

# Working Paper

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The Taxation of Financial Assets:  
A Survey of Issues and Country Experiences\*

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Abstract

Taxes affect the degree and efficiency of financial intermediation in many different ways. This paper summarizes the main tax provisions in OECD countries that affect the overall "tax wedge" between pre-tax returns on investments, and the post-tax yield on the savings that finance them. This tax wedge is shown to vary widely, in individual countries, according to the different ways in which savings are channeled through financial markets. The paper then discusses alternative criteria for assessing tax regimes for financial assets, and summarizes recent trends in OECD countries.

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### Summary

Taxes affect the degree and efficiency of financial intermediation by imposing a "wedge" between the return to an individual who saves and the return on the investment that is ultimately financed by that saving. This wedge is created by particular taxes (or tax reliefs) that are associated with the acquisition of financial assets, the holding of those assets, the income and capital gains that are generated by them, and their disposal. The paper shows that the effect of these tax provisions varies widely in OECD countries according to whether the saving is done directly or through financial intermediaries, such as banks, pension funds, and insurance companies--and also according to whether the savings are channeled to companies (in the form of debt or equity finance) or to the government. The international playing field for financial assets is thus very uneven.

A number of studies have been conducted since the mid-1980s of the overall ex ante "effective tax rate" on different types of saving in different countries. The paper finds that the results of these studies have, however, been very sensitive to the assumptions that they make (for instance, about inflation) and to their treatment of particular details in the tax laws. In addition, the impact of taxes ex post may differ substantially from ex ante tax rates as a result of market responses that lead to capitalization of tax burdens and tax arbitrage.

The paper describes how tax regimes for financial assets may be assessed according to different standards, such as the "comprehensive income tax" ideal, specific theories of optimal taxation, or more eclectic criteria (including the traditional criteria of fairness, simplicity and transparency, economic efficiency, and administrative feasibility). These different standards often imply different answers to some of the central questions that arise in designing a tax regime for financial assets, such as, what should be the overall tax rate on income from those assets? how should capital gains be treated? and how should tax regimes be adjusted in the presence of significant inflation?

Tax reforms in OECD countries since the mid-1980s have generally tended to broaden tax bases and tax rates. With regard to the tax treatment of financial assets, the clearest common trends have been the further spread of taxes on capital gains, the imposition of restrictions on deductions for interest expense, and the extension of final withholding; in other areas, trends are more difficult to discern. A relatively new development has been the removal (particularly in the Nordic countries) of capital income from the scope of progressive personal taxes and the substitution of flat-rate taxes. The paper concludes that, as the trend toward globalization in financial markets makes it increasingly difficult for individual countries to tax capital income effectively, this approach may offer important advantages.

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## I. Introduction

Financial markets channel purchasing power from individuals or entities whose revenues exceed their desired level of current spending, to others that run a deficit in the current period. <sup>1/</sup> The way in which funds are reallocated between "surplus units" and "deficit units" is of critical importance for the level of output and for growth. In cross-country studies, the degree of financial intermediation, as measured by the ratio of the gross stock of financial assets to GDP, appears to be correlated quite closely with the level of economic development. But it is not only the level of intermediation that is important. The efficiency with which funds are transferred from surplus to deficit units can vary as well and the cost of intermediation can be very high as Stiglitz and others have pointed out. <sup>2/</sup>

Government operations affect financial markets and financial intermediation in a variety of ways--notably, through borrowing that is undertaken to finance deficits in the government's own accounts; through its regulation of financial institutions such as banks and insurance companies; and through taxation.

This paper discusses the tax treatment of financial assets, particularly in the tax systems of the major OECD countries. Section II summarizes the ways in which taxes may affect the return from saving that takes the form of holdings of financial assets. Section III considers the overall impact of these taxes on returns to savers. Section IV discusses some critical issues that arise in designing an appropriate tax system to be applied to financial assets. Section V examines some trends in the relevant taxes and tax provisions in the major OECD countries, and possible future developments.

The focus is on financial assets (and the corresponding liabilities), rather than on financial institutions or the financial sector as a whole. There is, of course, a considerable degree of overlap between these areas of concern; but they are not the same. Many aspects of the tax treatment of financial assets concern individuals or non-financial companies that hold them, as well as financial companies. At the same time, a comprehensive discussion of the tax treatment of financial institutions would cover many more issues than those that arise specifically with respect to financial assets.

## II. Taxes on Financial Assets

The primary forms of financial asset in market economies consist of debt that is issued by the government, and both debt and equity issued by private corporations. Government debt has risen to very high levels in many

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<sup>1/</sup> They also channel purchasing power from countries with current accounts surpluses to those with deficits.

<sup>2/</sup> See Stiglitz (1991).

OECD countries in recent years and exceeds 100 percent of GDP in Italy, Belgium, Ireland, and Greece. Other financial assets are much more diverse. Recent years have seen a considerable increase in this variety in the financial systems of OECD countries, with the development of new forms such as swaps, options, financial futures, and deep discount securities. The internationalization of the financial market has also contributed to this development.

Primary financial assets are often purchased, and held, directly by individuals. In most countries, however, indirect holdings through deposit-taking institutions such as banks, and other intermediaries such as insurance companies and pension funds, have become much more important. In most OECD countries, holdings of financial assets through insurance companies and pension funds in particular have risen as a proportion of the total stock of financial assets in recent decades. For example, in 1990-91, these deposit-taking financial institutions' ownership of publicly listed corporations was 39.8 percent in the United States, 47.0 percent in Japan, 19.5 percent in Germany, and 60 percent in the United Kingdom (see Kester, 1992). Holdings by foreigners of financial assets has also increased in many countries as a reflection of the internationalization of capital markets.

Partly as a result of these trends, it has become more and more difficult to assess the *overall* impact that different tax systems are likely to have on the return to saving, in the form of the holding of financial assets. Consequently, it has become more difficult to assess the impact of taxes imposed on capital income on the propensity to save of individuals. The return to financial saving may be affected in complex ways by many different taxes and tax provisions. For example, taxes may bear on the cost of acquiring assets, and on the revenue obtained at the time of disposal of those assets; on the holding of assets; and, of course, on the flow of income derived from them. These provisions generally differ according to whether the primary assets are held directly by an individual saver, or indirectly, through a financial intermediary. All three types of provision influence the net return that the individual savers obtain from committing their savings to a particular type of financial asset.

Suppose that an individual devotes one unit of his own resources to the acquisition of a financial asset at the beginning of a period, and disposes of the asset (together with its accumulated return, which is assumed to accrue at a pre-tax rate of  $p$ ) at the end of the period. The *acquisition* may be taxed at the rate  $t_a$ , attract *tax relief* at the rate  $t_r$ , or both; hence, the value of the asset acquired at the beginning of the period through the investment of one unit of his resources will be  $(1-t_a)/(1-t_r)$ . If the *holding* of the asset is taxed at the rate  $t_w$ , its income yield is taxed at  $t_y$ , and the *disposal* is taxed at  $t_d$ , the net-of-tax return to the saver on this one-period holding of a financial asset will be:

$$s = [(1-t_w) + p(1-t_y)] \cdot (1-t_a) \cdot (1-t_d) / (1-t_r) \dots\dots\dots (1)$$

This section comments on some of the main components of the five separate tax rates that appear in this expression. Tables 1 - 4 summarize the structure of these taxes, in OECD countries, for four important types of financial asset--namely, shares in private companies, government bonds, bank deposits, and personal pension funds. <sup>1/</sup> The tables also show whether interest payments on borrowing undertaken to acquire each of the four assets are deductible expenses under the personal income tax systems of the different countries.

1. Taxes on the acquisition and disposal of assets

The acquisition of a financial asset may be the occasion for a tax charge, for a tax relief, or for both.

As shown in Table 1, a few countries allow individuals a deduction from taxable income for amounts used to acquire direct holdings of company shares. With the exception of Canada, these are relatively small countries. In most of these cases, however, the deduction is available only in certain limited circumstances. Such deductions are generally not available for government bonds or bank deposits (see Tables 2 and 3). Table 4, on the other hand, shows that most countries allow a deduction for contributions to personal pension schemes. The only exceptions are Australia, Iceland, and Japan.

Acquisitions of different types of financial assets may also be liable to transactions taxes, such as stamp duties. A majority of countries levy such taxes on acquisitions of company shares (see Table 1). However, most of these taxes are infrequently applied to the acquisitions of government bonds and almost never applied to bank deposits and personal pensions (see Tables 2-4).

The tax treatment of the disposal of financial assets also varies widely among countries. In general, as shown in Table 1, capital gains realized by individuals on their disposals of company shares are subject to tax--either as regular income, or under separate capital gains taxes. A frequent feature of capital gains taxes is that they are levied at lower effective rates (or remitted altogether) when the asset has been held for more than a given period. A smaller number of countries taxes capital gains realized on disposals of government bonds. For personal pensions, Table 4 shows that the whole of the disposal amount (in the form of pensions paid out by the fund) is generally taxable in the hands of the individual. Thus, the general rule for pensions seems to be that some tax relief is given when contributions are made, but that disposals are generally taxed. However,

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<sup>1/</sup> The tabulations are a simplified version of data presented in Tables 4.1 - 4.4 of OECD, Taxation and Household Saving (Paris: OECD, 1994). As is inevitably the case with summary comparisons of this nature, most entries in the table are subject to detailed qualifications (many of which are provided in Annex 1 of the OECD study).



Table 1. Tax Treatment of Financial Assets in OECD Countries:  
Company Shares

	<u>Acquisition</u>		<u>Holding of Asset</u>			<u>Interest Deduction</u>
	<u>Deduction</u>	<u>Other</u>	<u>Tax on</u>	<u>Tax on</u>	<u>Disposal</u>	<u>for Borrowing to</u>
	<u>for cost</u>	<u>taxes</u>	<u>income</u>	<u>value</u>		<u>Acquire the Asset</u>
	$t_r$	$t_a$	$t_y$	$t_w$	$t_d$	
Australia	-	T	P	-	G	P
Austria	-	T	Ps	N	-	Py
Belgium	-	T	P/W	-	-	-
Canada	Pp	-	Ps	-	G	P
Denmark	-	T	P/W	N	Ga	P
Finland	-	-	P	N	G	P
France	-	T	P	N	G	-
Germany	-	-	P	N	-	-
Greece	-	-	-	-	G	-
Iceland	Pl	T	Px	N	Ga	-
Ireland	Pl	T	P	-	G	-
Italy	-	T	P	-	G	-
Japan	-	T	-	-	G	-
Luxembourg	Pp	-	P	N	Ga	P
Netherlands	-	-	Px	N	-	P
New Zealand	-	-	P	-	-	P
Norway	Pp	-	P	N	-	P
Portugal	-	-	P/W	-	Ga	-
Spain	-	-	P	N	G	-
Sweden	-	T	P	N	G	P
Switzerland	-	T	P	N	-	P
Turkey	-	T	-	-	-	-
United Kingdom	-	T	P	-	G	-
United States	-	-	P	-	G	Py

Source: OECD, *Taxation and Household Saving* (Paris: OECD, 1994), Table 4.3.

Legend: G Capital gain is subject to tax.  
Ga Gain subject to tax where asset held for less than a given number of years.  
N Taxable under the annual net wealth tax.  
P Taxable (or tax relief) under the Personal Income Tax (PIT).  
Pl Allowable in some cases, up to limits.  
Pp Income tax deductions given in certain cases, or partially.  
Ps Taxable under the PIT at a reduced rate.  
Px Taxable under the PIT, above an exempt limit.  
Py Deductible from income from investment only.  
P/W Taxpayer can opt for final withholding, or liability under the PIT.  
T Transactions tax (or stamp duty) applies.  
W Final withholding tax.

Australia and Japan--two of the three countries in the table that do not provide a general income tax deduction for contributions paid--confine this tax charge to the "income" element of the pension in payment.

## 2. Taxes on holdings of assets

Around half of all OECD countries levy annual taxes on the net wealth of individuals, above some threshold. 1/ Tables 1-3 show that these net wealth taxes are applied to financial assets, including bank deposits as well as company shares and government bonds. Accumulated rights in private pension schemes are not, however, included in the bases on which these taxes are levied.

In addition to these explicit wealth taxes, holdings of financial assets may be subject to a number of "implicit taxes" arising from government's budgetary and regulatory operations. In particular, any asset with a fixed nominal value is exposed to an "inflation tax". 2/ Reserve requirements for banks may also impose an implicit tax on bank deposits, when the required reserves must be held in forms that yield low levels of interest. For developing countries in particular, such implicit taxes are typically a far more important source of government revenues than are explicit taxes on financial assets or the financial sector. 3/

## 3. Taxes on income from assets

The pre-tax return that is paid on financial assets may be taxed in different ways, according to the nature of the asset and any intermediation between the saver and the ultimate borrower of his surplus funds. Tables 1-3 show that most OECD countries subject company dividends, interest on government bonds, and bank deposit interest to personal income tax in the hands of the saver. But several countries instead levy flat-rate; final withholding taxes on some or all of these sources of income. 4/ As shown in Table 4, on the other hand, income earned by pension funds is generally exempt.

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1/ These taxes are summarized in Messere (1993), chapter 11, and in more detail in OECD (1988).

2/ However, except for government bonds, the "inflation" tax will be collected by the companies that issue the financial assets rather than by the government. Furthermore, if inflation is fully anticipated, it is likely to be reflected in the rate of return to the asset.

3/ Indeed, a recent study entitled "Taxation of Financial Assets in Developing Countries" devotes only one paragraph to explicit taxes, focusing almost exclusively on implicit taxation: see Chamley (1991). Giovannini and de Melo (1993) have estimated that these implicit taxes exceeded four percent of GDP in many countries in recent years.

4/ These flat-rate taxes tend to be lower for income from government bonds so as to reduce interest rates on government debt.

Table 2. Tax Treatment of Financial Assets in OECD Countries:  
Domestic Government Bonds

	<u>Acquisition</u>		<u>Holding of Asset</u>		<u>Disposal</u>	<u>Interest Deduction for Borrowing to Acquire the Asset</u>
	<u>Deduction for cost</u> $t_r$	<u>Other taxes</u> $t_a$	<u>Tax on income</u> $t_y$	<u>Tax on value</u> $t_w$		
Australia	-	-	P	-	-	P
Austria	-	T	W	-	-	Py
Belgium	-	T	Px/W	-	-	-
Canada	-	-	P	-	G	P
Denmark	-	-	P	N	-	P
Finland	-	-	W	-	G	-
France	-	-	P/W	N	-	-
Germany	-	-	P	N	-	-
Greece	-	-	-	-	-	-
Iceland	-	-	-	-	-	-
Ireland	-	-	P	-	-	-
Italy	-	-	W	-	-	-
Japan	-	T	P/W	-	-	-
Luxembourg	-	-	Px	N	-	P
Netherlands	-	-	Px	N	-	P
New Zealand	-	-	P	-	-	P
Norway	-	-	P	N	G	P
Portugal	-	-	P/W	-	-	-
Spain	-	-	P	N	G	-
Sweden	-	-	P	N	G	P
Switzerland	-	T	P	N	-	P
Turkey	-	T	-	-	-	-
United Kingdom	-	-	P	-	-	-
United States	-	-	P/-	-	G	Py

Source: OECD, *Taxation and Household Saving* (Paris: OECD, 1994), table 4.2.

Legend: G Capital gain is subject to tax  
N Taxable under the annual net wealth tax  
P Taxable (or tax relief) under the Personal Income Tax (PIT)  
Px Taxable under the PIT, above an exempt limit  
Py Deductible from income from investment only  
P/W Taxpayer can opt for final withholding, or liability under the PIT  
P/- Deductible in the case of bonds issued by state and local governments  
T Transactions tax (or stamp duty) applies  
W Final withholding tax

Table 3. Tax Treatment of Financial Assets in OECD countries:  
Bank Deposits

	<u>Acquisition</u>		<u>Holding of Asset</u>			Interest Deduction
	Deduction for cost $t_r$	Other taxes $t_a$	Tax on income $t_y$	Tax on value $t_w$	Disposal $t_d$	for Borrowing to Acquire the Asset
Australia	-		T	P	-	P
Austria	-		-	P	-	Py
Belgium	-		-	Px/W	-	-
Canada	-		-	P	-	P
Denmark	-		-	P	N	P
Finland	-		-	W	-	-
France	-		-	P/W	N	-
Germany	-		-	P	N	-
Greece	-		-	W	-	-
Iceland	-		-	-	-	-
Ireland	-		-	W	-	-
Italy	-		-	W	-	-
Japan	-		-	W	-	-
Luxembourg	-		-	Px	N	P
Netherlands	-		-	Px	N	P
New Zealand	-		-	P	-	P
Norway	-		-	P	N	P
Portugal	-		-	P/W	-	-
Spain	-		-	P	N	-
Sweden	-		-	P	N	G
Switzerland	-		-	P	N	P
Turkey	-		-	W	-	-
United Kingdom	-		-	P	-	-
United States	-		-	P	-	Py

Source: OECD, *Taxation and Household Saving* (Paris: OECD, 1994), Table 4.1.

Legend: G Capital gain is subject to tax.  
N Taxable under the annual net wealth tax.  
P Taxable (or tax relief) under the Personal Income Tax (PIT).  
Px Taxable under the PIT, above an exempt limit.  
Py Deductible from income from investment only.  
P/W Taxpayer can opt for final withholding, or liability under the PIT.  
T Stamp duties apply on production of documents.  
W Final withholding tax.

Table 4. Tax Treatment of Financial Assets in OECD Countries:  
Personal Pensions

	<u>Acquisition</u>		<u>Holding of Asset</u>		Disposal	Interest Deduction for Borrowing to Acquire the Asset
	Deduction for cost $t_r$	Other taxes $t_a$	Tax on income $t_y$	Tax on value $t_w$		
Australia	Pp	-	F	-	Y	-
Austria	Pp	-	-	-	Dp	-
Belgium	Pl	-	-	A	D	-
Canada	P	-	-	-	D	-
Denmark	P	-	F	-	D	P
Finland	Pp	-	-	-	D	P
France	-	-	-	-	D	-
Germany	Pl	-	-	-	D	-
Greece (a)						
Iceland	-	-	-	-	D	-
Ireland	Pl	-	-	-	D	-
Italy (a)						
Japan	-	-	-	-	Y	-
Luxembourg	Pl	-	-	-	D	P
Netherlands	Pl	-	-	-	D	P
New Zealand	-	-	F	-	-	-
Norway	Pl	-	-	-	D	P
Portugal	Pl	-	-	-	D	-
Spain	Pl	-	-	-	D	-
Sweden	Pl	-	F	-	D	P
Switzerland	Pl	-	-	-	D	P
Turkey (a)						
United Kingdom	Pl	-	-	-	D	-
United States	Pl	-	-	-	D	-

Source: OECD, *Taxation and Household Saving* (Paris: OECD, 1994), Table 4.4.

Legend: A Annual tax levied on the assets of the funds.

D Tax on disposal proceeds (pension).

Dp Tax on portion of disposal proceeds.

F Tax levied on income of the fund.

P Taxable (or tax relief) under the Personal Income Tax (PIT).

Pl Allowable in some cases, up to limits.

Pp Partially allowable under the PIT.

Y Tax on income element only.

Note: (a) Greece and Turkey do not have provisions relating to personal pensions (as distinct from pensions provided through an employer). In Italy, personal pension plans became available only in April 1993.

In the case of corporate source income (dividends), a further dimension of variation is the extent to which that income is taxed in the hands of the company as well as the individual, domestic shareholder. "Classical" corporate tax systems such as those of the US, the Netherlands, Luxembourg and Switzerland impose a tax charge on the company which other countries relieve--in whole or in part--by some form of imputation system or system of relief at the corporate level. In practice, however, different systems may result in a very wide variety of degrees of relief for corporate tax paid on the income, in the case of different types of shareholder. <sup>1/</sup> When the income is earned in--or paid to residents of--foreign countries, the analysis of the impact of taxation on income from corporate shares becomes even more complex.

#### 4. Statutory tax rates

Tables 5 and 6 provide some information on the tax rates imposed by OECD countries on dividends and interest (Table 5) and on capital gains and net wealth (Table 6). In both cases, the tables refer to individuals rather than institutions. A word of warning is necessary. In most tax systems there are many special treatments of particular circumstances so that the tables would need to be qualified in many ways. The original source from which they are adapted (OECD, 1991) has a great deal of footnotes to try to qualify the information. The reader must be sent to that source for those qualifications.

The main message conveyed by these tables is the great diversity (in quantitative terms) in the treatment of incomes from financial assets. In this area the international playing field is far from level. Take the tax on dividends for example. The top rate varies from 10 percent in Turkey to 60 percent in Finland and the Netherlands. For the G-7 countries the range is from 35 percent for Japan to 57.9 percent for France. Interestingly, the tax on corporate income raises much more revenue in Japan than in France. The range is reduced somewhat if instead of looking at the top rate we consider the average marginal rate but it is still very wide.

An even wider-range is found in the top tax rates on interest income which range from zero in Iceland to 60 percent in the Netherlands. For the G-7 countries, the range is from 18.1 percent in France to 53 percent in Germany. If the average marginal tax rate is taken, the range is reduced somewhat but it still remains very wide. As indicated earlier, many countries withhold taxes on interest and dividends at rates that in many cases become final rates. These are also shown in Table 5. Once again, the most striking aspect is the unevenness of the international playing field.

Table 6 gives some information on the statutory treatment of capital gains and of net wealth. The table is largely self-explanatory. Here, in

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<sup>1/</sup> See the analysis in Chapter 8 of the Ruding Committee report: Commission of the European Communities (1992).

Table 5. Tax Rates on Dividends and Interest  
Received by Individuals

	<u>Tax Rate on Dividends</u>		<u>Tax Rate on Interest</u>		<u>Withholding Tax</u>	
	Top rate	Average marginal rate	Top rate	Average marginal rate	Dividends	Interest
Australia	48.3	39	48.3	39	--	--
Austria	25	19.8	50	39.7	25	10
Belgium	25	25	10	10	25	10
Canada	49.1	44.6	49.1	39.5	--	--
Denmark	45	37.6	57.8	51.1	30	--
Finland	60	45.2	10	10	--	10
France	57.9	45	18.1	5.6	--	18.1
Germany	53	39.1	53	39.1	25	--
Greece	50	n.a.	25	--	25	42-50
Iceland	39.8	15.8	--	--	--	--
Ireland	53	50(27)	53	38.4	--	30
Italy	50	39.4	30	12.5	10	12.5-30
Japan	35	35	20	20	20	20
Luxembourg	51.25	24.6	51.25	24.6	15	--
Netherlands	60	49	60	42	25	--
New Zealand	33	28.6	33	25.9	33	24
Norway	19.5	n.a.	40.5	n.a.	25	--
Portugal	25	25	25	25	25	25
Spain	56	28.4	56	31.5	25	25
Sweden	30	30	30	30	30	30
Switzerland	43.8	30.8	43.8	30.8	35	35
Turkey	10	10	10	10	10	10
United Kingdom	40	32	40	24	--	--
United States	36	31	36	28	--	--

Source: OECD, *Taxing Profits in a Global Economy* (Paris, 1991). Adapted from Tables 319 and 320, pp. 78-79.

Table 6. Tax Rates on Capital Gains, <sup>1/</sup>  
and Net Wealth <sup>2/</sup> of Individuals

	First Period		Length of First Period	Second Period		Base Indexation of Capital Gains	Tax on Net Wealth of Individuals
	Top Rate	Average marginal rate		Top Rate	Average marginal rate		
Australia	48.3	39	--	--	--	Yes	--
Austria	50	39.7	1	0	0	--	1
Belgium	0	0	--	--	--	--	--
Canada	36.8	10.5	--	--	--	No	--
Denmark	57.8	51.1	3	0	0	No	1
Finland	60	55	5	30	2	No	0.9
France	18.1	0	--	--	--	No	0.5-1.5
Germany	0	0	--	--	--	--	0.5
Greece	0	0	--	--	--	--	--
Iceland	39.8	20	--	--	--	Yes	1.2-2.2
Ireland	50	50	3	35	35	Yes	--
Italy	25	25	--	--	--	--	--
Japan	20	20	--	--	--	--	--
Luxembourg	0	0	--	--	--	--	0.5
Netherlands	0	0	--	--	--	--	0.8
New Zealand	0	0	--	--	--	--	--
Norway	40	40	3	0	0	No	1-2.3
Portugal	10	10	2	0	0	No	--
Spain	56	31.5	--	--	--	Yes	0.2-2.0
Sweden	30	30	--	--	--	No	1.5-3
Switzerland	0	0	--	--	--	--	0.118-0.711
Turkey	50	27	--	--	--	No	--
United Kingdom	40	33	--	--	--	Yes	--
United States	36	31	--	--	--	No	--

Source: OECD, Taxing Profits in a Global Economy (Paris, 1991). Adapted from Tables 3.21 and 3.22, pp. 80-81.

<sup>1/</sup> Minority shareholders in quoted companies.

<sup>2/</sup> The tax base varies substantially across countries.



relative terms, the differences among countries are even greater than in the previous table. Some important countries (Germany, Belgium, Netherlands) do not tax capital gains (but Germany and the Netherlands tax net wealth). Some tax capital gains as if they were regular incomes; and some impose preferential rates on these incomes. Furthermore, a few countries make a distinction between short-term and long-term capital gains giving preferential treatment to long-term gains. The distinction between short- and long-term varies from one to five years. Finally, some countries attempt to remove the inflationary component of capital gains by indexing the acquisition cost.

Table 6 shows also that several countries tax the net wealth of individuals with rates that vary from 0.2 percent to 3 percent. These rates, however, are applied to tax bases that diverge significantly either because of different exemption limits or because some wealth is not (or cannot be) taxed.

### III. The Overall Impact on Returns to the Saver

Because of the many complexities in the tax treatment of financial assets, a cross-country comparison of any particular tax provision for savings is likely to lead to conclusions which are, at best, incomplete, and which in some cases may be positively misleading. What is needed is a way of bringing together, in a consistent manner, the various provisions of different taxes that are relevant to the return on different kinds of financial assets.

#### 1. Summary measures of the impact of taxes

A seminal comparison of the structure and level of taxes on capital income in the United States, the United Kingdom, Sweden and Germany was undertaken in the early 1980s by King and Fullerton (1984). The focus of this study was on income originating in the corporate sector. Its measure of the impact of taxes was the overall "tax wedge" between pre- and post-tax returns to the saver (i.e.,  $p - s$ , using the notation in expression (1) above); or--equivalently--an "effective tax rate" which expresses the tax wedge as a proportion of the pre-tax return:

$$\text{ETR} = (p - s)/p \dots\dots\dots (2)$$

The King-Fullerton study employed a broad framework, in which this effective tax rate was measured for 81 corporate investment projects. These consisted of investments in three assets (machinery, buildings, and stocks), in three sectors (manufacturing, "other industry", and commerce), financed in three ways (by new share issues, retained earnings, and debt), with funds supplied by three kinds of "savers" (individuals, pension funds and insurance companies). The same framework has since been used to compare

patterns of effective tax rates in a large number of other countries, and to examine how those rates changed in the course of the 1980s. 1/

Subsequent studies have developed the original framework in several ways. First, they have extended it to cover other forms of capital income, such as income from self-employment, and from investment in housing. Secondly, the King-Fullerton tax wedges and effective tax rates have been disaggregated in some comparative studies into separate components that relate to the corporate and personal tax systems, and effective *corporate* tax rates have been compared for cross-border as well as domestic investment flows. 2/ Thirdly, some studies in individual countries have modified the framework in order to make more realistic comparisons of the tax regime for different savings media--by, for example, including transactions taxes such as stamp duties in the analysis, incorporating income from government securities, and treating pension funds and insurance companies as intermediaries rather than as "savers" (as they appeared in the original King-Fullerton study). 3/

In spite of the refinement mentioned above, the results of the King and Fullerton methodology remain highly fragile with respect to assumptions and information. They are, for example, very sensitive to assumptions about the rate of inflation and about the many exceptions that are common in the tax laws. Those who have tried to apply that method have often remarked on that fragility.

## 2. Market responses: capitalization and arbitrage

In spite of their limitations, these analytical frameworks can provide useful summaries of the effective tax rates, in a simple numerical form, of the complex tax structures that apply to different types of saving or capital income. There is, however, a potentially serious conception problem with methods such as that typified by King and Fullerton. The problem is that the summaries that are obtained are "ex ante" summaries. Except under very strict and unrealistic assumptions, they do not show how the *post-tax* rates of return on different assets will vary as a result of the imposition of these taxes. In practice, one should expect that wide differences in effective tax rates for different kinds of asset, as summarized in these studies, are likely to give rise to some offsetting market forces.

For example, suppose that the effective tax rate on an asset such as government debt is increased. In the first instance, this change will make the asset less attractive than others for individuals or companies to hold.

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1/ See, in particular, Jorgensen (1993).

2/ See, for example, OECD (1991) and Commission of the European Communities (1992).

3/ For studies of this third kind see Hills (1984) and Saunders and Webb (1988). The study of *Taxation and Household Savings* by the OECD applies a similar approach.

As a consequence, they would immediately tend to avoid this asset just as consumers avoid a product that has been subject to a high tax. In equilibrium, however, the outstanding amount of debt must still be held, in aggregate; what will happen is that its pre-tax return must rise to compensate for the higher effective tax rate. 1/ If the government wants to tax government bonds, it must be willing to adjust the gross yield to induce savers to keep buying those bonds. 2/ That tax rate increase will, therefore, tend to be capitalized into the price of the debt, resulting in a capital loss for existing holders of the asset--but offsetting at least some part of the decline in their prospective net return.

This capitalization mechanism has sometimes been used to justify tax exemptions for certain types of government securities (or a practice of issuing low-coupon stock whose yield takes the form of lightly-taxed capital gain rather than fully-taxed income): it is sometimes argued that the cost of funds to the government is not affected, since the tax concession will be offset by a higher issue price. This argument, however, might be valid in a world in which all savers were subject to tax at the same rate. However, when taxpayers are subject to different rates of tax, an asset whose yield is tax-favored will be *relatively* more attractive than other assets to those who are subject to tax at the higher rates. For example, in the United States the fact that municipal bonds are free of federal income tax have made them a favorite habitat for high income taxpayers subject to marginal tax rates higher than the yield difference between taxed and untaxed bonds. Those in different tax rate brackets will then tend to specialize in assets with different tax characteristics, and capitalization will not be complete. 3/ Some of the benefit of tax concessions will, thus, remain with those individuals and institutions that hold the favored securities. That benefit will be enjoyed at the expense of the government's revenues.

Variations in tax rates--both between individuals (or organizations), and between different types of asset and between different countries--create opportunities for more complex market responses, in the form of "tax arbitrage". Such arbitrage is likely to occur, for example, when interest that is paid on borrowing to finance the acquisition of an asset can be deducted at a higher rate than the taxpayer must pay on income from the asset itself. 4/ This has been especially the case with respect to

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1/ In the United States bonds issued by the Federal Government are taxable while those issued by municipalities are tax free; as a consequence, the nominal interest rate on federal bonds is somewhat higher than that on municipal bonds, given comparable risk factors.

2/ Governments with high public debt tend, in fact, to reduce the tax rates on the yield of public debt so as to reduce the cost of servicing the debt. However, while they pay less interest they receive less taxes.

3/ Galper et al (1988) present a detailed general equilibrium model of this process.

4/ For a discussion of tax arbitrage from a US perspective, see Steuerle (1985). For a more general discussion, see Tanzi (1984 and 1995).

housing since in some countries (i.e., the United States) interest payments on a mortgage are fully deductible from the regular income of the individual while the return to housing is not taxed unless the house is rented. In addition, markets may find ways to transfer tax deductions from those liable to low tax rates to those liable at higher rates, and to transfer tax liabilities in the opposite direction. The development of the finance leasing industry, particularly in the USA and the UK in the early 1980s, provides a striking illustration of this process.

The general result of these market responses is that tax rates on different forms of capital income, and incomes from different financial assets in particular, do not rest where they are placed by the formal tax structure. There is likely to be a general tendency for returns to different forms of financial asset to be equalized, in net-of-tax terms; and those individuals who are subject to higher formal rates of tax are likely to be able to escape, through tax arbitrage, at least some part of the burden that the tax structure seeks to impose on them.

#### IV. Issues in the Design of a Tax System for Financial Assets

##### 1. Criteria

The fundamental issue that arises in appraising a tax structure for financial assets is the appropriate standard to apply.

The simplest approach would be to adopt, as a criterion, an "ideal" standard such as the comprehensive taxation of individual incomes, as developed in the late 19th and early 20th centuries by theorists such as Schantz, Haig and Simons. This defines the appropriate object of income taxation during a particular period as:

*the algebraic sum of (1) the market value of rights exercised in consumption and (2) the change in the value of the store of property rights between the beginning and end of the period in question. In other words, it is merely the result obtained by adding consumption during the period to 'wealth' at the end of the period and then subtracting 'wealth' at the beginning. 1/*

One major virtue of this approach is that, under simplified circumstances, clear and reasonably straightforward implications can be drawn about particular tax arrangements, and about the appropriate structure of effective tax rates on different sorts of financial assets. 2/ For example, application of this standard leads directly to the conclusions that

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1/ Simons (1938), p. 50.

2/ See, for example, the papers in Pechman (1977). The Schantz-Haig-Simons standard is implicit in the measure of "fiscal privilege" that was used in appraising the tax treatments of personal savings in the UK by Hills (1984) and Saunders and Webb (1988).

accruing capital gains should be subject to tax at the same rate as cash incomes, and that there should be no distinction in tax treatment between debt and equity incomes.

A disadvantage of the approach, however, is the exclusive emphasis of the Schantz-Haig-Simons standard on considerations of horizontal equity, and its neglect of other traditional criteria for appraising tax systems--such as simplicity and transparency, economic efficiency, and administrative feasibility. Attempts to design a tax system for financial assets on the basis of this standard usually founder on the practical impossibility of measuring and taxing all individual capital gains consistently, on an annual accrual basis.

Quite apart from the question of whether values are always known, in order to determine tax liabilities, one would face the problem that the payment of taxes may require the conversion of illiquid into liquid assets. Thus, conversion may (a) involve major transaction costs; and (b) when the operations required are large, may reduce the ex post size of the accrued income compared with the ex ante size.

A further problem with the Schantz-Haig-Simons standard, despite its considerable intuitive appeal, is that its implications do not always accord with popular notions of "fiscal equity". One important example of the difference arises in the case of capital gains taxation. 1/ For practical reasons, many gains are subjected to tax only when they are realized in a disposal of the asset. Application of the standard then implies that the taxpayer enjoys a benefit from the "deferral" of his tax liability, from the time that the gain originally accrued. This benefit will usually be greater, the longer is the period since the asset was originally acquired. 2/ Some schemes that appear reasonably practicable have been proposed to compensate for this deferral advantage. 3/ In practice, however, no government has yet adopted a scheme of this kind. On the contrary: many countries that tax capital gains apply a lower tax rate, or exempt the gain from tax altogether, when the asset has been held for more than a certain number of years (see Tanzi (1980), especially Chapter 4).

An alternative to an approach based on the Schantz-Haig-Simons standard is to apply results drawn from theories of "optimal" taxation. Such theories seek to combine considerations of economic efficiency with those of distributional equity. At a rather general level, they can often provide useful insights on particular issues. But, while they have proved helpful in clarifying some of the trade-offs that have to be made in designing or modifying tax systems, optimal tax theories do not provide a basis for clear and detailed recommendations about the appropriate provisions of those systems. In addition, these theories suffer--perhaps even more than the

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1/ See on this point Tanzi (1981).

2/ See Aaron (1976), Chapter 1.

3/ Such schemes are described in Wetzler (1977) and IFS (1978).

Schantz-Haig-Simons standard--from their general neglect of considerations of administrative feasibility.

For the purposes of this paper, therefore, a rather more eclectic approach seems appropriate. A variety of different criteria are applied in the brief discussions that follow, of some of the major issues that arise in the area of financial asset taxation.

## 2. The appropriate tax rate

Should incomes from capital be taxed at the same rates as labor income? An application of the Schantz-Haig-Simons standard provides an unambiguous "yes" as an answer to this question. For each individual, the tax computation should be based on "global" income from all sources, so that the same marginal rate will apply to every source--though that rate could differ between individuals depending on their income level and their family situation. 1/ Optimal tax theories, on the other hand, suggest the opposite answer. On certain assumptions about individual preferences between leisure, present consumption, and future consumption, the optimal tax rate on capital income in some simple models is zero 2/. More generally, different optimal tax rates on the two forms of income emerge from these analyses, according to the parameters of the particular model employed. 3/

In the theoretical literature of recent years, it has often been concluded that a reduction in the rate of return to saving would reduce the saving rate and thus reduce capital accumulation and, eventually, the rate of growth. The view has been that the taxation of labor has no, or, at least, less negative effects on labor effort and thus on economic efficiency. The theoretical conclusions received a powerful and, at the time, politically important boost from an article by Michael Boskin (1978) that concluded, from empirical analysis, that the elasticity of aggregate personal saving with respect to the net-of-tax rate of return is considerable. Therefore, savings should not be taxed; or, at least, it should be taxed at lower rates than labor.

There are two problems with the Boskin conclusions. First, his results have not been duplicated by others. Second, it ignores a powerful trend now affecting mature economies. This is the fact that financial assets are often disproportionately owned by senior citizens who, according to the

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1/ However, one could argue that individuals should be allowed to depreciate their human capital just as companies are allowed to depreciate their capital assets.

2/ For example, King (1980). A useful survey of approaches to the issue of the optimal tax rate on capital income is provided by Zodrow (1990).

3/ This result is, however, a predictable one: almost inevitably, a model with which one may analyze this question will imply that different tax rates are likely to be appropriate for different income sources.

life-cycle theory of consumption, have a much higher propensity to consume than younger ones. As a consequence, if the taxes on capital income were reduced, and this reduction resulted in a higher rate of return to financial saving, the rate of saving for a country could fall because the major beneficiaries would be senior citizens who would consume a high proportion of the extra income. 1/

Even when equity considerations are predominant, some arguments may be presented for taxing capital and labor incomes at different rates. For example, the UK levies its personal income tax on the combined total of labor and capital income, but until 1984 a surcharge was imposed on capital incomes. Two main types of justification were offered for this surcharge. First, it was argued that extra costs--for example, in time and effort--are expended in acquiring labor income, and that it is appropriate on equity grounds that the tax system should recognize these differential costs. Secondly, the surcharge was sometimes defended as a rough form of compensation for the fact that labor income is subject in the United Kingdom--as in most OECD countries--not only to personal income tax, but also to social security contributions. 2/

The late 1970s and 1980s saw rapidly increasing recognition in most countries of the fact that high inflation rates in that period, in combination with unindexed income tax systems, could result in very high effective tax rates on certain sorts of capital income--but also that particular arrangements (such as those that most countries apply to savings through personal pension funds or savings channeled toward housing) could result in effective tax rates that were zero, or even negative. 3/ In these circumstances, discussions of the appropriate relative tax rates for capital income on the one hand and labor income on the other began to seem rather far removed from practical realities. A more immediate issue was whether the tax treatments of capital incomes should and could be rationalized, so that these incomes would all be taxed in a transparent manner at the *same* effective rate for each individual taxpayer. This inevitably called attention to the need to adjust tax bases to remove the effect of inflation.

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1/ For a detailed explanation of this point, see Sheshinski and Tanzi (1989).

2/ These arguments were discussed at length in IFS (1978).

3/ When the income earned by the fund itself is not taxed, expressions (1) and (2), in combination, imply that the effective tax rate will be negative when the tax rate that is charged on pensions paid by the fund is lower than the rate at which relief was given on the corresponding contributions. This will usually be the case in practice, since pension incomes are generally lower than those from which an individual pays pension contributions before retirement. In addition, some countries allow a part of accumulated private pension entitlements to be commuted into a tax-free lump sum; this further reduces the tax rate applying to disposals below the rate at which relief is given on the corresponding contributions.

In discussions of this issue, the main focus of the arguments has been on considerations of economic efficiency and practical feasibility, rather than equity. The operation of financial markets is distorted by tax treatments that differ between primary financial assets (such as debt and equity), or according to the nature of the intermediation between the saver and the ultimate borrower of funds. These distortions typically lack any clear rationale. They may, on the other hand, entail significant economic costs. For example, a tax bias in favor of debt financing of corporations is likely to increase the incidence and risk of bankruptcies. Preferential treatment of savings flowing through intermediaries such as pension funds and insurance companies is likely to increase the power of those institutions in financial markets; this may result in a loss of flexibility, and perhaps--some have argued--in an excessive concern on the part of these markets with "short term" returns, at the expense of longer term investment performance (see Summers and Summers, 1989). <sup>1/</sup>

### 3. Taxing capital gains

In a similar way, in recent debates over whether capital gains should be subject to tax, considerations of economic efficiency have tended to predominate over more traditional arguments based on considerations of fiscal equity. Financial markets provide many ways in which cash incomes can be converted into increases in the value of an asset. When the two are not subject to tax at the same effective rate, savings flows are distorted, and revenue is lost to the government.

On the other hand, to tax capital gains at the time of realization--which in many cases is the only time at which they can in practice be brought into tax--can damage efficiency by discouraging transactions in assets, tending to "lock in" savers to their existing portfolios. (A similar argument against taxes on asset transfers, such as stamp duties, has been common in the tax literature for almost two centuries. <sup>2/</sup>) Further practical arguments against the taxation of capital gains arise from its administrative complexities, particularly when the tax base is appropriately adjusted for inflation. Outside of the United States, taxes on capital gains yield little revenue directly, and some countries (such as the Netherlands and New Zealand) have concluded that this yield would be

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<sup>1/</sup> At the international level, James Tobin has advocated a tax on all financial transactions that require converting one currency into another (Tobin, 1978).

<sup>2/</sup> Shoup traces this argument to David Ricardo, who cited J.B. Say in support: see Shoup (1969), p. 405. A counter-argument that has recently been developed by Summers and Summers (1989), to the effect that stamp duties on asset transfers may have the beneficial effect of reducing speculation that is socially unproductive and costly, can also be traced back in time, at least as far as Keynes's General Theory: see Keynes (1936), p. 160.



insufficient to compensate for the administrative costs and market distortions associated with such a tax.

#### 4. Adjustments for inflation

Inflation distorts the measurement of capital income from both real and financial assets. When rates of inflation accelerated sharply in OECD countries in the 1970s, the nature of these distortions was thoroughly explored in the literature. The appropriate methods of "capital income, or tax base, adjustment" for tax purposes are now widely known--and, in principle at least, reasonably non-controversial. <sup>1/</sup> For present purposes, the important point is that unadjusted income measures result in distortions to effective tax rates that differ substantially for different financial assets. In many cases, the appropriate adjustment will convert a positive nominal income or capital gain into a negative amount; it will also result in gains being measured on financial liabilities, when those liabilities are fixed in nominal terms.

Studies of effective tax rates on different forms of capital income invariably find that they are highly sensitive to inflation. Changes in those effective tax rates over time, therefore, generally owe as much to changes in the rate of inflation as they do to changes in the formal tax structure. <sup>2/</sup>

#### V. Some Trends and Prospects

Some broad trends in the tax structures of OECD countries have been clearly discernible over the last few decades. One of these trends has been the increase in the level of taxation of labor incomes in OECD countries since the 1940s, in the form of normal income taxes and payroll taxes used to finance social security systems. A second has been the remarkable spread of broad-based consumption taxation, by means of the value added tax, that has occurred since the late 1960s. A third, more recent trend in tax reform has been the reduction of tax rates on individual and corporate incomes since the mid-1980s. This reduction, however, has been more pronounced for Anglo-Saxon countries than for others.

These reductions have been accompanied by some broadening of the bases on which income taxes are levied. In a few cases, the base-broadening has included the elimination of fiscal concessions enjoyed by particular forms of saving. Nevertheless, it is not easy to discern any broad underlying trends in particular measures that different countries have recently taken,

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<sup>1/</sup> For a comprehensive discussion of these distortions and adjustments, in the context of the personal income tax, see Tanzi (1980). The term "capital income adjustment" was introduced by IFS (1978). In the U.S. the term used was tax base adjustment. See Aaron (1976).

<sup>2/</sup> For a UK example, see Saunders and Webb (1988).

affecting the tax treatment of financial assets. 1/ In part, this is because so many different taxes and tax provisions can be relevant to this issue, as earlier sections of this paper have shown. However, even when one looks at particular tax provisions affecting financial assets, clear trends are hard to establish. This concluding section comments briefly on recent tax changes in various countries affecting six specific types of provision.

### 1. Integration of corporate and personal income taxes

Over a period of two decades, from the mid-1960s to the mid-1980s, changes were made to the corporate tax systems of many OECD countries with the objective of reducing the greater tax burden on distributed profits than on retained profits, which is inherent in a "classical" corporate tax system. 2/ Since the mid-1980s several more countries (including Australia, Finland, New Zealand and Turkey) have also moved from classical systems to systems with some form of relief for distributed profits. But other countries (including Japan, Belgium and Denmark) have moved back towards classical systems: these countries now provide a measure of relief for distributed profits by means of a separate, schedular rate for dividend income rather than in the form of a tax credit for corporate tax paid, or a lower tax rate at the corporate level. The general trend in OECD countries away from classical corporate tax systems, and towards greater integration of corporate and personal income tax, thus seems rather less clear than it used to be.

### 2. Capital gains

On the other hand, the gradual but fairly steady trend in OECD countries for personal income taxes to be extended to capital gains, and for effective tax rates on gains to be raised towards income tax levels, has continued in the last few years--with the introduction of new taxes on capital gains in Australia (1985) and Italy (1991), and significant increases in effective rates in the US (1986) and Canada (1987).

### 3. Deductions for interest

As Tables 1-4 show, a majority of OECD countries still allow a deduction under their personal income taxes for interest payments on some types of borrowing. However, for several decades there has been a slow but steady tendency for such deductions to be restricted or eliminated, primarily because of the arbitrage opportunities which they create. In the course of the last ten years this trend has continued, with new restrictions on interest deductions being introduced in Denmark, Ireland, New Zealand, Sweden and the US. 3/

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1/ See the discussion in section IV of Smith (1990).

2/ See Messere (1993), p. 344.

3/ See Smith (1990) and Messere (1993).

#### 4. Final withholding

A number of countries have recently introduced or extended withholding taxes on income from different sorts of financial assets, with the aim of improving the collection of tax that was theoretically due but often unpaid. In several countries, withholding has led to a sharp increase in revenue. The experience has not always been favorable, however. For example, in 1988 Germany introduced a withholding tax on interest paid to residents, but abandoned it shortly afterwards as a result of the shifting of deposits to neighboring countries. The tax was reintroduced at the beginning of 1993, but appears to be yielding less revenue than had been expected.

Many of these new taxes are *final* withholding taxes, which remove the source of income from the ambit of progressive personal income tax. Some examples of such taxes on dividend incomes have already been cited; Japan's 20 percent withholding tax on interest, introduced in 1988, is a further example. The apparent willingness of a number of OECD countries to take certain forms of capital income out of the scope of their progressive personal income tax may represent a significant change of direction. Hitherto, in major income tax reforms undertaken in OECD countries (such as Belgium in 1963, Italy in 1973, Spain in 1978 and Portugal in 1989), it has appeared that changes have been consistently in the direction of converting "schedular" into "global" systems.

#### 5. Savings for retirement

As shown in Section II, the tax treatment of private pension arrangements in most OECD countries can be seen as generous: the provision of income tax relief for contributions paid to pension funds, in combination with the absence of tax on income or gains earned by the funds, has been criticized as "a massive tax deferment mechanism". <sup>1/</sup> These arrangements have, however, developed with remarkable consistency in different countries since the early years of this century. It does not appear to offend against popular conceptions of equity, that income tax systems should be designed--in effect--to allow individuals to spread forward an appropriate portion of their taxable earnings, from their years of employment, to their expected years of retirement. Thus, while recent tax reforms in the US and Canada in 1986-87 did introduce tighter restrictions on deductions for retirement savings, the structure of tax arrangements for private pension contributions, pension funds and pensions has generally been left untouched in the process of income tax base-broadening.

#### 6. Inflation adjustment

During the 1970s and early 1980s many OECD countries introduced provisions to index the thresholds and brackets of their income tax schedules--though in some cases the provisions were subsequently dropped, as

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<sup>1/</sup> Messere (1993), p. 233.

the tide of inflation receded. The number of countries that tackled the more difficult problem of capital income adjustment was much smaller. Individuals' capital gains on financial assets are now indexed for tax purposes in Australia, Ireland, Luxembourg, Spain and the United Kingdom. Rather more countries introduced inflation adjustments of an ad hoc kind into their business tax systems, but some of these partial adjustments were swept away in the base-broadening reforms of the later 1980s. Only in Latin America, with its relatively high inflation rates, have there been systematic attempts to adjust capital incomes in a comprehensive manner--including appropriate adjustments for financial assets and liabilities.

#### 7. Future prospects for the taxation of financial assets

The simplest way to predict the future is to extrapolate from the past. On that basis, the prospects for systematic reform that will tackle the many present inconsistencies and complexities in the tax treatment of financial assets do not appear bright. A more likely scenario is that ad hoc changes will continue to be made from time to time in particular areas--sometimes for specific domestic reasons, sometimes in response to developments in other countries or in the slow process of EC harmonization, and very occasionally, perhaps, as a result of the gradual encroachment of the ideas of "academic scribblers". 1/ Financial markets will continue to devise new instruments at a faster rate than governments can prescribe appropriate income tax treatments, and the length and complexity of the relevant legislation will inexorably increase.

All of this will be made considerably more complicated by the globalization of the financial market that will provide ample opportunities for arbitrage on an international scale. 2/ Increasing liberalization of foreign exchange arrangements, and the associated rapid growth in international capital movements, will make the principle of taxing capital incomes on a residence basis increasingly difficult to apply. Although cooperation between national tax authorities in the exchange of information can be expected to increase, the appropriate tax liability on incomes with a foreign source is likely, nevertheless, to become steadily more difficult for national authorities to assess. At the same time, the taxation of those incomes in their source countries will continue to be eroded by rising competition for foreign capital, and also by the practical difficulties of effectively measuring the income of enterprises whose activities span national frontiers. National tax authorities will, increasingly, be tempted to adopt ad hoc approaches that effectively convert taxes on capital income into something different (for instance, applying "formula apportionment" to the worldwide reported incomes of international companies).

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1/ As described in Keynes (1936), pp. 383-4.

2/ For a discussion of the implication of globalization for the taxation of capital, see Tanzi (1995), chapters 6- 8.

There may, perhaps, be attempts to stem the resulting "degradation" of capital income taxation in other ways--for instance, by new international or regional agreements to limit the scale of investment incentives, or to establish minimum levels of withholding taxes or taxes on corporate income. There seems little reason to expect, however, that such attempts will prove more effective in the future than in the past.

And yet one might also detect, in the above sketch of some relevant trends, the outlines of an alternative scenario. In a number of countries, flat-rate taxes are now imposed on capital incomes, or particular sorts of capital incomes. Often, this arrangement is seen as a second-best approach that is defensible only on grounds of practical administrative feasibility; but a case can be made for such flat-rate taxes on grounds of economic efficiency and horizontal equity as well (see Sorensen (1994); and Tanzi (1995)). Where this case is accepted, such taxes could be confined to the original sources of the incomes to which financial assets constitute a claim, such as corporate profits. 1/ The assets and liabilities themselves could then be removed entirely from the ambit of income taxes. Transparency would be improved, and complexity dramatically reduced.

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1/ A proposal of this kind (in the form of a "comprehensive business income tax") has recently been developed by the US Treasury Department (1992).

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