accrued causes different problems. However, a comprehensive income tax raises more revenue at a given tax rate: the discounted total tax take is 25 under the expenditure tax and 33 under the comprehensive income tax in the example given in Table 1. The broader tax base of comprehensive income allows a lower tax rate to collect the same revenues. A 20.5 per cent rate in the simple model would raise the same revenues as an expenditure tax with a 25 per cent rate. This could have important economic effects through labour-supply incentives and the incentive to work in the 'black' or 'shadow' economy. But it still means savings choices



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are distorted. An individual could choose to consume 79.5 now or save for retirement and consume 116.5 then. But that is equivalent to just 72.3 at working age (or, equivalently, the neutral consumption in retirement would be 128). An expenditure tax may also affect portfolio choice. Since pensions are taxed on withdrawal under the classical expenditure tax (EET), the government becomes a co-investor, sharing in any rents, but also participating in any losses. This may encourage a riskier choice of portfolio. A second concept of fiscal neutrality with respect to savings decisions is neutrality between different types of savings instruments. If one savings medium is taxed more lightly than others are, then it will tend to attract funds at their expense. Economic inefficiency results as decisions are distorted compared with those that would be made in a tax-free environment. In many countries, saving for retirement is treated favorably compared with other savings media. A number of arguments have been proposed to support this relatively generous treatment:

- the state should ensure that people maintain a standard of living in retirement approaching the level when they were of working age;
- by encouraging individual provision for retirement, the cost of social security benefits may be reduced, particularly when means-tested benefits are an important source of retirement income; and
- the state should increase long-term savings to add to the level and/or stability of capital available for investment.

The first argument is a paternalist one; the state gives incentives to save for retirement (relative both to current and to future, pre-retirement consumption) because in the absence of incentives, individuals will fail to make 'sufficient' provision. There are a number of reasons why, first this rationale may not be valid and, secondly, why the tax system is not a good way of achieving it. It is hard to define 'sufficiency' of retirement income beyond an adequate minimum. Offering tax incentives for retirement saving may not ensure that everyone achieves a minimum standard; some will still fail to provide whereas others may even over-provide. Other means of ensuring that retirement living standards approach the level during working life may be more effective and, perhaps, less distortionary: for example, the state can adjust the level of compulsory private pension contributions (the 'second pillar').

The second argument is one of 'moral hazard' — individuals will not provide for themselves if they know the state will give them an adequate income anyway. Pensions are partly — *e.g.* in the United Kingdom — or wholly — *e.g.* in Australia — means-tested in a number of countries. This means-testing produces a substantial disincentive to save for retirement, especially for people with low incomes. Again, however, it does not follow that attaching fiscal privileges to pensions is an effective way of minimizing the cost to the state, compared, for example, with mandating a certain level of contributions. The reduction in current revenues that results from the tax incentive adds to this argument. Tax incentives for pensions appear to increase pension savings. Examples include the 'success' of registered retirement savings plans, RRSPs, in Canada, personal pensions in the United Kingdom, and individual retirement accounts, IRAs, in the United States. Whether this results, however, from a substitution of pensions for other savings media or from an increase in overall savings is difficult to ascertain. If people have a fixed target for retirement savings, a new tax incentive for pensions could induce them to reduce current savings, since their level of retirement income would remain the same. Tax incentives cost the government by reducing revenues, cutting public sector saving. Even if household savings increase, the overall effect on *national* saving is uncertain. Many empirical studies of household saving, particularly of IRAs in the United States, have found a positive effect, although others are skeptical. The OECD (1994a) study of taxation and savings concludes its survey of evidence in a number of countries.

**"There is no clear evidence that the level of taxation, along with other factors affecting the rate of return, does generally affect the level of saving".**

Given the inconclusive nature of this literature, it does not seem wise to suggest that a desire to increase economy-wide saving either is or should be a major objective for the taxation of pensions. Changing the composition of saving towards long-term retirement savings might at times, however, be useful policy tool. Having established the desirability of expenditure tax treatment for pensions and of a 'level playing field' for different types of saving, the final policy choice is between the classical expenditure tax (EET) and the pre-paid expenditure tax (TEE).

The pre-paid expenditure tax has much to recommend it. First, by bringing the revenues from pension taxation forward compared with the deferred taxation in the classical expenditure tax, it alleviates the transitional pension deficit when moving from a pay-as-you-go to a funded system. The outgoing Conservative government in the United Kingdom proposed such a scheme in 1997. Croatia has also adopted the pre-paid expenditure tax. Secondly, it limits tax avoidance and evasion by ensuring the government collects the money up-front. It also ensures revenues can be collected from foreign workers or people who intend to emigrate on retirement. Thirdly, it will raise more revenues from people who are higher-rate taxpayers during their working life but pay tax at the standard rate during retirement. However, the pre-paid expenditure tax has two major drawbacks. First, although the tax incentive may be equivalent to a classical expenditure tax, psychology suggests that the up-front tax relief is perceived as more valuable. Financial-services companies also find up-front reliefs a better selling point. Secondly, the pre-paid expenditure tax subjects funded pensions to 'policy risk'. A future government may not feel bound by commitments of previous governments not to tax pensions in payment or investment returns, and may view pension funds as an easy revenue target. This is likely to undermine the attractiveness of funded pensions to potential investors.

### Conclusions

The expenditure-tax system taxes pensions once: either when contributions are made or when benefits are withdrawn. It is the best way of taxing the pensions, because it does not distort the decision whether to consume now or save and consume in the future, unlike the comprehensive income tax. Moreover, it is also easy to administer and the tax burden does not vary arbitrarily with inflation. A more generous treatment than the expenditure tax is not justified, neither by the impact on national saving nor the effect on public pension and social assistance liabilities.

Most countries tax pensions using a system close to the expenditure tax. The pre-paid version of the tax, which exempts benefits, collects more revenue up-front. However, it may not be credible if consumers suspect the Government might eventually tax benefits

when they are paid. Finally, in the context of the design and implementation of a pension reform, it is important to take the cost of tax reliefs, measured by tax expenditures, into account.

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