

1 Introduction

Capital gains taxation on a realisation basis is known to give rise to a number of distortions in behaviour. “Lock-in effects”, the absence of constructive realisation at death and arbitrage opportunities that exploit inconsistencies in tax codes can result in a significant erosion of the tax base. Tax authorities have responded to the potential loss of tax revenue by adopting an increasingly complex array of tax provisions aimed at limiting loss offsets and closing many potential loopholes, albeit in an “ad hoc” fashion.

Economists have proposed two types of solution to overcome these problems. The first is to move from a tax system based on realisation (cash basis) towards one based on accruals (Shakow, 1986). The second is to introduce retrospective taxation of capital gains along the lines suggested alternatively by Vickrey(1939), Meade(1978), Auerbach (1991) Bradford (1995) and Auerbach and Bradford (2001).

To our knowledge, Italy is the first country to have experimented with both types of proposal. The purpose of this paper is to describe the Italian experience highlighting its peculiar features and the lessons that can be learned by other countries wishing to pursue these approaches. The recent Italian experience illustrates various mechanisms for implementing such systems as well as the administrative and political difficulties encountered by the “mark to market” (accruals) and the “retrospective” capital gains tax approaches. It also highlights the crucial role that financial intermediaries can play in lowering compliance costs under a proportional tax system and the effects on tax revenues.

The next section of this paper summarises briefly the well-known effects of capital gains taxation on a realisation basis and the various adjustments that have been proposed to mitigate the distortions arising therefrom. The third section describes the framework of capital income taxation in Italy. It examines the major features of the Italian tax system prior to 1997-8 focusing on its numerous deficiencies that led to reform. We then provide a critical assessment of the very innovative changes introduced by the 1998 tax reform. In particular, this reform introduced an accruals based regime in a number of situations. Where this was not feasible, various types of retrospective capital

gains taxation were introduced with the purpose of “equalising” realisations based taxes with those resulting from a system based on accruals.

The fourth section examines some of the effects of the new regimes. The revenue impact is probably the most striking aspect of the introduction of the new regime. Unfortunately it is difficult to assess other effects owing to the large number of confounding developments that occurred at the time of the reform. However, it is possible to assess the potential impact of the Italian tax system on hypothetical ex-post returns, compare these results with those of the theoretical benchmarks and assess potential distortions to simple portfolios. We also examined possible effects of retrospective capital gains on realisation behaviour using the methodology of event studies. The major conclusion of this section is that the Italian system of retrospective capital gains has created some distortions, but these do not appear to be very significant.

The regimes introduced by the 1997-98 reform met with increasing opposition from various quarters. Indeed, the new government that was elected in mid-2001 has abolished retrospective capital gains taxation and also appears intentioned to abolish the accruals regime. The fifth section examines the criticisms of both the accruals and retrospective capital gains tax regime that lie behind these changes and provides an assessment of how close the Italian regime has represented an approximation to a truly comprehensive income tax. The final section provides some concluding comments.

2 The Theory of Capital Gains Taxation

It is well known that realisation based taxation provides taxpayers with the opportunity to reduce substantially their effective tax burden by deferring the recognition of capital gains (“lock in effects”). The overall tax burden can be further reduced (down to nil) if capital losses can be fully offset against other types of income (Constantidines 1983, Stiglitz 1985). The traditional response to these problems has been to limit loss offsets and impose restrictions on “abuses”. All of these remedies have ultimately been unsatisfactory and resulted in very complicated provisions in the tax code.

Two different strategies have been proposed to eliminate the incentives to realise gains and losses selectively. The first is to move towards a system based on accruals (Shakow, 1986). Economists have typically shown great scepticism on the viability of

this approach: (a) it increases compliance costs; (b) “marking to market” is difficult for non-traded assets; (c) unrealised gains may pose problems forcing liquidation at the time of tax payment (Alworth, 1998).

For these reasons, attention has been focused on a second solution based on retrospective capital gains taxation. With full information regarding the path of asset prices and holdings, it is possible to adjust taxes paid on realisation to those that would have accrued if portfolios had been marked to market. The adjustment is determined by calculating “ex post” accrued gains in each tax year between purchase and realisation, and capitalising the implicit or “virtual” tax payment (or tax credit) for each year using the net-of-tax period-by-period internal rate of return. After paying the adjusted tax at realisation the investor terminal wealth from investing in a particular asset is would be equivalent to the terminal wealth under accrual taxation. We will refer to this procedure for calculating taxation upon realisation as the “full equivalence” method.

However, as first argued by Vickrey (1939), the incentive to defer gains and realise losses can be eliminated even in the absence of ex-post equivalence between taxation upon accrual and realisation. If “virtual” tax payments are capitalised at the risk-free net-of-tax interest rate and charged at realisation, investors would be ex-ante indifferent between accrual and realisation based taxes because certainty-equivalent after-tax returns would be equated.

If the actual path of an asset’s value is unknown and taxes are levied upon realisation it is not possible to replicate the ex-post terminal wealth that would result under accrual taxation. In this case, the Meade report (Meade, 1978) proposed to approximate accrual taxation by assuming that assets appreciate at the implicit rate of return over the holding period. Accrual taxation would be approximated by capitalising these annual “virtual” tax payments by using the net-of-tax interest rate.

Unfortunately, the Meade method does not eliminate “lock-in effects”. Taxpayers may find it profitable to anticipate or postpone the recognition of gains and losses depending on the actual time path of asset prices. In fact, as shown by Auerbach (1991), there exists only one tax system that does not affect the timing of realisations and that can be implemented with no information regarding the path of asset prices. As in the Meade proposal, assets are assumed to appreciate steadily through time at a given rate, and

”virtual” taxes are calculated for each tax period and capitalised at the net-of-tax risk free interest rate. In contrast to the Meade method, it is assumed that income accrues in each period at the risk free interest rate. Furthermore, the interest is calculated starting from a “virtual” initial asset value computed by discounting the terminal value of the asset at the risk free interest rate¹.

Despite the equivalence between accrual taxation and the Auerbach retrospective tax formulation from an ex-ante perspective, there is a widespread belief that the two are not equivalent from an ex-post basis. Auerbach in his original contribution acknowledged this difference and recognised that from an ex-post perspective his method works much like a wealth tax, as it charges a higher burden on below-normal returns and a lower burden on above-normal returns. Subsequently Kaplow (1994) challenged this view by showing that a tax on riskless returns is equivalent to an ex-ante wealth tax which in turn is equivalent to a tax on investment returns. For any return that might be realised on the risky assets, the three tax regimes are equivalent if investors can achieve the same after-tax wealth by adjusting their portfolios² so as to sterilise the impact of changes in tax systems on the overall ex-post return.

3 The Italian Tax Reform

3.1 Capital income taxation prior to reform

The current structure of taxation in Italy dates back to the reforms of 1973 that introduced a personal and progressive income tax as well as a corporation tax. They also established new definitions of the tax base and revised tax assessment procedures for different sources of income³. As regards capital income, a distinction was made between “capital income”, (*redditi da capitali*) comprising of a detailed specific list of proceeds

¹ The equivalence with an accruals tax on an ex-ante basis is achieved by replacing “the requirement of asset valuation (which may not be feasible) with the assumption of an efficient capital market in which investors equate the certainty equivalent after-tax returns on different assets” Bradford and Auerbach (2001). The original Auerbach proposal has been generalised by Bradford (1995) and Auerbach and Bradford (2001).

² The government obtains the same revenue under the three regimes for any return that might be realised on the risky assets.

³ Six sources of income with different assessment criteria are set down in the tax law: (i) real estate and immovable property; (ii) income from capital; (iii) employment income (iv) income from self employment; (v) enterprise income (vi) other income

on *financial* investments (such as dividends and interest), and “other income” (“*redditi diversi*”), a catchall category inclusive of capital gains on a limited set of assets.

Although the original proposals envisaged that all sources of personal income would be taxed comprehensively at progressive rates, to all intents and purposes “capital income” became subject to a special “substitute” regime of withholding taxes. The withholding taxes operated as a final tax for individuals but could be credited against corporation tax. As regards “other income”, capital gains, most notably on shareholdings, were excluded from taxation. The system guaranteed tax anonymity for bearer instruments but not for shares and other most registered securities.

Owing to the limited development of domestic financial markets (a relatively narrow equity market, the absence of derivatives etc.) and the presence of rigid capital controls, there was arguably little need for a separate capital gains tax. Moreover, since there was a substitute withholding tax regime, there were no significant deductions for interest payments. The only tax deduction against personal income, for interest on mortgages, was and remains very limited. As a result in contrast to the Anglo Saxon and Nordic countries there was no incentive for individuals to engage in zero cost arbitrages by borrowing and transferring high taxed income into low taxed capital gains.

Table 1

Table 1 shows the complex array of tax rates and valuation procedures for individual instruments and issuers under the “substitute” tax regimes.

The peculiar features of this “dual income tax” regime can be attributed to numerous factors. From the standpoint of this paper it is important to note two. First, there was a widespread perception that tax anonymity – and hence withholding of taxes at source - was important to ensure compliance and that compliance costs for the taxpayer should be minimal (a point to which we shall return later). This was partly due to the belief that the tax administration was incapable of monitoring and enforcing a personal and progressive tax on capital income. Anonymity was also viewed as permitting savers from not having to declare their personal wealth⁴.

⁴ Even today, anonymity remains a cornerstone of the Italian tax system. Indeed, the current government has recently enacted a tax amnesty on repatriations or disclosure of illegally exported capital that, in most instances, has ensured full anonymity to all participants.

Second, withholding taxes had a strong appeal in the heavily regulated Italian economy. These taxes could be used to channel credit to particular sectors, as a blunt tool of monetary policy and as a way of distorting competition in financial markets (particularly that coming from foreign financial intermediaries and borrowers). It was also widely believed that keeping taxes on government debt at a low level would help the government to finance its burgeoning deficit.

During the 1980s and early 1990s major changes in the financial system and macroeconomic environment resulted in a very significant shift in the composition of households' portfolios. As can be seen from Table 2, in 1980 nearly 75% of households' assets were invested in bank deposits. By the end of the decade, Italian households had moved heavily into tradable assets (most notably government bonds) and had cut back holdings in bank deposits sharply in relative terms. In the wake of the pronounced decline in interest rates instigated by the move towards European Monetary Union a further reallocation of portfolio holdings began in the mid-1990s with households shifting their portfolios away from bonds into mutual funds or into separate accounts managed on a discretionary basis by financial intermediaries. By the end of the decade security accounts managed on a discretionary basis and mutual funds accounted for 22% of Italian households' total portfolios. Furthermore, as elsewhere a wave of financial innovations resulted in the appearance of new financial instruments whose return profiles could not easily be associated with existing definitions of taxable income.

Table 2

These developments were accompanied by numerous major and minor modifications in the tax treatment of financial instruments. After a long debate, a tax on interest on government debt was introduced in 1986 at a rate of 6,25% and in 1987 raised to 12.5%. In the years that followed, the withholding tax regime was extended to a wider range of financial instruments and issuers. Mutual funds, which were first allowed under Italian law in 1983, were subjected to separate taxation albeit on the same basis as individuals (i.e. to different rates of withholding tax), with the notable exception of dividends for which no tax credit was allowed. The funds were also burdened by a wealth tax with rates that varied according to the type of financial instrument (bonds or shares)

in the portfolio. Another important development was the introduction of an “imputation system” as a means of integrating corporate and personal income tax. A separate capital gains tax on shares was introduced in 1990 but rapidly repealed for a large number of transactions⁵.

In spite of the many adjustments made over the years, pressure for tax reform accelerated in the early 1990s. The dismantling of capital controls, the increasing sophistication of financial markets following deregulation and the widening array of tax arbitrage strategies contributed to a widespread perception that the tax system was complex, inefficient and inequitable. In particular, attention was drawn to a number of undesirable effects of the tax system including

- (a) a very wide spectrum of implicit taxes across financial instruments with little economic justification;
- (b) a sharp reduction in the transparency of the tax system;
- (c) an incentive for widespread tax avoidance and, in some instances, near fraudulent behaviour;
- (d) potentially serious competitive distortions both among financial intermediaries and instruments, and between domestic and foreign investments and investors;
- (e) excessive resources being dedicated to tax planning; and
- (f) horizontal and vertical inequities across taxpayers generated by buoyant equity markets and sizeable capital gains.

3.2 The reform of capital income taxation

The unsatisfactory state of affairs described above lay behind widespread demands for a more consistent tax system and to a number of different reform proposals⁶. The Minister of Finance (Prof. Tremonti⁷) issued a White Paper in 1994 suggesting several changes to the tax treatment of capital income. Following a change in government

⁵ Capital gains resulting from transactions in securities traded on regulated Italian exchanges were excluded from tax, save those relating to qualified holdings. Bonds and mutual funds were also excluded. The tax essentially applied to foreign stocks, domestic options and structured products that were not deemed to be bonds. Taxpayers could either declare gains and losses in their annual tax return (and be taxed at a rate of 25% on the inflation adjusted net gains) or opt for a substitute tax regime. In practice, the substitute regime entailed a flat tax of 1.05% (raised to 2.1% in 1997) on the sales price of the security.

⁶ Caleffi () Pedone ()

those proposals were scrapped. While in opposition, the Finance Minister of the incoming government (Prof. Visco⁸) had prepared a number of proposals that, to some extent, were similar to those of the White Paper, albeit much more wide-ranging and radical⁹. The new finance minister set up a number of separate committees to investigate the feasibility of his proposals, including the reform of corporation tax along the lines of a regime reminiscent of the ACE (allowance for corporate equity) and a substantial overhaul of the personal taxation of capital income.

As far as the taxation of capital income is concerned the Tax Reform of 1997-98 was characterised by three main features:

- (a) a greater uniformity of tax rates.
- (b) the redefinition of the concept of taxable income;
- (c) the introduction of three types of tax regime allowing for the taxation of capital gains.

The reform was debated in several Parliamentary Committees. Although the opposition parties voted against the introduction of taxation based on accruals, most interested parties (such as financial intermediaries) appeared to support the gist of the reform proposals¹⁰. Most of the issues raised at the time were of a “technical” nature and drew attention to the complexities of specific provisions¹¹.

3.2.1 The review of tax rates

While the overall spirit of the reform seemed to support a single tax rate on all types of capital income¹², pressures on government finances limited tax reductions and fears of capital flight placed pressures on raising rates. The final legislation resulted in a compromise with a drastic reduction in the number of rates to only two: 12.50% and

⁷ A professor of tax law and a very successful tax practitioner.

⁸ A professor of public finance and a staunch supporter of the Haig-Simons definition of income.

⁹ Visco()

¹⁰ Sen.D’Ali’, a member of the opposition on the Tax Committee of the House of Deputies, hinted that the approval by the financial intermediaries of the new regime was due to the fact that they would benefit from the new regime. Individual investors under the “administered” and “tax return” regime (described below) would be penalised.

¹¹ Furthermore, within the ministerial committees mentioned above (for which no minutes of meetings appear to be available) it appears that there was also some disagreement between economists and legal experts regarding the definition of income.

¹² Prof. Visco in later interventions suggested that ideally this rate should be 19% in order to achieve neutrality between the corporate and personal taxes.

27%. All forms of capital income which prior to 1 July 1998 were subject to a tax rate equal to or less than 15% were now taxed at the tax rate of 12.5%. All other capital income which previously had been subject to a tax rate higher than 15% (primarily bank deposits) were taxed at a rate of 27%. As already mentioned the rate of 27% also applied to gains from the sale of qualified holdings.

For non-residents, the system and level of taxation had already begun to change in 1996. In the years that followed in combination with the domestic reform of capital income the rate levels were revised significantly and, in a number of instances, reduced unilaterally or by virtue of the provisions in double tax treaties. In practice, residents from countries that do not provide preferential tax regimes and with double taxation treaties that allow an “exchange of information” are presently no longer taxed at source on interest income. For other sources of income, double tax treaties entail that the tax rates applicable to non-residents may differ from 12.5% and 27%.

3.2.2 The redefinition of the types of income

The reform retained the broad distinction between “capital income” and “other income” although the original proposal envisaged abolishing this differentiation. The components of “capital income” (dividends, interest, etc.) remained unchanged but the definition of “other income” was widened to include capital gains. These gains included the proceeds from sales of equity shares, bonds, currencies and precious metals, as well as the proceeds from derivative contracts (with or without underlying securities) and from other securities and credits.

In addition, capital gains from shareholdings and other forms of equity participation were subdivided into two separate categories: capital gains and losses resulting from the sale for consideration of “qualified” holdings; all other gains (and losses) on capital¹³.

¹³ The criteria for establishing “qualified” holdings were redefined to take as reference the percentage of the voting rights that can be exercised at shareholders’ meetings. In the case of securities traded on regulated markets, voting rights (other than savings shares) which can be exercised at the ordinary shareholders’ meetings in excess of 2% or participations in the capital of a company in excess of 5% constitute qualified holdings. In the case of securities not traded on regulated exchanges, such percentages increase respectively to 20% and 25%.

The tax law also introduced a new type of income assessment termed “operating income” (“risultato di gestione”)¹⁴ for assets managed on a discretionary basis by authorised intermediaries and for mutual funds. Broadly speaking “operating income”, $Y(t)$, can be viewed as either the change in the “mark to market” value of investors’ portfolios or the sum of “capital income” and “other income”. In practice it is defined as

$$Y(t) = W(t) - W(t-1) - X(t) - S(t) \quad (1)$$

where $W(t)$ is the “mark to market” value of the net assets in portfolio (i.e. wealth) at time t , $X(t)$ is the value of any proceeds received between t and $t-1$ ¹⁵ which have already been subject to tax or are tax exempt and $S(t)$ are additions to net assets (net savings flowing into the “operating income” account).

3.2.3 *The taxation regimes*

Capital gains (net of any capital losses) incurred from the sale of qualified holdings by individuals must be declared under the personal income tax schedule although they are subject to a special substitute tax rate 27%. All other forms of capital income or other income are subject to three possible types of regime:

- the *managed portfolio* method, which applies to “operating income”;
- the *tax return* regime under which taxpayers opt to declare income in their tax returns according to criteria similar to those provided for «qualified» capital gains;
- the *administered portfolio* method, whereby an authorised financial intermediary withholds tax at source on an instrument by instrument and transaction by transaction basis.

Table 3

Under the managed portfolio method taxation is based on accruals. Individuals can opt for this regime only if they entrust the management of their wealth to financial intermediaries on a discretionary basis. A substitute tax rate of 12.5% is applied to

¹⁴ This concept was not included as an additional type of income alongside in “capital” and “other” income.

¹⁵ This item includes income which has been subject to a withholding tax, such as interest on bank deposits, income from closed and open-ended mutual funds and tax exempt securities, such as bonds issued by international institutions prior to 1992.

“operating income” as defined above¹⁶. Any net losses can be carried forward for four years.

The managed portfolio method is also applied to Italian mutual funds and SICAVS (variable capital companies), in ways that are not very different from those indicated above. For example, in terms of the definition of operating income provided in (2), $S(t)$ can be interpreted as subscriptions less redemptions. Moreover, the shift to the concept of “operating income” as of 1st July 1998, means that funds are no longer subject to withholding tax and domestic revenues are accrued on a “gross” basis. The major difference between the taxation of mutual funds and that of other “managed accounts” is that for the former a tax accrual (or tax credit) is set aside on a daily basis within a fund. In other words purchases and sales of funds are net of any taxes which have accrued over the period. Individual accounts managed on a discretionary basis are taxed once a year (as well as at the time of the closing of an account). It should also be noted that authorised intermediaries, including asset management companies, can offset tax credits and debits across accounts and funds.

Under the tax return regime and the administered portfolio method, taxes are applied on a realisation basis (mostly through withholding taxes at source) subject to a “tax equalisation” factor described below. Capital gains are computed net of any losses by the taxpayer (under the “tax return” method) or by the authorised intermediary (under the “administered portfolio method”). However, capital income and “other income” are treated separately in the sense that losses arising from “other income” (i.e. capital losses) cannot be used to offset capital income (dividends, interest etc.). Net losses from “other income” arising in different accounts can be offset against one another if the net gains

¹⁶ For non-residents the administered portfolio method is the norm, if there is a custody, management or deposit relationship with an Italian intermediary. However, non-residents may opt out of the administered portfolio method (and thus fall within the tax return regime) by giving notice to the Italian intermediary. The aforesaid waiver is granted also to non-resident intermediaries relative to custody, administration and deposit relationships registered in their name, and within which third party financial assets are held (so-called “omnibus” accounts). In this case non-resident intermediaries must appoint a tax representative in Italy that will notify the tax authorities of the data relative to the individual transactions carried out by its clients in the previous year. The managed portfolio method appears to prejudice non-residents. In fact no tax treaty contemplates the “operating income” as a taxable event, and therefore provides for exemption from or reduced taxation. Unilateral relief also does not appear to be applicable. Thus, a non-resident should be obliged to pay the substitute tax of 12.5% provided for fund management. In order to avoid this problem a unilateral tax credit is provided for the underlying taxes paid by the fund. The complexities of the regime, however, have discouraged non-residents from investing in Italian funds.

and losses are declared by taxpayers in their annual tax returns. Realised losses in an individual account can be carried forward for four years. Finally it should be noted that the administered portfolio method and managed portfolio method guarantee full tax anonymity.

3.3 The “equaliser”

In order to place taxation on realisations on a par with accruals, the reform provided for an adjustment to the realisation tax basis under the *tax return* and *the administered portfolio regimes*. This adjustment was called the “equaliser”. It took different forms but was similar to the proposals put forth by Vickrey (1939) and Meade (1978).

Because of its complexity the “equaliser” was the subject of much debate before its introduction and its implementation required creating a sophisticated database to permit the precise computation of accrued capital gains at the end of each tax year. As a result, its introduction was delayed until January 2001. However, it took effect retroactively on gains accruing from July 1, 1998¹⁷.

Three separate types of regime were ultimately put in place covering (a) securities traded on regulated exchanges; (b) securities not traded on regulated exchanges; (c) foreign mutual funds regulated under the European Directive¹⁸.

Securities traded on regulated exchanges

Where the prices of traded securities are known (*full information*), it is possible to determine the value of the tax that would have matured in each year in which the security was held. The realisation-based adjustment under these circumstances (known as the “analytical method”) is reminiscent of the system proposed by Vickrey (1939). This system envisages calculating “ex post” accrued gains in each tax year between purchase and realisation, and capitalising the “virtual” tax payment (or tax credit) for each year. The “virtual” tax payment on a single security i at time t is then be given by

¹⁷ Unpublished documents, that have been made available to the authors, highlight that the precise formulas adopted were the object of long discussions between financial intermediaries and the Ministry of Finance.

¹⁸ Two important exclusions from the “equaliser” regime where gains from “qualified” shareholdings and from investments in foreign non-harmonised mutual funds (i.e. not covered by the European Directive on collective investments - UCITs).

$$\tau(t-1)[p_j(t) - p_j(t-1)]n_j \quad (2)$$

where $\tau(t-1)$ is the tax rate on gains between the end of year t and the end of period $t-1$, $p_j(t)$ is the price of security i at time t (or the purchase price)¹⁹, n_j is the number of securities held at time $t-1$. Henceforth for simplicity it will be assumed that $\tau(t-1) = \tau$ and $n_j = 1$.

If the value in (2) is positive, it is capitalised at an official interest rate $i(t)$ for time t (based on the return to government bonds at time t). If the security is held until time T , the capitalisation factor for the gain accruing between t and $t-1$ is the product of the capitalisation factors between t and T , $K(t, T)$, defined as

$$K(t, T) = \prod_{s=t}^T (1 + i(s))$$

If (2) is negative it is carried forward *without* being capitalised and the accumulated value of such losses $L_j(t)$ is given by

$$L_j(t) = \text{Max}[L_j(t-1) - \tau(p_j(t) - p_j(t-1)), 0]$$

Accordingly “virtual” taxes at time t are given by

$$TAX_j^A(t) = \text{Max}[\tau(p_j(t) - p_j(t-1)) - L_j(t-1), 0]$$

and upon realisation the total taxes payable on security i are given by

$$TAX_j^A(T) = \sum_{t=1}^T [K(t, T) TAX_j^A(t)] - L_i(T)$$

¹⁹ The price is net of any dividends paid during the period which that have already been taxed.

and the overall tax liability for securities taxed under the analytical method is given by

$$TAX^A(T) = \sum_{j=1}^J TAX_j^A(T)$$

The actual tax law includes some additional complications. In particular, the precise formulae take into account the timing differences between the payment of the “equaliser” and the realisation of the capital gain or loss²⁰. Prices for the traded securities that serve as a basis for the calculation of the “equaliser” are provided from a database established by the UIC (Ufficio Italiano Cambi, the former Foreign Exchange Office).

Securities not traded on regulated exchanges

When full information regarding the path of the prices of securities over time does not exist the Vickrey or “analytical” method cannot be applied. One proposal to deal with this circumstance was suggested by Meade (1978); the Italian authorities implemented a variant²¹. This so-called “simplified” method consists in determining the average annual price increase over the holding period and in the case of a capital gain capitalising this amount at the reference interest rate

$$TAX_j^S(T) = \sum_1^T \tau K(t, T) \frac{[p_j(T) - p_j(0)]}{T}$$

If there is a capital loss, no capitalisation factor is applied and the tax credit is given by

$$TAX_j^S(T) = \tau [p_j(T) - p_j(0)]$$

²⁰ The precise calculation methods were described in a technical appendix to the tax law.

²¹ As in the case of the “analytical method” losses are carried forward without being capitalised. Another difference between the Meade and the Italian simplified method is that under the Meade method the growth of asset prices is assumed to occur exponentially.

Accordingly the overall liability is equal to

$$TAX^S(T) = \sum_{j=1}^J TAX_j^S(T)$$

Foreign mutual funds regulated under the European Directive (UCITS)

In the case of foreign mutual funds the system is similar to that adopted for the “analytical” method. Accordingly the loss and tax liability in each period are given by

$$L_j(t) = \text{Max}[L_j(t-1) - \tau(p_j(t) - p_j(t-1)), 0]$$

$$TAX_j^M(t) = \text{Max}[\tau(p_j(t) - p_j(t-1)) - L_j(t-1), 0]$$

However there are two important distinctions. First, gains are not capitalised at the reference (“riskless”) interest rate. In order to approximate the effects of the mark-to-market regime for domestic mutual funds, accrued gains are capitalised at the internal rate of return of the fund itself in each period between the accrual of the “virtual” tax and the time of realisation. As a result the tax on foreign mutual fund j is given by

$$TAX_j^M(T) = \sum_{t=1}^T \left[\left(1 + \frac{p_j(T) - p_j(t-1)}{p_j(t-1)} \right)^{T-t} TAX_j^M(t) \right] - L_j(T)$$

Second, it is not possible to offset funds for which there are positive tax payments against funds in a credit position (save within an “umbrella” fund structure). This is because net positive gains over the holding period for an individual fund are considered “capital income” whereas a fund for which an aggregate loss has been realised is treated as “other income”. No offset is possible between “capital income and “other income” outside of a “managed account”.

4 Economic effects of accrual taxation and the “equaliser”

In this section we attempt to assess the impact of the new capital gains tax regime on tax revenues and economic behaviour. Any empirical investigation of the effects of

the reform on prices and portfolio composition is a complicated task. The evidence is limited because the equaliser was abolished soon after its introduction and the evaluation of its impact may be affected by several confounding factors. For example, during the long-lasting electoral campaign the current winning coalition had advocated several times the removal of the equaliser.

Bearing these limitations in mind we have focused our attention on two questions:

- (a) whether the various different regimes may have significantly distorted portfolio decisions relative to a no tax or a perfect accruals regime; and
- (b) whether the retroactive application of the “equaliser” resulted in abnormal trading before its introduction.

4.1 Tax revenues

The new capital gains regime had an impressive performance in terms of revenue in the first three years of implementation due to the exceptional upsurge of equity markets in 1998 through early 2000. Table 4 provides tax revenue data from withholding taxes on capital income, capital gains taxes under the tax return and administered portfolio regimes, and taxes on the “operating income” of mutual funds and individual managed accounts.

Table 4

The yield of the capital gains tax levied under the tax return and the administered portfolio regimes almost doubled between 1999 and 2000, reaching €3000 million. Revenue from the tax on the “operating income” of mutual funds and individual managed accounts displayed an even more exceptional expansion, from €1,525 million in 1999 to €7,868 million in 2000. The bulk of the tax was paid by mutual funds. The low tax yield on individual managed accounts is mainly due to the structure of holdings. More than half of the accounts’ total assets is invested in mutual funds; in order to avoid double taxation, no additional tax is due on this portion of managed accounts.

The rise in revenue from capital gains and operating income taxation was offset by the sharp reduction in withholding taxes on capital income from €9,806 million in 1999 to €6,241 million in 2000. This shortfall is attributable to two developments. First, interest rates on deposits and Treasury bonds steadily fell during the period. Second, an increasing share of bonds and stocks was held in managed accounts or by mutual funds

which are not subject to the withholding tax (interest and dividends are taxed as part of the “operating income”).

It is interesting to note that the flipside of the massive revenues in 1999 and 2000 has been the equally sizeable volume of tax credits which have resulted from the sharp turnaround in equity markets. While no official data are available on this topic, Assogestioni (the Italian Association of Fund Managers) has estimated that mutual funds alone had accumulated over €6 billion in tax credits at end-May 2002²². A further €3.4 billion tax credits were estimated for other “managed accounts” and “administered accounts”.

4.2 The distortions induced by the equaliser

As previously remarked, the adjustments made under the three different regimes (securities traded on regulated exchanges, securities non traded on regulated exchanges and foreign mutual funds) are variants of the Vickrey, Meade and full equivalence methods respectively. There are three main differences between the “equalisers” and their theoretical counterparts.

First, the adjustment of the income from foreign mutual funds uses a gross-of-tax return to capitalise virtual tax payments instead of the net-of-tax rate employed in the theoretical model of full equivalence. This increases the effective tax burden above the level that would arise under accrual taxation and provides an incentive to anticipate realisations.

Second, for securities not traded on regulated exchanges, the adjustment follows the Meade method but the virtual annual price increase over the holding period is set equal to the arithmetic mean, instead of the geometric mean used in the original Meade proposal.

Finally, in all the regimes capital losses are not capitalised. As a result of this asymmetric treatment of gains and losses, the Vickrey and full equivalence methods no longer neutralise the lock-in effect. It also entails that assets with higher volatility will be subject to higher expected tax payments. Given the asymmetry of the tax schedule it is not possible to derive an analytical solution for the effective tax burden on risky

investments under the three alternative regimes. The expected value of the tax will depend not only on the expected appreciation of the asset but also on the volatility and path of prices. We can overcome this hurdle by simulating expected final wealth and taxes²³.

The simulations assume that the asset (or portfolio) returns in each tax year are normally distributed with mean δ and standard deviation σ , i.e.

$$\frac{p(t) - p(t-1)}{p(t-1)} = \delta + \varepsilon_t$$

where $p(t)$ is the price of the individual security and ε_t is a white noise process with $\varepsilon_t \sim N(0, \sigma)$.

For each series of draws from the Normal distribution, one for each tax year, we calculated final wealth and taxes to be paid under the different types of “equaliser”. The average values over two thousands simulations were used to calculate expected gross, u , and net-of-tax return, v . The expected effective tax rate (EETR) was computed as:

$$EETR = \frac{u - v}{u}$$

The results of the simulations are reported in Table 5. Part A contains the simulated EETR for a five year holding period under the assumption that the mean return is equal to the risk free interest rate.

If gains and losses were treated symmetrically, the equaliser applied to securities traded on regulated exchange would be equivalent to the Vickrey method and the EETR equal to the statutory rate (12.5%). The absence of loss capitalisation raises the EETR above the statutory rate. The difference, ranging from a minimum of 0.27 to a maximum of 1.78 basis points, is directly related to the asset price volatility and inversely related to its expected return. EETRs are lower in the regimes that apply to securities not traded on regulated exchange. The difference from the statutory rate ranges from 0.35 to 1.03 basis points. This shows that the method used to average the gain among periods partially compensates the asymmetric treatment of losses. Finally, the simulations demonstrate

²² It is interesting to note that the accumulation of tax credits could lead to the insolvency of a mutual fund if redemptions were excessive. Presumably tax credits could not be used to pay out investors requesting the redemption of their units in the fund.

²³ Mintz and Smart (2002) have recently applied a similar approach to evaluate the effect of non refundability of losses on taxable equities.

that foreign mutual fund are discriminated especially when volatility is high. EETR are 1.59 and 23.52 basis points higher than the statutory rate respectively in the best and worst scenarios.

Part B of Table 5 report the values for the simulated EETR under the assumption that the risk free interest rate is equal to 0.02. The data show the effect of the various adjustment methods on the distribution of the EETR across assets with different mean returns. The EETR are not affected by the value of the risk free interest rate in the case of the foreign mutual funds as the value of the risk free interest rate does not enter the calculation of the tax. As to the remaining “equaliser” method, all favour assets with higher returns.

Table 5

Estimates for a holding period of 10 years are displayed in Table 6. By increasing the holding period, the EETRs have a tendency to rise marginally, since the likelihood of incurring a (non-capitalised) loss is higher. This in turn increases the bias against assets with lower returns.

Table 6

4.3 Trading activity and the introduction of the “equaliser”

The “equaliser” was introduced with nearly a two-year delay. The 1997 Tax Law had referred to its introduction but deferred the practicalities to subsequent legislation. Hence, when it was effectively introduced on January 1, 2001 the “equaliser” was applied retroactively to gains realised after this date but which had already accrued from July 1, 1998.

While the equaliser should not in general give rise to significant tax timing behaviour, its announcement may have led to “abnormal” trading prior to the end of 2000. In order to avoid paying the difference between the equaliser and the realised capital gains tax that had accrued from July 1, 1998, investors had an incentive to realise their gains and purchase the same securities to create a new basis.

We tested this hypothesis using daily data on share prices and trading volumes of companies listed on the Italian Stock Exchange in the period from July 1, 1998 to December 31, 2000. “Abnormal” trading volume was obtained by regressing the volume

of trading in individual securities on the overall trading volume of the market²⁴. The sum of the residuals for the month of December 2000, divided by the average volume of trading during the month, was taken to be the standardised “abnormal” volume for each company.

In order to determine whether the equaliser had affected end year trading volumes, we regressed the standardised “abnormal” volume on *EQU*, a variable measuring the percentage *increase in taxable income* resulting from the “equaliser”. *EQU* is defined as the ratio of the “equalised” tax liabilities to ordinary realisation based taxes for a holding period beginning July 1, 1998 and ending on December 31, 2000. This ratio takes a value of 1 only if capital losses were accrued in both 1998 and 1999. If accrued gains were positive in either (or both) of these years and the sum of the net gains was positive the variable takes a value in excess of 1 indicating that there would have been an incentive to realise the gains before end-2000. However, if accrued gains were positive in either of these two years but the sum of the net gains was negative investors would still have an incentive to realise gains before end-2000 but the indicator would take a value less than 1. Under these circumstances we have utilised the reciprocal of the indicator variable in order to capture the percentage *reduction in deductible losses* resulting from the “equaliser”.

The test was performed on a sub-sample containing data on shares with *EQU* greater than one. Over this sub-sample, with 137 observations, *EQU* ranges from a minimum of 1.0003 to a maximum of 10.87 with a mean value of 1.20 and standard deviation of 1.09. Standardised “abnormal” trade in December 2000 has a mean value of -3.40, between minimum of -59.24 and a maximum of 0.89, with a standard deviation of 7.56.

Table 7 reports the results of the OLS estimates. There seems to be some evidence that “abnormal” trading activity at end-2000 is related to the introduction of the “equaliser”: the coefficient of *EQU* has the expected sign and is weakly significant. We ran two additional regressions: one limited to 102 companies which recorded “equalised” taxes in excess of taxes under a simple realisation regime and another restricted to 35

²⁴ Historically there has never been any “abnormal” trading activity to exploit capital gains or losses on the Italian Stock Exchange. Close to 35% of trading activity is accounted for by foreign investors.

companies that had recorded a reduction in deductible losses. The coefficient is positive and strongly significant in the first case while is not statistically different from zero in the second. These results are consistent with the asymmetric tax treatment of capital gains and losses. When the security had appreciated the wash sale reduced the investor tax liabilities with certainty. In contrast, if the investor realise a capital loss to prevent a decrease in deductible losses, the investor's tax liabilities decreased only if losses could be compensated with realised gains on other assets.

Table 7

In order to test whether these results were spurious we tested whether the indicator variable explained abnormal trading volumes in December 1999. The results were mixed. When the regression was run over the entire sample of companies, the coefficient of *EQU* was positive and strongly significant. This result supports the conclusion of a spurious correlation between “abnormal” trade at end December 2000 and the indicator variable. However, by splitting the sample between appreciated and depreciated shares, it turns out that the coefficient is weakly significant (at 5,6% probability level) in the first case and strongly significant in the second. These results suggest that our findings may be in part fortuitous.

5 The Italian Comprehensive income tax in practice

5.1 Compliance costs of implementing the tax reform

As we have already mentioned, banks and other financial intermediaries have always played a pivotal role in administering the system of withholding taxes. However, the last five years have witnessed a broadening of their obligations. The reform coincided with financial intermediaries extending their remit as paying agents to withholding taxes on government and (most) corporate bonds which until then been effected directly by the issuer. The reform itself necessitated that financial intermediaries take direct responsibility for running accruals taxation and calculating tax liabilities under the “administered account” system.

The trend towards transferring compliance costs onto intermediaries is not uncommon. It is associated with the centralisation of custody arrangements and the increasing role of banks as paying agents in securities transactions. However, the actual

administrative burden borne by Italian financial intermediaries and their legal liability is probably higher than elsewhere and considered a positive feature of the tax system²⁵. Indeed, lowering compliance costs for individual taxpayers was viewed as an objective of the reform and, at the same time, was aimed at gaining widespread acceptance for the changeover (Ciocca, 1998).

The withholding of taxes by banks and other financial intermediaries in Italy is highly automated and exhibits considerable economies of scale. Alworth and Violi (1998) estimate the overall compliance costs – including the filing costs for corporate tax - amounted annually to about €210 million or only 1% of banks' operating costs prior to the reform²⁶. The bulk of these costs (over 75%) are related to its agency role on behalf of the tax authorities.²⁷

Unfortunately, no independent study has been carried out after the Reform but it is clear that the introduction of accruals taxation and the “equaliser” has involved a considerable upgrading of systems and greater maintenance of databases particularly in respect of less liquid and non-listed securities (including foreign mutual funds). A small informal survey carried out by the authors across some large banks suggests that the burden of implementing this new system (information systems upgrading etc.) can be estimated at roughly €200 million, a not insignificant amount considering that the parts of the tax have now been repealed.

5.2 The demise of the “equaliser” and the future of “accruals taxation

Shortly after the elections, on September 21, 2001 the new Italian Government approved a decree that *inter alia* abolished the “equaliser”. The “equaliser” had actually

²⁵ Typically in other countries the role of financial intermediaries is to collect data for foreign tax authorities or to act as withholding agents. Recent changes in the US practices regarding withholding taxes on non-residents (Form W-8 and applications to become a qualified intermediary -QI) provide a good example of these procedures. The EU proposed on withholding taxes on interest income and exchange of information would also expand the role of financial intermediaries in the administration of taxes on capital income.

²⁶ This is a relatively small number if compared to the compliance costs for filing Personal Income Taxes on capital income in most countries (Blumenthal and Slemrod, 1992).

²⁷ Banks indicated that operating as a withholding agent was the most burdensome compliance cost since it was not explicitly remunerated. Taxpayers (individuals and corporate entities) can use bank branches to pay all taxes (cheques are not accepted by the tax authorities). While there is an explicit charge for this service, banks can offset part of this burden by benefiting from the lag between the time of withholding and the actual payment of tax. ABI (the Italian Bankers Association) has argued that the role of banks as withholding agents for the tax authorities should be remunerated and subject to an explicit contract since these implicit revenues vary according to the interest rate cycle and are extremely different across banks.

already been suspended on August 4, 2001 (seven months after its introduction) following a judgement by a regional Administrative Tribunal (TAR of Lazio) awaiting appeal, that had ruled in a case of constitutionality brought to the court by the national consumer association.

The “equaliser” had already encountered considerable hostility prior to its introduction and this had entailed a two-year delay in its implementation. The delayed introduction of the new tax, a number of misperceptions regarding the functioning of the tax and the rapid build-up of strong “anti-equalisers” lobbies helped to erode any political support for a tax which was increasingly perceived to be inequitable, expensive and inefficient.

Without entering into the merits of the single arguments presented – which have often reflected the interests of rather narrow interest groups -, it is useful to provide a brief summary of the various viewpoints against the “equaliser”. Many have argued that the formulae for the “equaliser” were not very transparent for taxpayers (de Nicola, 2001) or in practice unnecessary- “why aim for perfection?” (Piazza, 2001). In hindsight, the existence of three different types of calculation may have been an important factor triggering these criticisms. Opposition was also voiced in respect of the possibility that taxes might be payable even if realisations result in a loss (Panzeri, 2002). Furthermore, a minister of the current government (Prof. Marzano) and a number of tax lawyers argued that the “equaliser” was in breach of Article 53 of the Italian Constitution which states that taxes should be based on “effective” or “real” ability to pay.

Criticisms of the reform have not limited to the “equaliser”. The current government appears to have been concerned with the “originality” of accruals taxation and the “equaliser”²⁸. In the introductory document to the new proposed tax law argues that the equaliser and accruals taxation present a competitive disadvantage because Italy is the only country to have such a regime in the EU. For example, although foreign investors in Italian mutual funds would be rebated any taxes that have been accrued on the fund, income would not be capitalised gross of tax and moreover the rebating

²⁸ The current government has also supported many of the changes introduced by the Visco Reforms. In particular, it has indicated that it wishes to maintain the role of financial intermediaries as withholding agents. The Minister of the Economy is also on record as wishing to abolish the distinction between capital and other income and as seeking to introduce a single uniform rate of tax for capital income.

arrangement is quite cumbersome for financial intermediaries. Accruals taxation is also faulted with having been an extremely volatile source of revenues. As we have already seen, in rising markets accruals taxation has generated very sizable revenues, but the recent prolonged period of market decline has given rise to a record volume of tax credits. The most immediate effect of these credits has been to postpone the changeover to a generalised regime of taxing capital gains on a realisation basis that the current Minister of the Economy is on record as favouring. The accumulation of tax credits have also been a major concern for a number of mutual funds since in some instances such credits have exceeded 50% of assets. In these circumstances, if investors raise their redemptions beyond a certain level the mutual funds could become insolvent (Panzeri, 2002).

Abolition of the accrual regime on managed accounts has not encountered the same level of support for the ending of the “equaliser”. Assogestioni appears to back the government on the grounds that domestic Italian funds are discriminated, whereas ABI (the Italian Bankers Association) has argued that “accruals” taxation should be retained because it has “encountered wide acceptance amongst the public” and “banks have incurred substantial costs to implement the system”. At the same time ABI has argued that “accruals” should not be considered the “tax” benchmark.

5.3 A “comprehensive” income tax?

The Italian reform of 1998 is in many respects the most serious attempt to approximate a comprehensive income tax albeit within a “dual income” framework. However, an overall assessment of its applicability elsewhere must take into account some specific Italian institutional features.

First and foremost, the regime was based on rates that are independent of the tax status of individual taxpayers. With the operating income concept and the retrospective capital gains tax, financial intermediaries tax each specific account without any reference to other sources of income. This means that an individual taxpayer may not always be able to offset fully gains on one account against losses on another. More significantly, progressive rates are not applicable to capital income and the concept of income is not fully comprehensive in the sense that labour income and capital income are not added together. Furthermore, potential issues of equity that might arise in respect of the timing

of gains are non-existent with proportional tax rates. It should also be noted that valuation problems are sidestepped by concentrating on traded financial instruments for which purchase and sales prices can be easily determined.

Second, Italian tax rates on capital income very low by international standards. It is not clear whether an accrual regime would have been acceptable if taxes had been significantly higher. Indeed, the opposition to the “equaliser” on the grounds that taxes may be levied even if gains have not been realised suggests a high sensitivity to the level of tax rates.

Third, the concept of “operating income” is not truly comprehensive: deductions for interest payments are limited, income from owner occupied housing is subject to a special regime and gains and losses on real estate are not considered under the income tax and no adjustment is allowed for inflation²⁹.

Finally, the Italian system has been largely possible because compliance costs are borne almost fully by financial intermediaries and are relatively low because of the economies of scale associated with bulk processing. It is not clear whether intermediaries in other jurisdictions would be willing to shoulder this burden³⁰. Reliance on financial intermediaries has also come at the cost of a “one size fits all” approach. Transactions outside of broadly defined categories are in many instances tax discriminated. In particular, this applies to assets held in foreign bank accounts, collective investment vehicles not covered by EU directives, or financial instruments whose returns do not fit neatly into the scheme foreseen by the law (such as venture capital funds). Tax discrimination in this instance often tends to take the form of encouraging domestic over financial intermediation. Qualified or dominant shareholdings are another significant form of investment income which is tax discriminated for reasons that have no bearing with the “comprehensive income tax” concept³¹.

²⁹ Given the short existence of the present regime, it is not clear whether these separate regimes may have resulted in distortions to resource allocation. One may surmise that the current low rates of tax are not likely to have led to major distortions.

³⁰ The Italian Banking Association is now arguing that the cost of upgrading banks’ information systems to cope with further changes in the taxation of financial instruments should be borne by government.

³¹ Some may argue that the “ability to pay” concept should be interpreted in an extensive fashion as “power” over resources. “Accumulations of wealth confer valuable economic and social benefits to their owners even if the wealth is not consumed” (Aaron and Galper (1985)).

The Italian experience also provides some interesting lessons for the taxation of cross-border capital flows. The application of tax on accruals at source within individual accounts – particularly mutual funds – is not currently compatible with existing double tax treaty practices which tend to distinguish between dividends and interest on the one hand and capital gains on the other. In other words, the 12.5% tax on accruals is not considered by the tax authorities of the country of residence of foreign investors in Italian mutual funds as a withholding tax on a source of income which can give rise to double taxation relief³².

6 Final considerations and proposals for future improvements

The Italian tax reforms have been very short-lived and it is difficult to draw many conclusions regarding the working of capital markets and the behaviour of investors. The introduction of accruals based taxes was accompanied by a number of developments that contributed to very significant adjustments in portfolios. Unfortunately even event studies do not appear to be provide much information because the “equaliser” never actually came into effect. The conclusions one can draw from this experience must consequently be of a different type.

The Italian Tax Reform of 1998 is illustrative of the difficulties that any attempt to implement a close variant of the Haig-Simons concept of “comprehensive” income taxation has to face. The solution found by the Italian authorities was an elaborate equilibrium between several peculiar features of the tax system:

- a) a “dual income tax” regime where income from capital and capital gains are taxed at proportional rates;
- b) very low tax rates on income from capital and capital gains;
- c) taxation upon accrual for managed accounts and retrospective capital gains taxation on individual accounts;
- d) compliance costs borne largely by financial intermediaries.

At first sight, all these elements seem essential for the coherence of the overall construction and may limit the appeal of the “Italian model” of taxing capital income for other countries.

³² Relief is typically available for withholding taxes on dividends and interests. This has led the Italian

Most of the drawbacks commonly imputed to accrual based taxation (such as liquidity problems that could force some taxpayer to dispose the asset in order to pay the tax) appear to have been of secondary order importance in the Italian context due to the low level of tax rates. These issues will arise more forcefully in a tax system where capital income is taxed at high and progressive tax rates. Furthermore, in such a framework it would be quite hard to defend limitations on the deductibility of capital losses from other sources of income. This in turn would raise doubts on the effective yield of the tax.

At the same time the Italian experience suggests that tax revenues (and especially tax credits) under an accrual regime can be very volatile and can give rise to serious problems particularly if accrual taxation is applied to the income of collective investment vehicles.

Retrospective capital gain taxation is the requisite complement to the accrual based taxation implemented on managed accounts. The demise of the “equaliser” is a warning signal that should be taken seriously: there exists a gap between the methods and concepts used by economists in analysing issues like the “lock-in” effect and the methods and concepts that can be used in the political and legal arena for upholding ex-post adjustments of realised income. Even the more sophisticated adjustments such as those put forward by Auerbach are not immune from political pressures and “ex-post” equity considerations. When accrual and retrospective capital gains taxation are both implemented, as in the Italian case, an individual that had invested in a asset yielding below-normal return and taxed according the to Auerbach method could legitimately complain of being discriminated with respect to investors taxed on an accrual basis. As the ruling of the Italian tax tribunal regarding the constitutionality of the “equaliser” suggests, it is difficult to argue in the political arena that net-returns would have been the same as under the accrual system if portfolio allocations had been changed as would be dictated by rational behaviour.

authorities to introduce a complex system of refunding of tax for foreign investors.

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Table 1: Final withholding taxes on Italian financial assets

Instruments	Tax treatment	Rate	Frequency of Assessment
Sight deposits		30.0%	Annual
Time deposits(<18 months)		25.0%	
Certificates of deposit	Withholding tax		Annual
< 3 months		30.0%	
>3 and <18 months		25.0%	
> 18 months		12.5%	
Commercial paper	Withholding tax	15.0%	Annual
Bankers' acceptances	Withholding tax	15.0%	Annual
Italian government bonds	Withholding tax	12.5%	Annual accrued daily
Bonds issued by special credit institutions	Withholding tax	12.5%	Annual
Bonds issued by qualifying international institutions (e.g. IBRD, EIB etc.)	Withholding tax	exempt	Annual
Corporate bonds	Withholding tax		Annual
listed companies		12.5%	
convertible		12.5%	
non-listed companies		30.0%	
Mutual funds	Wealth tax	0.25%	Annual accrued daily
"Atypical" instruments	Withholding tax	30.0%	Annual
Preferred ("savings") share dividends	Withholding tax	15.0%	Annual
Ordinary dividends	Personal income tax with tax credit	10-52%	Annual
Life assurance	Premiums deductible from income tax up to ceiling; Special tax withholding	10-52%	Deferred until maturity

Table 2: Distribution of Italian Households' Financial Assets: 1980-2000

	(in percentages)				
	1980	1985	1990	1995	2000
Currency and sight deposits¹	27.47	20.76	12.10	18.86	14.64
Other Deposits	36.72	28.11	23.72	21.29	9.93
Bills and short-term notes	9.28	13.60	13.21	9.63	0.98
Bonds	7.95	17.91	18.82	21.08	18.86
Shares and other participations	10.04	10.77	20.21	14.36	25.41
<i>of which domestic listed shares</i>	n.a	n.a	n.a	n.a	9.06
Mutual funds		3.36	2.41	4.00	17.23
<i>of which: domestic</i>		n.a	n.a	3.66	15.49
<i>Foreign</i>		n.a	n.a	0.34	1.74
Life insurance²	5.97	5.26	9.13	10.34	12.52
Other financial assets	2.58	0.22	0.38	0.44	0.43
TOTAL	100.00	100.00	100.00	100.00	100.00
Memo: Financial assets held in managed accounts					11.74 ³

Source: Banca d'Italia

The data exhibit major breaks in series. In 1990, the definition of "shares and other participations" was expanded to include unlisted equity holdings. The other major break in series occurred in 1995 and was due to the introduction of the new SEC national accounting which adopted end-period market valuations. At that date unincorporated businesses were excluded from the household sector. In addition there are a number of minor breaks in series, such as those regarding life insurance policies and the breakdown for shares listed on stock exchanges.

¹ As of 1995 free savings deposits have been shifted from "other deposits" to "sight deposits".

² As of 1995 pension funds have been re-allocated from "other financial assets" to "life assurance".

³ Excluding life insurance and unlisted shares and participations managed portfolios accounted for 25% of households' financial assets.

Table 3: A comparison of the three tax regimes

Type of income	REGIME		
	Personal Income Tax	Administered Accounts	Managed Accounts
Capital Income 1. Basis of assessment 2. Computation and payment	Realisation. Capital income is reported in annual tax return but is subject to separate flat rate of tax. Dividends from qualified investment must be reported in annual tax return.	Realisation Authorised intermediary (custodian or administrator of account) withholds tax on each individual source of capital income.	n.a.
Other income (Capital Gains) 1. Basis of assessment 2. Computation and payment 3. Loss offsets	Realisation Gains and losses are reported in annual tax return but are subject to a separate flat rate of tax. Gains/losses on ordinary assets and “qualified” holdings are taxed separately. Capital losses can be fully offset against capital gains. Capital losses cannot be offset against capital income (i.e. dividends, interest etc.)	Realisation. Authorised intermediary (custodian or administrator of account) calculates gains and losses for each individual security held in account. Authorised intermediary can offset gains and losses in each account. Net gains in one account can be offset against net losses in another account if positions are declared in annual tax return. Capital losses cannot be offset against capital income (i.e. dividends, interest etc.).	n.a.
Operating income 1. Assessment 2. Computation	n.a	n.a	Accruals: Capital income and other income for each asset are calculated separately. The net income resulting from these two calculations is summed together. This value net of any costs (e.g. management fees and other expenses) is defined as operating income. Tax payment is net of any tax credits.
Tax rates	27%: income from “qualified” investments and from securities with an original maturity of less than 18 months. 12.5% all other income	27% : income from securities with an original of less than 18 months 12.5%: other income	12,5%
Carryforward provisions	4 years	4 years	4 years
“Equaliser”	Yes	Yes	No
Tax monitoring*	Yes	No	Yes
Anonymity	No	Yes, unless full loss offset across accounts is sought by declaring positions in annual tax return	Yes

* Tax authorities can question the data provided by taxpayers in their tax returns.

Table 4: Revenue from capital income and capital gains taxes in Italy
(in millions of Euro)

	1998	1999	2000
Withholding taxes on capital income	9,806	7,780	6,241
<i>of which withholding tax on interest</i>	5,743	3,459	3,696
Capital gains tax under the tax return and administered portfolio regimes	543	1,715	3,153
<i>of which capital gains realised before July 98</i>	338	335	42
<i>capital gains realised after July 98</i>	205	1,380	3,111
Tax on operating income	212	1,525	7,868
<i>of which mutual funds</i>	208	1,026	6,895
<i>individual managed accounts</i>	5	499	973
Total	10,562	11,020	17,262

Source: Ministry of the Economy and Finance

Table 5: Effective tax rates – holding period: five years

	Securities traded on regulated exchanges			Securities not traded on regulated exchanges			Foreign mutual funds regulated under the European Directive		
A. Riskless rate equal to mean return									
	Standard deviation (σ)								
Mean return (δ)	0.05	0.1	0.25	0.05	0.1	0.25	0.05	0.1	0.25
0.02	12.66%	12.98%	14.03%	12.56%	12.72%	13.28%	14.02%	16.95%	35.77%
0.03	12.61%	12.89%	13.91%	12.54%	12.66%	13.20%	13.86%	16.00%	29.23%
0.04	12.57%	12.82%	13.80%	12.54%	12.63%	13.13%	13.84%	15.58%	25.99%
0.05	12.55%	12.76%	13.70%	12.56%	12.61%	13.08%	13.88%	15.36%	24.08%
0.06	12.53%	12.71%	13.60%	12.58%	12.61%	13.03%	13.96%	15.26%	22.84%
0.07	12.52%	12.67%	13.51%	12.60%	12.63%	13.00%	14.06%	15.22%	21.97%
B. Riskless rate equal to 2%									
	Standard deviation (σ)								
Mean return (δ)	0.05	0.1	0.25	0.05	0.1	0.25	0.05	0.1	0.25
0.02	12.66%	12.98%	14.03%	12.56%	12.72%	13.28%	14.02%	16.95%	35.77%
0.03	12.36%	12.55%	13.22%	12.31%	12.40%	12.75%	13.86%	16.00%	29.23%
0.04	12.12%	12.24%	12.72%	12.10%	12.15%	12.39%	13.84%	15.58%	25.99%
0.05	11.90%	11.99%	12.35%	11.90%	11.93%	12.11%	13.88%	15.36%	24.08%
0.06	11.70%	11.76%	12.04%	11.71%	11.73%	11.86%	13.96%	15.26%	22.84%
0.07	11.51%	11.55%	11.78%	11.53%	11.54%	11.64%	14.06%	15.22%	21.97%

Table 6 Effective tax rates - holding period: ten years

Securities traded on regulated exchanges				Securities not traded on regulated exchanges			Foreign mutual funds regulated under the European Directive		
A. Riskless rate equal to mean return									
	Standard deviation (σ)								
Mean return (δ)	0.05	0.1	0.25	0.05	0.1	0.25	0.05	0.1	0.25
0.02	12.75%	13.32%	15.63%	12.57%	12.78%	13.79%	14.04%	16.66%	33.68%
0.03	12.66%	13.14%	15.26%	12.59%	12.72%	13.60%	13.97%	15.97%	28.18%
0.04	12.60%	13.01%	14.97%	12.65%	12.72%	13.48%	14.01%	15.68%	25.55%
0.05	12.56%	12.90%	14.72%	12.73%	12.77%	13.41%	14.10%	15.56%	24.03%
0.06	12.54%	12.82%	14.51%	12.82%	12.85%	13.38%	14.23%	15.53%	23.05%
0.07	12.53%	12.75%	14.31%	12.94%	12.95%	13.39%	14.39%	15.56%	22.38%
B. Riskless rate equal to 2%									
	Standard deviation (σ)								
Mean return (δ)	0.05	0.1	0.25	0.05	0.1	0.25	0.05	0.1	0.25
0.02	12.75%	13.32%	15.63%	12.57%	12.78%	13.79%	14.04%	16.66%	33.68%
0.03	12.13%	12.45%	13.84%	12.09%	12.18%	12.76%	13.97%	15.97%	28.18%
0.04	11.63%	11.82%	12.78%	11.65%	11.69%	12.07%	14.01%	15.68%	25.55%
0.05	11.18%	11.31%	12.01%	11.24%	11.26%	11.53%	14.10%	15.56%	24.03%
0.06	10.77%	10.86%	11.39%	10.85%	10.87%	11.06%	14.23%	15.53%	23.05%
0.07	10.39%	10.45%	10.87%	10.49%	10.50%	10.64%	14.39%	15.56%	22.38%

**Table 7. Effect of the equaliser on abnormal trading: dependent variable
“standardised” abnormal trading volume in December 2000^a**

	All shares with EQU ^a >1	Shares with $EQU > 1$ and with terminal value higher than value at 01/July/1998	Shares with $EQU > 1$ and with terminal value lower than value at 01/July/1998
<i>EQU</i>	0.2366 (0.1325) [0.076]	0.4579 (0.1764) [0.011]	0.0380 (0.0670) [0.575]
<i>Constant</i>	-3.6945 (0.7647) [0.000]	-4.1122 (1.022) [0.000]	-2.9432 (0.6177) [0.000]
Observations	137	102	35
R-squared	0.0012	0.0109	0.0004

White-corrected standard errors and p-values respectively in round and squared brackets

^aSee text for definition of this variable

^a When a share has appreciated in the period beginning July 1, 1998 and ending on December 31, 2000, the variable *EQU* measures the percentage increase in taxable income resulting from the “equaliser”. It is defined as the ratio of the “equalised” tax liabilities to ordinary realisation based taxes. When the share price has fallen in the same period *EQU* measures the reduction in deductible losses resulting from the “equaliser”. In this case it is defined as the *reciprocal* of the ratio of the “equalised” tax liabilities to ordinary realisation based taxes. When *EQU* is greater than one, investors have an incentive to realise their gains or losses and purchase the same security to create a new basis.