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Italy: The Search for a Sustainable PAYG Pension System

By

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Abstract

During the 1990s the reform of the pension system had been at the core of the effort to consolidate Italian public finances and ensure long-term fiscal sustainability. The reform process began in 1992 when a quarter of perspective public sector pension liabilities was abruptly cancelled. A second major reform, in 1995, aimed primarily at reducing distortions in the labour market and at making the system more fair.

This latter reform began a shift from a defined benefit to a defined contribution system. The Italian system will remain on a PAYG basis, but each individual will hold a notional social security account. Pensions will be related to accumulated contributions and to retirement age. The introduction of the defined contribution pensions aims at mimicking the incentive effects of funded pensions, while avoiding the need to pre-fund future liabilities.

Over the last decade, pension expenditure trends have been substantially adjusted down. Microeconomic incentives have been improved. Distributive effects have been largely redesigned. However, the reform process is not yet over. Italian pension spending, which is proportionally higher than that in any other western industrial country, is still expected to increase as a share of GDP. This also depends on the very low fertility rate and the relatively high life expectancy. Moreover, some reforms have been implemented without adequate analysis of their implications and they include solutions which may result unsustainable in the long-run.

This lengthy reform process generates uncertainty, limits the microeconomic benefits of the actuarial approach introduced by the 1995 reform, and induces elderly workers to retire from the work-force as soon as they are in the condition to for fear of possible cuts in benefits. An actuarially based pension system, such as that introduced in Italy in 1995, can deliver the expected labour market benefits only if the link between contributions and benefits is transparent and perceived as stable by citizens. This may not be the case in Italy, where a large number of workers are not affected by the new pension regime and where public opinion expects further reforms.

Contents

1   Introduction

The reform of the pension system is at the core of the effort to ensure fiscal consolidation and long-term fiscal sustainability in Italy. Pension spending is proportionally higher than in any other western industrial country (15.7% of GDP in 1999) [1] and the fertility rate is among the lowest (1.2 children per woman of childbearing age). The ratio of the elderly to the working age population is expected to increase from 21% in 1990 to about 30% in 2010 and 48% in 2030; it will be among the highest in the world. These problems are compounded by the high public debt, which requires Italy to run sizeable primary surpluses in order to comply with the fiscal rules introduced for European Monetary Union.

Pension reform is also an important component of any policy aimed at improving the functioning of the labour market, namely at increasing the present low participation rate. Since the incidence of pensions on total social spending is very high (70%), it is also a precondition for implementing policies which may increase public support for the non-elderly groups of citizens and finance additional spending on long-term care.

The reform process began in 1992. After decades of myopic policy-making, about a quarter of perspective public sector pension liabilities was abruptly cancelled. A second major reform was introduced in 1995. These reforms were supplemented by numerous minor changes in legislation. The process is not yet completed. There is a widespread consensus that additional changes should be introduced in the PAYG pillar. New reforms are also envisaged for the supplementary funded schemes, which are at present rather underdeveloped. Even if a supplementary funded pillar has been considered a necessary component of the reform since 1992, its development has been extremely slow.

This paper examines the reforms implemented so far and considers the problematic aspects of current arrangements. It presents the main policy options under consideration and considers the issue of funding. The paper argues that the reforms implemented in the 1990s, under the pressure of budgetary constraints, have gone a long way towards limiting expenditure growth. Progress has been achieved in improving the effects of the pension system on the labour market and in making redistributive effects less erratic.

However, the reforms include solutions which may result unsustainable in the long-run. The lengthy reform process generates uncertainty, limits the microeconomic benefits of the actuarial approach introduced by the 1995 reform, and induces elderly workers to retire from the work-force as soon as they are allowed to for fear of possible cuts in benefits. The combination of defined-contribution PAYG pensions with increasingly important defined-contribution funded pensions may also prove problematic.

Section 2 outlines the main features of the development of the Italian pension system. Sections 3 and 4 respectively examine the reforms implemented in 1992 and 1995. The role of funded schemes is considered in Section 5, whereas Section 6 considers some critical aspects of the framework set up by the recent reforms. Section 7 examines the main additional reforms at present under consideration. Section 8 concludes.

2   History up to the 1980s

The history of the Italian pension system is in many ways similar to that of other continental Europe systems[2]. The first pension plans were established for public employees

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[1]   International comparisons of pension expenditure are influenced by differences in the definition of pension benefits. They are also affected by the structure of national social protections systems. For example, in the case of Italy pensions have been extensively used to substitute other benefits. Moreover the net burden on public sector finances depends on the tax regime of pensions.

[2]   For a general view of the development of the Italian social security system see CNEL (1963), Fausto (1978), Ferrera (1984), Ascoli (1984); for the pension system see INPS (1970), Castellino (1976), Morcaldo (1977), Pizzuti (1990).

in the second half of the nineteenth century. A voluntary pension scheme for private employees was introduced in 1898 and was made compulsory in 1919. The scheme, which was a funded one, was managed by INPS (the National Social Security Institute). It was financed by a payroll tax and provided old age and disability benefits based on paid contributions. Pensions were calculated on the basis of rules which worked in favour of workers with relatively short contribution records and lower earnings. Survivors benefits were introduced in 1942.

In the aftermath of the Second World War the funded schemes were unable to sustain the costs of pension benefits. This was due to the effects of inflation and to the use of pension fund assets to support government finances. Only a small part of assets was invested in shares and real estate (about 5% in 1939; see Beltrametti and Soliani, 1999). Out of necessity and in haphazard fashion, Italy shifted to the PAYG system. The transition came to an end in 1952, when new rules were eventually introduced. A guaranteed minimum pension level was also introduced (Franco and Morcaldo, 1989).

The resulting regulatory framework remained comparatively stable for a number of years. However, as the system gradually approached its full application there was a considerable increase in the number of pensions. By the end of the fifties, a period of far-reaching and frequent changes began, setting the ground for the rapid expansion of expenditure experienced in the following decades. Public pension coverage was extended to the self-employed[3], to work-disabled citizens (in 1966) and to elderly persons with low incomes (in 1969). In 1969 pension entitlements for private sector employees shifted from the old contribution-based formula to an earnings-based one. The change was a decisive step towards guaranteeing pensioners a standard of living correlated with that of active workers. Seniority (long-service) pensions, which can be taken at any age provided that the worker has a minimum contributory period, were established in 1956 for public sector employees and in 1965 for private sector employees and self-employed workers[4]. No evaluation of budgetary costs was carried out while introducing these reforms, which altogether have been estimated to involve a net transfer to living generations of about 80% of GDP (Castellino, 1996).

The innovations of the 1970s were less sweeping, affecting mainly the indexation mechanisms, which had been introduced in 1969 and put into force in 1971. On account of the unequal protection afforded by the various indexing systems, the effects of the decade's high inflation on purchasing power varied from one class of pensioners to another. The recipients of higher benefits were hardly hit;[5] the failure to adjust the ceiling on pensionable earnings (introduced in 1968) generated additional disadvantages for high-income workers.

During the 1960s and the first half of the 1970s the social assistance functions of the pension system were extended. Pensions were used to provide income support to people working in agriculture, in the country's poorer regions and to elderly workers with short contributory periods. Pension expenditure helped in easing social conflicts, first when the farming and the South were unable to keep up with the growth in industry and in northern regions (see Becchi Collidà, 1979 and Fausto, 1983) and later when the slowdown in economic growth exacerbated conflicts over income distribution. This enlargement of the welfare aspect was achieved partly through the introduction of new entitlements (welfare benefits for persons over 65 lacking adequate means of support and for the disabled) and partly through the abuse of existing ones (such as, for example, social security disability

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[3] Special schemes (managed by INPS) were introduced for self-employed farmers in 1957, for artisans in 1959 and for other self-employed businessmen (mainly shopkeepers) in 1966.

[4] For public sector males and females workers the required period was respectively set at 25 and 20 years. In 1973 the period was reduced to 20 and 15 years. For private sector workers it was set at 35 years.

[5] These effects were primarily due to the indexation mechanism involving lump sum increases, rather than proportional increases, for private sector employees pensions above the minimum level and for public sector pensions. Each pensioner received the same increase in nominal terms whatever the level of the pension. See Morcaldo (1977).

pensions[6]). However, the improper use of disability pensions, which also came to serve as a substitute for adequate unemployment benefits (Regonini 1984), produced uncontrolled redistributive effects, especially because of: (i) the possibility of drawing multiple pensions or cumulating pensions and earned income, (ii) the lack of strict eligibility requirements for benefits, (iii) the lack of requirements linked to effective participation in the labour force. Citizens' efforts to reap disability benefit found the authorities basically receptive. There was no systematic, attentive examination of applications and regular use of the instruments available to help beneficiaries to find jobs. Several studies assert that disability pensions have long been a tool of political patronage (see Ferrera, 1984 and Vitali, 1984). Between 1965 and 1975 disability pensions represented 40% of the new pensions paid to private sector employees and 70% of those paid to the self-employed. The number of disability pensions increased from 2 million in 1960 to 7.2 in 1980, far exceeding the number of old-age pensions (see figure 1).

Figure 1 Number of Pensions

(in thousands)
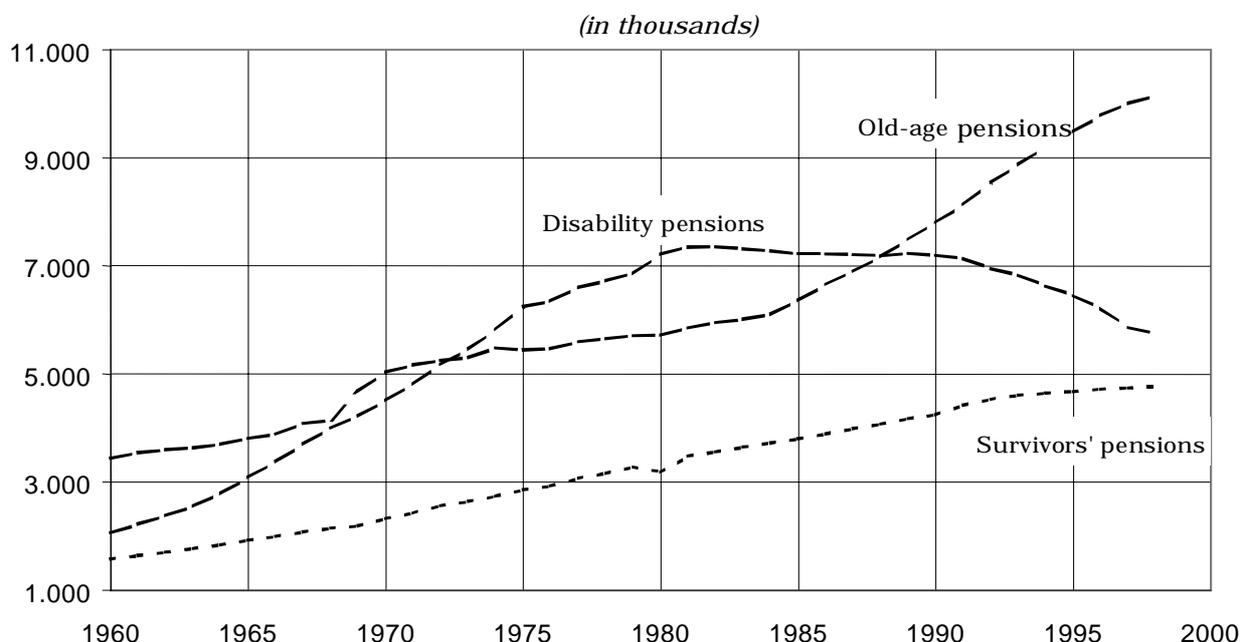
The 1980s saw the first steps towards rationalising the rules, prompted by increasing expenditure on retirement provisions, the difficulties of the public finances, and certain glaring inequities in the distributive effects of pension plans. In 1983 means testing was introduced for eligibility to the minimum pension level and to disability pensions, and administrative verification of continued entitlement to welfare old age benefits was initiated. In 1984 the eligibility requirements for disability pensions were tightened: the criterion for eligibility was changed from loss of earning capacity to work disability. The flow of new disability pension was rapidly reduced[7]. In the same year the indexation system was made

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[6] It should be noted, in particular, that the possibility to obtain a disability pension often depended not so much on a real inability to work as on the inability to earn an income, to be assessed in the light of the socio-economic conditions of the applicant's province of residence. See Franco and Morcaldo (1990).

[7] The number of new disability pensions paid by INPS went down from 0.4 million per year in the early 1970s to 0.1 million in the mid-1980s. See Franco and Morcaldo (1990).

uniform[8]. The ceiling on pensionable earnings was abolished in 1988. However, lower accrual factors were applied for earnings above the former ceiling.

In 1990 the pension schemes for self-employed farmers, artisans and other businessmen were reformed. While previously these groups could not receive pensions higher than the guaranteed minimum level, under the new rules they were gradually granted pensions proportional to their average earnings over the last 10 years of work with the same accrual factor (2%) applied to employees. The reform increased by about 75% the expenditure level expected for the year 2010 (INPS, 1989 and 1993) and accelerated the increase in the equilibrium contribution rates of the three schemes. For instance, the rate of the artisans' scheme was expected to increase from 12.7% in 1992 to 33.7% by 2010.

In spite of frequent calls for a general reform of the pension system, no large-scale reform containing expenditure growth was introduced in the 1980s. Prospective expenditure was further increased by the decision to raise the benefits for the self-employed. Frequent changes in the rules concerning initial pension awards introduced additional disparities: persons with the same work history who had retired in different years often had substantially different benefits. Moreover, as mentioned above, the previous indexation system in a period of high inflation had increased the purchasing power of some pensions and severely reduced that of others. This situation prompted a decision to increase the level of the latter category of pensions. This action substantially contributed to increase expenditure levels and was not unproblematic from an equity point of view.

The need to reform the Italian pension system was clearly recognised by several experts from the late 1970s. In 1981 this need was stressed in a Report of the Ministero del Tesoro (Ministry of the Treasury), which also outlined some reform guidelines. The first long-term forecast of Italian pension expenditure carried out in the same years pointed to substantial increases in the ratio of pension expenditure to GDP (see Morcaldo, 1977 and Ministero del Tesoro, 1981). It was apparent that the benefit and the demographic structures were mutually incompatible and that gradual cuts in benefits would have eased the burden of the reform (in terms of changes in citizens' expectations) and, hence, softened the opposition to it. However, no action was taken for a long time, in spite of high expenditure, perspective large imbalances and fast ageing.

Several factors delayed the implementation of the pension reform: the long-term nature of pension contracts, the short-term perspective of Italian politics, the lack of uncontroversial projections and agreement on the direction of reform, the segmentation of the Italian pension system and the high level of the pension wealth.

The long-term nature of implicit pension contracts and the large number of elderly citizens make difficult the introduction of pension reforms in any country. However, reforms can be implemented gradually while avoiding abrupt reductions in expected benefits. This approach, which limits opposition to changes, may work only if both government and public opinion take a long-term view of budgetary issues and if long-term expenditure projections are available and provide unequivocal indications.

This was not the case in Italy. Due to a number of political reasons, inter alia the frequent changes in government, policy-makers took a short-term view of public finance developments (see Sartor, 1998). Moreover, for some time there was also no general agreement on pension expenditure trends and on the size of the prospective deficits of pension schemes. Franco and Morcaldo (1986) projected a large rise in the equilibrium contribution rate of the private sector employees' scheme, while Alvaro, Ricci and Pedullà

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[8]   In 1984 the mechanisms of price-indexation were standardised. Since that year coefficients for price indexation vary with the size of the pension: up to twice the guaranteed minimum pension, benefits are raised in line with the change in prices; for those between two and three times this minimum level, the increase is equal to 90% of the change; for those above three times the minimum level, the increase is equal to 75% of the change. From 1984 to 1992 all pensions awarded to employees were also linked to real wage increases (from 1988 to 1992 for the pensions of self-employed workers). Welfare pensions were not adjusted to the dynamics of earnings.

(1987), INPS (1989) and Ministero del Tesoro (1988) projected a limited increase.[9] According to these projections the pension system was already approaching maturity and the ageing process could be partially offset by a large increase in female labour force participation. Therefore, it was argued that the need for corrective measures was limited. Only in the early 1990s did it become apparent that this optimistic view was not consistent with actual expenditure trends. All available projections concurred on the seriousness of the situation. Both INPS (1991) and Ministero del Tesoro (1991) pointed to alarming trends. Later projections, carried out after the 1992 pension reform presented even more worrying pre-reform expenditure trends. INPS (1993) estimated that without the reform the equilibrium contribution rate of the scheme for private sector employees would have risen from 42% in 1992 to 54% in 2010. Ministero del Tesoro (1994a) forecast the rate to be 50% in 2010 and 60% in 2025. It also estimated that the equilibrium rate for public sector employees' schemes would have risen from 40% in 1994 to 73% per cent in 2010.

Moreover, during the 1980s there was no agreement on the directions of reform. Some proposals supported a radical move from the public PAYG system to a private funded system. These proposals met with the intimidating problems of transition and with the lingering uneasiness about funded systems stemming from their crisis in the 1940s. Proposals were also made to abandon the rule of proportionality between pension and salary and to introduce a system in which each elderly citizen would receive the same benefit financed out of general revenues (Paci, 1987). Such a reform would have required a difficult switch from social security contributions to other sources of revenue. It would also have represented a complete reversal of the traditional role assigned to Italian pensions. In the end, all plans for radical changes met strong opposition and were rejected.

The reform process was also hampered by the segmentation of the Italian pension system. The system involved sizeable differences in benefits between categories of recipients. Categories with less favourable treatment (e.g. private sector employees) accordingly opposed any reduction in their benefits in the absence of an even more pronounced reduction in the benefits of the more privileged categories (e.g. public sector employees). [10] This meant that pension reform should have imposed different burdens on different categories and should have abrogated a large number of special benefit programmes set up over the years. The reform proposals got lost in the intricacies of the system till financial constraints developed a strong pressure for harmonisation.[11]

The size of citizens' pension wealth and the large number of pensioners may also have contributed to stop the reform process. Trade unions were particularly active in defending pensioners and perspective pensioners. This situation was closely related to the increasing weight of pensioners in trade unions. In 1980 pensioners represented 18% of total union members, in 1991 they were up to 40%, with a peak of 48% in the main union (Peracchi and Rossi, 1998).

3   The 1992 Reform

The situation radically changed in 1992, when the pension formula and the eligibility conditions were extensively modified under the pressure of the exchange rate crisis and the urgent need to curb the deficit. [12] Before examining the main features of the reform, it is useful to briefly overview the three main factors underlying the reform: the increase in projected outlays, the adverse effects of the pension system on the labour market, and its widespread distributive anomalies and inequities (see Banca d'Italia, 1991; Franco and Frasca, 1992).

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[9]   On this debate see Gronchi (1989).

[10]   See Vitaletti (1990).

[11]   See "Commissione per l'analisi delle compatibilità macroeconomiche della spesa sociale" (1997). The governmental Committee, in examining the reform of the Italian welfare state, noted that the harmonisation was a prerequisite for pension reform.

[12]   The role of external constraints in Italian fiscal and labour market policies is examined in Ferrera and Gualmini (1999).

Public expenditure on pensions: 1960-1998
(percentage of GDP)
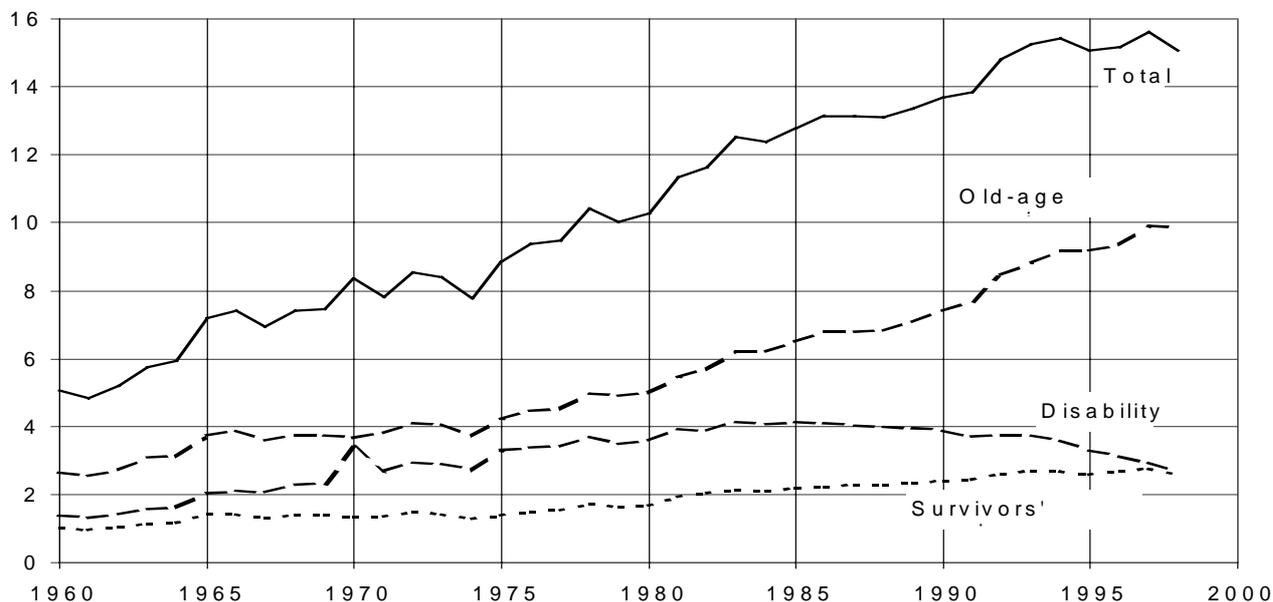
(a)   Expenditure trends. Pension expenditure increased from 5.0% of GDP in 1960 to 7.4% in 1970, 10.2% in 1980, and 14.9% in 1992 far outstripping the growth of the other items of social spending, which only increased from 5.1% to 6.7% of GDP between 1960 and 1970 and from 6.7% and to 7.3% between 1980 and 1992 (Figure 2). Only a limited part of the increase in pension expenditure can be imputed to demographic factors, the most part being accounted by the extension and the maturation of the system. Expenditure was expected to increase further and get close to 25% of GDP by 2030. According to Ministero del Tesoro (1994a), the equilibrium contribution rate for private sector employees was set to increase from 44% in 1995 to 50% in 2010 and 60% in 2025. The pension formula, the eligibility conditions and the indexation rules granted rates of return which were considerably higher than the rate of growth of the social security tax base (Ministero del Tesoro, 1994b; Padoa Schioppa Kostoris, 1995). Demographic changes accounted for about 20% of the increase of the GDP ratio of total pension expenditure and for about 40% of the increase in the GDP ratio of the old-age pensions over the period 1960-90. The eligibility ratio increased by 60%; the dependency ratio by 47% and the transfer ratio by 18% (see Figure 3 - Franco, 1993a). According to Rossi and Visco (1995), about 50% of the decline in the Italian private sector saving ratio in the period 1954-1993 can be attributed to the extensive development of the pension system.

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Figure 3 Breakdown of Change in the Ratio of Public Pension Expenditure to GDP:
1960-1998 (1960 = 1)
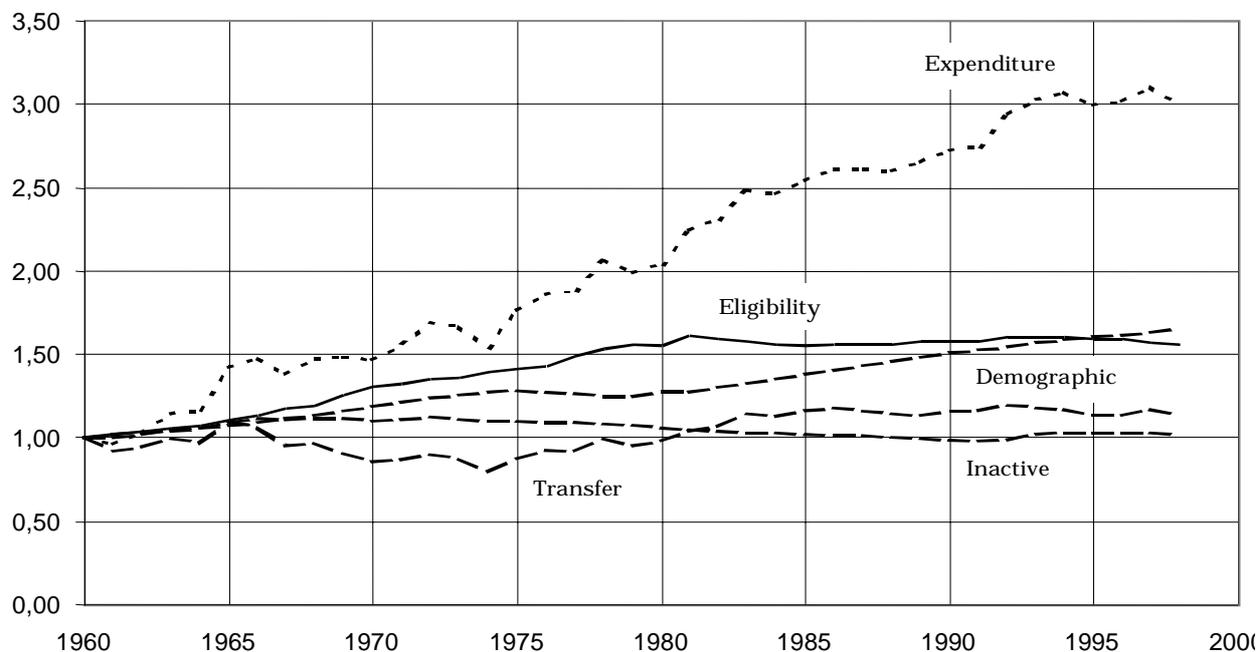

(1) For the methodological aspects, see Franco (1993a).

(b)   *Equity considerations*. The rate of return on contributions was extremely uneven for several reasons (Gronchi and Aprile, 1998). The reference period for calculating pensionable salary (the last pay-check for public employees, the last five earning years for the private sector) worked in favour of those whose earnings had risen most rapidly towards the end of their careers. On the other hand, low pensions were raised to the guaranteed minimum level while high income workers were attributed lower accrual factors. Public sector employees and the self-employed had very advantageous rules.[13] The standards for the means testing of certain benefits and the rules on cumulability of more than one pension had conflicting effects on income distribution. Because of the structure of the pension formula, other things being equal, the purchasing power of private sector employees' pensions was inversely proportional to the inflation rate in the year prior to the year of retirement. After the initial award, medium-level and larger pensions lost purchasing power in proportion to inflation, which thus continued to affect the relative value of retirement benefits. While the increase in outlays was accompanied by a sharp improvement in the economic conditions of the elderly and of pension beneficiaries in general,[14] it also constrained the resources available for other social policies (Figure 4).

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[13]   See the estimates presented in Castellino (1996) and in Peracchi and Rossi (1998). The latter authors estimate that the rates of return on the contributions paid by the self-employed were 2 to 3 times higher than those on the contributions paid by private sector employees.

[14] The poverty rate for households headed by individuals older than 65 had steadily declined over the 1970s and 1980s. Although households headed by a pensioner remained slightly more likely to be poor (13% in 1987 as against 11% for other households), the difference between actual income and the poverty line was smaller for the former households (a gap of 19% in 1987, as against 28%). See Cannari and Franco

In this situation, expenditure control was closely linked to the reduction of differences in the

Figure 4 Poverty Rates by Age: 1980-1995

(1) Source: Cannari and Franco (1999).
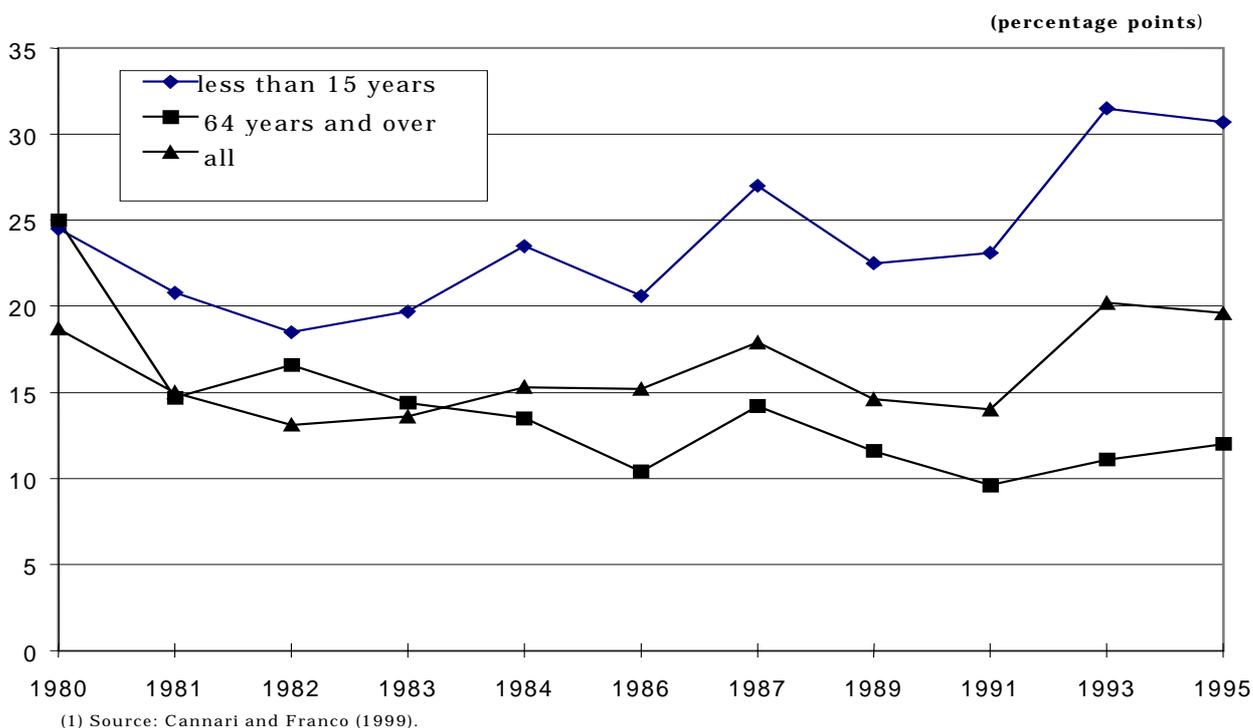
rules applying to the different groups of workers. For instance, private sector employees would not have accepted a reduction in entitlements if the special provisions granted to public sector employees were not limited. The issue of harmonisation remained at the core of the policy debate through the 1990s, when the debate gradually shifted from harmonisation across workers of different sectors to harmonisation across different age-groups.

The main features of the reform, which aimed at limiting the public pension expenditure to GDP ratio at its 1992 level, were the following (see Table 1):[15]

(i)   The age of retirement was raised (over ten years) from 55 to 60 for women and from 60 to 65 for men in private employment.

(ii)   The reference period for calculating pensionable earnings was lengthened (over ten years) from 5 to 10 years; for younger workers – those with less than 15 years of contributions in 1992 - it was extended to the whole working life; past earnings were to be revalued at a rate equal to the rise in the cost of living plus one percentage point per year.

(iii) The minimum number of years of contributions giving entitlement to an old-age pension was raised (over ten years) from 15 to 20.

(iv)   The reference index for pension benefits indexation was changed from wages to prices; government was allowed to introduce discretionary additional adjustments through the Budget.

(v)   The minimum number of years of contributions required for public sector employees to be entitled to a seniority pension was gradually raised to 35 (i.e. to the requirement already in effect for private sector workers' seniority pensions).

(1990). These trends continued in the following years (see Cannari and Franco, 1997 and 1999). On the distribution of pension benefits see Baldacci and Inglese (1999) and Peracchi (1999).

[15]   The reform is examined in Franco (1993b) and Vitaletti (1993). Baldacci and Tuzi (1999) examine the impact on public expenditure of the reforms implemented in the period 1992-97.

Table 1 Main Features of the Italian Pension System

	up to 1992	2000-08	after 2010
Old age pension requirements			
-Private sector employees	60 M 55 F	All workers: 65 M 60 F	All workers: 65 M-F Actuarially discounted
-Public sector employees	65 M – F		pensions between 57 and 64; retirement
-Self employed	65 M 60 F		allowed if pension exceeds threshold
Seniority pension Requirements			
-Private sector employees	35yrs of contribution At any age	35yrs of contribution *and* 57yrs of age *or* 37 →40 yrs of contribution	abolished
-Public sector employees	20/25 yrs of contribution At any age	same conditions required for private employees	abolished
-Self employed	35yrs of contribution At any age	35yrs of contribution *and* 58 yrs of age *or* 40 yrs of contribution	abolished
Indexation	Consumer Price Index + Changes in real wage	Consumer Price Index	Consumer Price Index
Benefit Determination	2% (or more for Special categories) of Reference wage per Year of contribution	Gradual transition between "up to 1992" and "after 2010" rules	Annuity determined according to life expectancy and lifetime contributions capitali- zed at rate of growth of nominal GDP
e **Reference wage** - Private sector - Public sector	Last 5 yrs wage Final wage	Last .....→Whole career Last .....→Whole career	not relevant not relevant

Moreover, in order to immediately restrain public expenditure, the adjustment of pensions to price dynamics was temporarily limited and the disbursement of new seniority pensions was curtailed. [16]

The parametric reform implemented in 1992 substantially changed the outlook for pension expenditure. At least a quarter of net pension liabilities was cancelled. According to Beltrametti (1994), total outstanding liabilities were reduced from 389% to 278% of GDP (a 29% cut – see Figure 5). [17] Rostagno (1996) estimates that the liabilities of the scheme for private sector employee were reduced by 27%. The cuts were unevenly distributed. Rostagno estimates reductions of 8% for pensioners, 42% for male workers, 94% for female workers,

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[16] Additional reforms were introduced in the following years. In particular, they accelerated the gradual increase in retirement age and restricted the special eligibility conditions applying to public sector employees.

[17] Beltrametti takes into consideration different definitions of pension liabilities. The estimates presented in this paper refer to the present value of pensions to be paid in the future on the basis of accrued rights to pensioners and existing workers, net of the contributions that the latter will pay under current rules.

37% for workers with long contributory records, 42% for those with short or discontinuous records.

The reform also started a gradual harmonisation of pension rules and, by relating the pension levels of younger workers to lifetime contributions, strengthened the link between contributions and benefits. However, it did not tackle the issue of seniority pensions. This substantially reduced the impact on effective retirement age of the increase in the age-limit for old-age pensions. Moreover, the exclusion of individuals with at least 15 years of contributions from changes in the pension formula implied a long transition period and an uneven distribution of the reform burden.

By breaking the deadlock of Italian pension policy and immediately restraining expenditure increases, the reform set the conditions for better planned and more systematic changes.

Figure 5 Pension Expenditure and Public Pension Liabilities
(percentage of GDP)
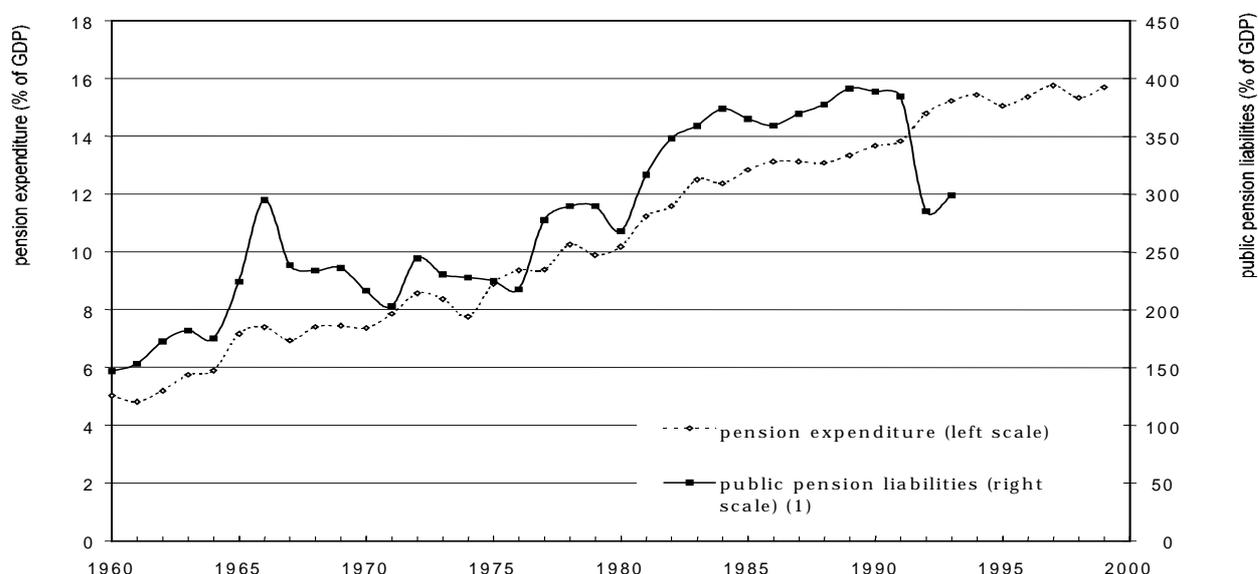
(1) Source: Beltrametti (1996)

In spite of the 1992 reform, expenditure prospects remained rather worrying. In 1995 both INPS and the Ministero del Tesoro released projections which were more worrying than those carried out in the two previous years.[18] These expenditure prospects and the high level of equilibrium contribution rates pointed to the need for a new major reform,[19] which was introduced in 1995.[20]

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[18] In 1995 both INPS (the projections are reported in Senate of Italy, 1995) and the Ministry of Treasury released more unfavourable projections. In spite of the 1992 reform, INPS expected the equilibrium contribution rate for private sector employees to remain stable at its 1995 level (49%). According to Ministero del Tesoro (1995a), this rate would decline from 47% in 1995 to 42% in 2010 and then increase to 46% in 2030. The equilibrium contribution rates of the schemes for the self-employed workers were also revised upwards.

[19] See Aprile *et al.* (1996), Artoni and Zanardi (1996), Bank of Italy (1995), Castellino (1995), CER (1994), IRS (1995), Padoa-Schioppa (1995), Peracchi and Rossi (1998).

[20] Further changes were introduced in legislation in the following years. In particular, the 1998 budget measures speeded up the harmonisation of the rules governing the different pension systems, raised the age threshold for seniority pensions for some categories of worker, postponed

While the 1992 reform primarily aimed at cutting pension expenditure, the new reform had a wider range of objectives. It aimed at stabilising the incidence of pension expenditure on GDP, at reducing distortions in the labour market and at making the system more fair (see Rostagno, 1996).[21] A tighter link of pensions to individual contributions was instrumental in achieving the latter objectives. It was expected that contributions would have been more clearly perceived as deferral of earnings, thereby reducing the distortionary effect of labour income taxation. Contribution evasion was expected to be reduced by the contribution-based formula combined with the reduction in the minimum service requirement for old-age pensions.[22] The 1995 reform aimed at equalising the yields of the contributions paid by all workers of the same sex and the same pension cohort (i.e. beginning to work and retiring in the same years). It removes the favourable treatment previously granted to workers with dynamic careers. Under the new rules, which apply to all categories of workers, the level of the pension wealth of each individual would not be affected by the age of retirement.

The main features of the reform are the following:

(a) Old-age pensions are related to the contributions paid over the whole working life (capitalised at a five-year moving average of GDP growth) and to retirement age. Each worker holds a notional social security account. On retirement the pension is determined by multiplying the balance of the account by an age-related conversion coefficient. Benefits will continue to be provided on a totally PAYG basis.

(b) The formula used to calculate the initial pension award is the following:

$$P_t = \beta\, c\, W_0 \sum_{k=1}^{a-1} (1 + g)^k\, (1 + w)^{a-k}$$

Where β is the conversion coefficient; c is the contribution rate; W0 is the entry wage; a is the number of years of contribution; g is the average annual rise in the workers" earnings over the entire career; w is the average rate of increase in real GDP. The conversion coefficients, which are determined on the basis of average life-expectancy – including the probability of paying benefits to survivors - and a 1.5% rate of return on accumulated contributions, range from 4.7% (for those retiring at 57 years of age) and 6.1% (for those retiring at 65 years of age).

(c) Contributions are proportional to earnings. However, the rate at which contributions are imputed to the notional accounts (33% for employees and 20% for the self-employed) is higher than the rate actually paid by individuals (respectively 32% and 15%). The latter rates have been increased after 1995.

(d) Conversion coefficients can be revised every ten years on the basis of changes in life expectancy and a comparison of the rates of growth of GDP and earnings assessed for social security contributions.

(e) Individuals can choose their retirement age between 57 and 65 years, provided the pension is at least 1.2 times higher than the guaranteed minimum pension level. Seniority pensions will be abolished.

(f) The minimum number of years of contributions required for an old-age pension is reduced to 5. The guaranteed minimum pension level will be abolished. Welfare pensions for elderly citizens are to be reformed.

(g) Survivors' benefits are modified. Income limits to the cumulability of survivors' benefits and old-age or disability benefits are introduced. The restrictions do not apply to families with children, who are minors, students or disabled.

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the retirement dates for new seniority pensions due to take effect in 1998 and temporarily reduced the cost-of-living adjustments for larger pensions (Onofri, 1998).

[21]   Most expenditure cuts were achieved through the tightening of the eligibility conditions for seniority and survivors pensions.

[22]   The eligibility requirement set by the 1992 reform (20 years) encouraged evasion by workers who felt they would never reach the minimum service requirement.

(h) Pension benefits are adjusted yearly to changes in price levels, measured by the consumer price index. [23]

The reform, which was probably inspired by the reform process undertaken in Sweden in 1994, envisaged the shift from a defined benefit to a defined contribution system in which the notional accumulated contributions are transformed into an annuity at retirement. As noted by Castellino (1996), the actuarial approach underlying the reform represents a structural break in Italian pension policy-making, since in previous decades actuarial considerations did not have any significant role.

Most of the potential benefits and distributive effects of the new defined-contribution system could have been achieved by adapting the old defined-benefit system (Cichon, 1999).[24] Pizzuti (1998) notes that the latter solution would have made changes more visible. The introduction of a new pension formula, that avoided the need to explicitly modify the old parameters, could contribute in making cuts in benefits more acceptable.

In spite of the change in the design of the pension system, the 1995 reform did not significantly affect long-term expenditure trends. Rostagno (1996) estimates that the reform increased the liabilities of the private sector employees pension scheme by 4 to 9% of GDP,[25] depending on the rate of growth of GDP.

Moreover, the implementation of the reform will be extremely gradual. Workers with at least 18 years of contributions in 1995 will receive a pension computed on the basis of the rules applying before the 1992 reform. Those with less than 18 years of contributions in 1992 will be subject to a *pro-rata* regime: the 1995 reform will apply only to the contributions paid after 1995. [26] Only individuals beginning to work after 1995 will receive a pension computed only on the basis of the new rules.

The length of the transition phase and other aspects of the reform may significantly reduce its expected microeconomic benefits (see Section 6).

Further minor reforms were introduced in the following years. The tightening of the conditions for eligibility to seniority pensions was speeded up. The contributions rate for self-employed workers was gradually increased from 15 to 19 percentage points. The adjustment to price dynamics of pensions above a certain level was temporarily curtailed.

The constraints to cumulating pension and labour income were tightened in 1995 and substantially relaxed in 2001. No restriction now applies to the cumulability of old-age pensions and labour income. Employees cannot cumulate seniority pensions and labour income unless they have paid contributions for at least 40 years.

5 The Role of Supplementary Funds

The role of pension funding has been very limited in Italy since the Second World War.[27] This situation reflects the impact of the crisis of funds related to the war, the limited

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[23] The 1995 reform also provided for the partial indexation to real wage growth of pension up to 10 million lire per year. The provision is to be applied from 2009 with a ceiling and with procedures still to be indicated.

[24] The equalisation of yields on contributions and the strengthening of the link between contribution and benefits could have been achieved by applying the same pension formula to all categories and computing pensions on the basis of lifetime earnings. See Pizzuti (1998).

[25] The higher GDP growth, the greater the increase in liabilities, since – contrary to the pre-1995 regime - contributions are adjusted to GDP growth.

[26] The pensions paid to individuals in the *pro-rata* regime will be computed on the basis of two components: the pre-1995 contributions and the contributions paid from 1995 onwards.

[27] At the end of 1998 the assets managed by social security funds (mostly by the pension schemes of the public sector employees and of some categories of self-employed workers) and by pension

development of Italian capital markets, the lack of a favourable tax framework, and especially the extensive development of the public pension system and the existence of severance-pay provisions.[28] Large public benefits reduced both the demand for supplementary plans and the resources available to finance them. The severance-pay provisions reinforced both these effects.

In the late 1980s, although it had become clear that Italy's public pension system would have inevitably experienced serious financial imbalances, the potential room for supplementary private pension plans was further reduced. As mentioned in Section 2, in 1988 the ceiling on benefits for high-income employees was eliminated. In 1990 the self-employed were granted eligibility for more than the minimum pension. [29] Since the contributions of the self-employed were much lower than the long-term equilibrium rate, the yield on them was high.[30]

Only in the 1990s a consensus was reached on the need to develop private supplementary pension funds. The growth of such funds was viewed not only as a means to adjust retirement provisions to the different needs of the citizens and to allow workers to offset the reduction in replacement rates resulting from reforms of PAYG schemes, but also as a way to strengthen the role of institutional investors in the capital market (see Pace, 1993).

However, high contributory rates and large public finance imbalances respectively reduced the scope for additional contributions and for supporting the transition to funding via budgetary transfers or large-scale tax deductions. The contributions allocated to severance-pay funds (about 1.5 % of GDP for private sector employees) were therefore considered the only sizeable source of funds to develop the second supplementary pillar.[31] This was not unproblematic both for employers and employees. For the former group, severance-pay funds represented a source of cheap credit. For the latter, they represented an important form of liquidity during unemployment and for the purchase of the primary residence (see Aronica, 1993; Ministero del Tesoro, 1994c; Fornero, 1999; Messori and Scafidi, 1999).

Legislation was enacted in 1993 and in 1995 with a view to increasing the role of funding by modifying the destination of severance-pay contributions and allowing additional contributions to be tax deductible. Employers and workers can unilaterally or jointly set up "closed" funds for workers of particular industries, companies, areas, etc. Banks, insurance companies and other financial institutions can set up "open" funds, to which anyone can sign up. However, workers can enrol in an open fund only if a closed company or industry fund is unavailable. Funds are usually based on defined contribution criteria.

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schemes of the banking sector amounted to 5.5% of GDP. Shares represented about 3% of total assets. See Banca d'Italia (2000).

[28] In order to fund the severance-pay benefits, employers must set aside 6.9% of each worker's gross earnings. These funds are disbursed to the employee upon the termination of the employment contract. While this severance entitlement is accruing, the worker has a secure but uncollectable credit with his employer, who retains full discretionary powers over the funds, which are a very advantageous form of financing. Each year contributions are to be revalued by 1.5% plus 0.75% of the inflation rate. If inflation is at 2% the worker gets a 3% return in nominal terms.

[29] An alternative solution enhancing the role of funding would have been the introduction of ceiling on contributions.

[30] The contribution rate was set at a level which was sufficient to finance current pensions – which had been awarded on the basis of previous rules – and not on a level consistent with the benefits that would be paid in the future on the basis of the new rules.

[31] Under the assumptions that only new entrants in the labour market shift their severance-pay contributions to pension funds, only these contributions are paid into the funds, contributions are not drawn for any reason, and the rate of return is 3%, Castellino and Fornero (1997) estimate that pension fund assets would represent 3% of GDP after 10 years, 12% after 20 years and 50% after 40 years.

The development of supplementary pension funds has been rather slow.[32] Employers have not been enthusiastic because of the loss of the cheap credit source. Trade-unions and government have supported the development of contractual funds, limiting the possibility of joining "open funds". This may have negatively affected the employees' willingness to invest in pension funds. In a situation in which PAYG pensions still guarantee relatively high replacement ratios for elderly workers and young workers are rather uncertain about the reliability of long-term commitments, several employees may have preferred to avoid the loss of liquidity determined by the shift from the severance-pay provision to supplementary funds. Moreover, tax incentives have been rather limited (Fornero, 1995). [33]

The government is now considering further action to accelerate the developments of pension funds. Tax deduction thresholds for contributions to the funds are to be increased. In order to benefit from the tax deductions, individuals would have two options: (i) joining the closed fund of the company or industry to which they belong; (ii) retaining the severance-pay provision; in this case the contributions would no longer be managed by the employer.

6   Critical Aspects

The reforms introduced in the pension system in the 1990s substantially contributed to change the outlook for Italian public finances. Generational accounting studies highlight this change. On the basis of 1990 public accounts, the gap between the net taxes paid by the last new-born generation (on the basis of current policies) and those paid by future generation (taking into account policy actions to restore government solvency) was estimated at Lit. 198 million. On the basis of 1998 accounts, it was estimated at Lit. 100 million.[34] In the latter case, in order to ensure the long-term sustainability of public finances, a 5% increase in the taxes paid by all generations would be required. Without the pension reforms introduced in the 1990s the required tax increase would have been 9%.

In spite of the important reforms introduced in the 1990s, there is a widespread consensus that further changes are required. The nature of the changes to be introduced still remains controversial. Before examining the main reforms under consideration (Section 7), in the following section some critical aspects of the present arrangement are highlighted.[35]

6.1 The lengthy transition – The rules introduced in 1992 and 1995 will become fully operational only after a long transition period. This depends on the decision to exempt individuals with 15 years of contributions from some important changes. About 40% of those currently employed will retire with the pre-1992 pension formula. For these people, the incentive to retire early will even be increased by the expectations that retirement

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[32] Up to 15 March 1999 only 96 new supplementary pension funds had been set up. About 400.000 workers were enrolled in these funds. Assets represented only 0.015 % of GDP (Banca d'Italia, 1999).

[33] Some decisions taken about the tax treatment of pension funds may have negatively affected their development. In particular, when legislation concerning funded supplementary pension schemes was introduced in 1992, contributions to funded schemes were subjected to a 15 per cent withholding tax. Tax credits proportional to the tax levied on contributions were granted on future pensions. Tax credits were to be calculated on the basis of the rate achieved by each pension fund on the remaining 85 per cent of the contributions paid to pension funds. The scheme, which aimed at increasing revenues in the first period of the development of pension funds (CER 1993), was abolished in 1995. Although the scheme would not have affected the pensions eventually paid by the funds, it introduced some additional uncertainty about these pensions: while the tax was immediately levied, the credit was to be redeemed after a long time.

[34] Estimates are expressed in 1998 prices. See Franco *et al,* (1992), ISAE (1999), Cardarelli and Sartor (2000).

[35] Extensive statistical information about the structure of the pension system and recent developments are provided in ISTAT (1998 and 1999) and Nucleo di valutazione della spesa previdenziale (1998 and 1999).

conditions might be tightened (Porta and Saraceno, 1996). This implies that, in spite of the increase in the age-limit for old-age pensions, the effective retirement age will not significantly increase over the next 15 years. Moreover, over the same period replacement rates will not decline.

The sharp difference in the treatment of workers who in 1992 and 1995 had small differences in contributory records raises an equity problem. There is also a budgetary problem. According to Ministero del Tesoro (2000), the ratio of public pension expenditure to GDP, which despite the reforms introduced during the 1990s was about than 15.5% in 1998, is likely to rise by another 1.3 percentage points by 2015. Since the Stability and Growth Pact requires close-to-balance budgets and revenue increases are problematic, if the transition is not sped up, primary non-pension expenditure will have to be substantially squeezed.

6.2 Long-term expenditure levels - Ministero del Tesoro (2000) estimates that the ratio of pension expenditure to GDP will rise by an additional 0.5 points between 2015 and 2031. Subsequently, even though the ratio of pensioners to workers is forecast to rise sharply, expenditure should stabilise in relation to GDP for some years and is expected to significantly decline thereafter. According to INPS projections, the equilibrium contribution rate of the private sector employees' pension fund will rise from 45% in 2000 to 47.8% in 2010 and 48.5% in 2025. The corresponding rate of the artisans' pension scheme is projected to increase from 21.3% to 28.2% and then to 30%, and that of the shopkeepers' pension scheme from 18.5% to 25.4% and then to 33.9%.

These expenditure trends imply either larger transfers from general taxation or a further increase in social security contribution rates, which are already higher than in the other leading industrial countries. Both these solutions conflict with the need to reduce the tax and contributions burden in view of growing international economic integration. They also appear problematic in a context of growing mobility of tax bases, which accentuates the distortionary effects produced by taxation in the markets for goods and factors of production.

Although the system is based on a close link between contributions and benefits for each individual, it is still vulnerable to demographic and economic shocks (Aprile *et al.*, 1996; Rostagno, 1996; Hamann, 1997; Gronchi and Aprile, 1998; Cichon, 1999).

The system is vulnerable to increases in the dependency ratio determined by reductions in birth rates, since these increases would not affect the amount of accumulated contributions and the pensions already awarded. Increases in life expectancy automatically reduce new pension benefits, via the conversion coefficients. However, it will take a long time before the impact of increases in life expectancy on the number of pensions is fully offset by the reduction in the average amount paid to each pensioner. This depends on the fact that reductions in mortality rates that take place after a pension is awarded do not affect its level. The 10 year interval between revisions in coefficients increases further the adjustment lag.[36]

A decline in the rate of GDP growth would not affect the amount of accumulated contributions and the pensions already awarded. A lasting decline in the ratio to GDP of earnings assessed for social security contributions can affect new pension benefits, via the conversion coefficients. As in the case of changes in life expectancy, financial equilibrium would be restored very slowly.

In the face of adverse demographic and economic events, as in the case of traditional PAYG systems, cash deficits can only be avoided by ad hoc cuts in pensions and changes in the pension formula. Increases in contribution rates would only have temporary effects, since they would translate into higher benefits. [37]

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[36] Baldacci and Tuzi estimate that the new mortality ratios would already imply a 1% cut in the benefits paid to those retiring at 57 and a 3% cut for those retiring at 65.

[37] The need for a built-in equilibrating mechanism operating via the indexation of pensions was highlighted in a study carried out at the end of 1994 for the main parliamentary group supporting

Gronchi and Aprile (1998) argue that the predetermination of the rate of return on accumulated contributions (1.5%) introduces unnecessary inflexibility in the system. If GDP growth is lower than 1.5%, there would be financial problems. In any case, the interest rates imputed to workers and pensioners would be different. Giarda (1998) takes a sterner view and argues that problems will occur whenever GDP growth is lower than 2.5%. This position reflects two considerations: (i) price indexation might be supplemented by ad hoc increases in pension levels, (ii) growth rates higher than 1.5% are required to offset the effects of some exceptions introduced in the general rules (e.g., the higher rates of return on contributions paid before 18 years of age). Nicoletti-Altimari and Rostagno (1999) point to the risks related to the predetermination of the rate of return on the contributions paid to the pension system. They demonstrate that the ensuing rigidity reduces the capacity to absorb shocks and may generate persistent generational imbalances.

Moreover, the conversion coefficients have been computed without taking part of the expenditure for disability and survivors pensions into consideration. More specifically, it has not been considered that disabled workers will receive benefits in excess of those awarded on the basis of their contributions.[38] Pensions paid to survivors of deceased workers have also been disregarded. These benefits have been implicitly considered welfare benefits to be financed by the government budget. This solution is questionable since the provision of a guaranteed minimum pension to disabled workers and survivors may be considered a component of social insurance, particularly considering that the contribution rates are relatively high (see Giarda, 1998).

6.3 The composition of expenditure cuts - The plan for bringing the pension system back into balance relies primarily on reducing the average pension in order to curb expenditure; limiting the number of pensions plays a relatively modest role. According to Ministero del Tesoro (2000), the ratio between the pensions paid by the main pension funds and the total number of persons in work will rise from about 90% in 1998 to 95% in 2015, 110% in 2030 and 123% in 2045.[39] The ratio of the average pension to per capita GDP would increase from 16% to about 16.5% in 2015 and then decline to 14.3% in 2030 and 11% in 2050. These projections assume that pensions will remain indexed exclusively to prices and that the conversion coefficients used to relate new pensions to the contribution record of each individual will be revised every ten years on the basis of demographic trends.

This situation depends on two decisions taken in 1995:
(i)   in spite of the increase in longevity, individuals will still be allowed to obtain a pension at 57; actuarially discounted old-age pension will provide individuals with a greater incentive to delay retirement than previous rules, however:
(a)   the conversion coefficients embody a discount rate which may still provide an incentive to quit the labour market (Brugiavini, 1998) or may not discourage individuals from claiming a poor, actuarially reduced, pension at an early age (Palmer, 1999).
(b)   Even an actuarially neutral pension system may not be sufficient to achieve a large increase in the activity rate of elderly individuals. Changes in the demand side of the labour market may also be required. More specifically, the wage structure for the different age groups should be consistent with their productivity.

(ii)   the reform was designed to achieve a replacement rate at retirement which, for individuals retiring at 62 after 37 years of service was close to the pre-reform rate; a full or a partial indexation to increases in real wages would have implied a reduction in the

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the reform (see Aprile *et al.*, 1996). For instance, the study advocated the introduction of a coefficient offsetting the effects of changes in working-age population. Aprile *et al.*, in an addendum to their original study, point to some drawbacks in the design of the reform from the financial equilibrium point of view.

[38] Gronchi (1998) tentatively estimates that this expenditure may represents 2 percentage point of earnings.

[39] See also the similar results obtained by Baldacci and Tuzi (1999).

replacement rate at retirement (Banca d'Italia, 1995; Castellino and Fornero, 1997; Giarda, 1998). Price indexation, which is adopted in several countries, implies that the purchasing power of each pensioner declines over time in comparison with that of workers and younger pensioners. [40] Two aspects may make this solution problematic in Italy over the long run. First, individuals are allowed to retire rather early. Most of those retiring at 57 may receive a pension for at least 25 years. Moreover, the adjustment to price increases of pensions which are twice as high as the minimum pension level is only partial. These factors may generate sizeable disparities among pensioners depending on the year of retirement.

The reliance on the reduction in the transfer ratio, instead than on increases in retirement age, may create political pressure for discretionary increases of pension in real terms (Gronchi and Aprile, 1998; Peracchi and Rossi, 1998).[41] Ministero del Tesoro (2000) estimates that, if pensions were adjusted to increases in real wages from 2005 onwards, the ratio of pension expenditure to GDP would be 2 percentage points higher than in the baseline scenario in 2015 and more than 3 points higher in 2030. Moreover, revisions of conversion coefficients at ten-year intervals may produce large differences in the treatment of contiguous generations of pensioners. This also may also be politically problematic.

6.4 The expected microeconomic effects – The strengthening of actuarial principles in social security systems has been recently advocated to limit some of the negative effects of the systems on labour market and employment (Folster, 1999 and Orszag and Snower, 1999). Contributions are often loosely related to benefits, so that they are largely regarded as a tax; expenditure controls frequently rely on administrative constraints rather than on built-in incentives; redistribution and insurance features are frequently mixed and insurance schemes are utilised for inappropriate distribution objectives. In several countries, proposals have been put forward to redesign social security schemes along lines that are less distortive of individuals' choices and more transparent in their distributive effects.[42] The strengthening of the contribution/benefit link is a crucial factor. It increases the incentive to work and, more specifically, to stay on in regular jobs (since benefits would depend on work record), to delay retirement, to move from benefits to work.[43] In the case of pension schemes, this implies increasing the role of funded schemes (where the contributions-benefits link is typically very strong), or shifting PAYG schemes from defined-benefits systems (which base pensions on earnings in final period of work) to defined-contribution systems (which base pensions on contributions paid over whole working life). Since 1995 Italy took both routes.

However, a tight link between social contributions and benefits at the individual level may be effective only if the link is transparent, easy to grasp, perceived as stable by citizens. Workers should be informed about their benefit entitlements (e.g., accrued pension rights). Welfare benefits should be separated from insurance benefits and funded from general revenues.

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[40] Assuming a 1.5% yearly growth in real wages, other things being equal, a newly awarded pension would be 43% higher than a pension awarded 25 years earlier. The gap would increase to 61% with a 2% rate of growth and to 81% with a 2.5% rate of growth, See Aprile *et al.* (1996).

[41] Rostagno (1996) points to the possibility that pensions, which implicitly include an adjustment to real wage dynamics, since the conversion coefficients have been computed assuming a 1.5% returns on residual accumulated contributions, may in the end be increased by ad hoc decisions prompted by the political pressure of pensioners. Pizzuti (1998) criticises the elimination of indexation to real wage dynamics on the ground that it breaks a long-established intergenerational contract and makes the pension system less credible.

[42] See, for instance, Ministry of Health and Social Affairs (1994).

[43] By making workers more aware of the value of the benefits for which they are paying contributions, they could also affect wage negotiations, for if workers are not aware of the value of non-wage benefits, they are not likely to trade lower wage increases for the continuation of present benefits. In this respect, the US case, where contributions to company-based health and pension schemes are an important part of wage negotiations, is particularly relevant.

Several factors may reduce the immediate impact of the rules introduced in 1995 on the behaviour of individuals:

(i)   an important component of the work-force is not affected by the reform;

(ii)   the younger workers may expect that further changes will be introduced and therefore may have the perception that the return to their contributions is uncertain. This perception has been probably reinforced by recent measures taken to curtail pension expenditure;[44]

(iii)   there is a gap between the effective contribution rate and the (higher) imputed rate used in the computation of benefits;

(iv)   there is some lack of clarity about the way the system works: no official document has explained the working of the new system; individuals do not receive a statement of their contributory account presenting their future pension entitlements; the formula underlying the conversion coefficients has not been published; the methodology envisaged for the revision of the coefficients has not been specified.

More generally, one can question whether in a fast evolving economic and demographic situation the rate of return on contributions may remain sufficiently stable and provide the microeconomic benefits expected from strengthening the contribution/benefit link. [45]

6.5 Problems in policy-making – As was argued in the previous Sections, 1992 represents a turning point in Italian pension policy in terms of expenditure control. With a sudden change with respect to the previous decades, since 1992 the policy debate has been basically about the control of pension expenditure. One major change regards the government departments in charge of developing pension policy proposals. Responsibility rapidly shifted to the Prime Minister Office and the Ministero del Tesoro. Both the 1992 and 1995 reforms were developed by them, while the Ministry of Labour and Social Protection had a very modest role. [46] The role played by the different pressure groups also changed in several respects.[47] With the gradual harmonisation of rules, the division between pressure groups gradually shifted from employment characteristics to generational characteristics. In this context, the rules to be applied in the transition to the new regime became the main issue.

However, policy-making in the pension area remained somewhat problematic. Reforms were introduced without adequate preliminary work. This deficiency was understandable in the emergency situation of 1992; it was less so in later years, when the focus shifted from expenditure control to a wider range of objectives. Gronchi and Aprile (1998) link some deficiencies of the 1995 reform to the speed with which it was introduced, that in effect gave little time to understand its implications (see also Aprile *et al.*, 1996).

No government document was presented in the 1990s to illustrate the case for reform, the alternative changes taken into consideration, the objectives and the expected outcomes. In

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[44]   This is the case of the temporary reduction in the adjustment to price changes of pensions above a certain threshold that was introduced in 1997.

[45]   See the more general point made in Tamburi (1999) about the need for periodic adjustments of pension provision.

[46]   As in other countries (Tamburi, 1999), the change is related to the reasons underlying the reforms, which were of economic and financial nature rather than social.

[47]   While in the pre-1992 period both public sector employees and self-employed workers had relatively advantageous rules with respect to private sector employees (Castellino, 1996), in the following years the cut in benefits was proportionally higher for them than for private sector employees. Public sector employees lost more than the other groups in relative terms (Sartor, 2000). While private sector employees managed to retain the right to take seniority retirement with 35 years of contributions, public sector employees lost their preferential conditions for seniority retirement. Self-employed workers fared relatively better: as already mentioned in 1995 their contribution rate was set at 15%, while pensions would be calculated on the basis of a 20% contribution rate.

particular, it is remarkable that the 1995 pension formula was never officially published (Gronchi, 1997). This creates some ambiguity for future revisions of conversion coefficients.

In the 1990s policy-making remained largely incremental and affected by short-term considerations. Changes were frequently introduced under external pressure. The effort to minimise the reactions of the more vocal groups led to solutions which may result unsustainable in the long-run. [48] Most expenditure cuts came from changes in the indexation mechanisms, which are perhaps more acceptable to public opinion because they are less visible and more gradual. As mentioned in Section 6, the 1995 reform avoided showing cuts on replacement rates at the cost of increasing pressures from pensioners in the future.[49]

In the end, there is a considerable continuity in the Italian policy-making in the pension domain. The same incremental and short-sighted approach which determined the extraordinary expansion of pension expenditure up to 1992 continued to work in the following years. Changes in benefits and eligibility conditions have again been introduced without adequate analysis of their implications.

7 Policy Options

As considered in Section 6, present expenditure trends imply further increases in contribution rates or general taxation or cuts in other expenditure items. The latter may not be feasible in a situation in which pension expenditure already represents a very large share of social expenditure and of total primary expenditure (16 percentage points of GDP out of, respectively, 23 and 42). Moreover, the pension system set up in 1995 does not fully exploit some of the major positive aspects of notional-defined contribution systems, i.e. the reduction of distortions in the labour market, the built-in incentive to postpone retirement, and the self-equilibrating mechanism. This failure may depend on the lack of an in-depth analysis of the implications and requirements of these systems. The reform was defined and introduced over a few months with little preliminary work (Gronchi and Aprile, 1998).

Several proposals for further changes have been formulated in recent years. They can be classified in three broad categories: faster implementation of the 1995 reform; tightening of the steady state regime established by the 1995 reform; acceleration of the developments of the funded pillar.

The transition to the new regime can be accelerated by the extension of the formula introduced in 1995 to all workers and by the elimination of seniority pensions (see Giarda, 1998). According to Ferraresi and Fornero (1999), these actions would reduce pension expenditure by about 0.8% of GDP in 2020. These proposals are technically simple, since they do not call into question the architecture of the pension system. However, they are politically sensitive, since they immediately affect a large number of older workers.

Several modifications of the 1995 regime have been contemplated in the large number of studies which have recently examined the reform. The extensive ex-post analysis of the reform is in stark contrast to the lack of preparatory work. Among the main proposals, there are the following (Commissione per l'analisi delle compatibilità macroeconomiche della spesa

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[48] The distribution of the burden of reform between generations and group of workers is uneven. The cut in the pension wealth of pensioners and elderly workers is very limited with respect to that imposed on younger workers. Generational disparities have replaced industry-based disparities. Moreover, workers with long-contributory records have retained their seniority pensions, while those with shorter periods have faced a sudden increase in the age-limit for obtaining an old-age pension (a 5-year increase over a 8 year period).

[49] Pizzuti (1998) remarks that this decision, which relies on the short-sightedness of individuals, is in stark contrast with one of the main roles of public action in retirement provision, that is that of compensating for this short-sightedness.

sociale (1997), Giarda, 1998; Gronchi, 1997 and 1998; Gronchi and Aprile, 1998; Hamann, 1997; Padoa Schioppa Kostoris, 1996; Peracchi and Rossi, 1998; Sartor, 2001): [50]

a)   a shift in the old-age retirement bracket (e.g.: from 57-65 years to 62-70 years);

b)   a steeper curve of conversion coefficients, providing an incentive to postpone retirement;

c)   more frequent revisions of the conversion coefficients;

d)   an increase in the number of factors considered in the revision of the coefficients;

e)   a reduction in the pensions awarded at retirement associated with the introduction of an adjustment to real GDP growth or real earnings dynamics that takes into account the demographic and economic changes. [51]

Change (a) would increase the minimum age in which retirement is allowed and provide an incentive to postpone retirement beyond the age of 65. It would get the Italian retirement bracket close to the one introduced in Sweden. Change (b) would remove any implicit tax on continuing work and take the negative externalities of retirement on public accounts into consideration. These changes should increase the effective retirement age and shift the focus of expenditure control from the reduction of replacement ratios to the reduction of the ratio of pensioners to workers. [52] The margins for this policy action are very large: in 1995 the average retirement age was about 60 years for males and 57 for females; in 1998 about 25% of pension expenditure was paid to individuals below 65 years on old-age pensions (ISTAT, 2000). In order to ensure an increase in the effective retirement age, these changes should probably be supplemented by reforms in the labour market, such as changes in the age-profile of wages, more training for elderly workers, more flexibility in work arrangements. [53] Gronchi (1998) argues that only an increase in the effective average retirement age would allow a reduction in payroll taxes: if retirement age remains low, high payroll taxes would still be required to provide politically adequate replacement rates, which he estimates in the 60-65% range.

Changes (c) and (d) would respectively accelerate the adjustment of the system to demographic and economic shocks and broaden the range of shocks taken into consideration. Change (e) would reduce the political pressure for discretionary increases of pension in real terms stemming from sizeable disparities among pensioners depending on the year of retirement. It would also introduce a second built-in equilibrating mechanism in the system: adjustments in the conversion coefficients would offset the effects of changes in life expectancy, the indexation mechanism would take cyclical aspects and birth-rate changes into account. These devices, which were considered in the preparatory work for the reform (see Aprile *et al.*, 1996), would make the pensioners share the burden or take advantage respectively of negative and positive shocks.

The modifications considered above are probably sufficient to ensure the financial equilibrium of the pension system. They would still leave in place a situation in which the

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[50]   It has also been suggested that (i) effective contribution rates should be equal to the rates taken into account to determine the accumulated contributions and (ii) disability and survivors pensions should be fully financed out of the contribution rate.

[51]   Gronchi (1998) suggests a reduction of the conversion coefficients by 15 to 20%. Giarda (1998) considers different options: (i) coefficients could be computed every year assuming a rate of return on accumulated contributions equal to real GDP growth minus 1%; (ii) whenever GDP growth is lower than 2.5%; indexation to price dynamics could be accordingly reduced (iii) the rate of return on accumulated contributions could be reduced from 1.5% to 1%, at the same time pensions could be increased in real terms if GDP growth exceeds 2%.

[52]   This strategy is in line with the policy response to population ageing advocated by OECD, which is centred on increasing the average number of years individuals spend active in the labour force and guaranteeing adequate income to pensioners. See Visco (1999).

[53]   Sartor (2000) estimates that the reforms introduced in the 1990s do not necessarily reduce very much lifetime earnings as the increase in labour earnings caused by the delay in retirement almost offsets the decrease in pension benefits. This condition applies if individuals can actually work longer.

compulsory old-age provisions require employees to pay a contributory rate of at least 40% (33% for the PAYG scheme plus at least 7% for the supplementary schemes). Workers with long contributory periods would have relatively high replacement rates.

Several recent studies have explored the possibility to reduce PAYG contribution rates and widen the role of funded schemes. [54] These studies generally move from the consideration that, taking returns and riskiness into account, a mixed system is superior either to a fully PAYG system or a fully funded system. In the analysis of the implications of different balances between the two systems, the studies point to a trade-off between the benefits of a larger share of funding – in terms of higher rates of return or lower contribution rates - and the budgetary cost.

Castellino and Fornero (1997) consider a reduction of the contribution rate of 8 percent (from 33 to 25%) only for the new entrants in the labour market. They estimate that it would take 60 years for the ensuing reduction in benefits to fully offset the cut in contributions. The government would have to cover a deficit which would peak after 40 years at about 2% of GDP.

Brugiavini and Peracchi (1999) consider the implications of reducing the PAYG contributions of new entrants by 20% (5.6 points out of 28.3 points paid on average by all workers) and paying this amount into a pension fund. Revenue losses for PAYG schemes will reach a peak of 1.7% of GDP after 40 years. Assuming a 5% return on capital, workers receive higher pensions than in the no-change scenario. With a 33% reduction in PAYG contributions, revenue losses would peak at 3% of GDP.

Forni and Giordano (1999) show that the replacement rates guaranteed by the PAYG system to newly insured workers contributing for 40 years range between 50 and 90%, depending on the career profile. Assuming that severance-pay contributions are fully used to finance supplementary funded schemes, replacement rates range between 60 and 120%. They argue that a 10 percentage point reduction in the contributions paid by employees to PAYG would still guarantee adequate replacement rates: about 70% for a worker with an average career profile, working 40 years and retiring when 65 years old. They consider two main scenarios: the rate reduction applies only to new entrants; it applies also to the workers who are subject to the 1995 pension formula (those with less than 18 years of contributions in 1995). In the first scenario, revenue losses would reach 0.4% of GDP in 2010 and peak at 1.8% by 2045. In the second scenario, revenue losses would increase faster (1.5% in 2010) and peak earlier (1.8% in 2025). Forni and Giordano show that the cost of the transition would be substantially reduced if the payroll tax reduction induces positive effects on labour productivity and employment. If the unemployment rate is gradually reduced to a half of its current level and labour productivity growth is 0.5% higher each year, in the first scenario the impact on the budget would be positive by 2025.

Modigliani and Ceprini (1998) take a different approach and suggest a gradual transition to a fully funded system. They suggest the creation of a new fund financed by an additional contribution of 2% of earnings. Workers would receive the same pension benefits paid by the PAYG schemes. The fund would gradually pay an increasing part of these benefits allowing a reduction of PAYG rates, which in the end would be 0%. In the process, the contributions to the funded scheme would be increased up to 6 or 7% of earnings. The funded scheme would operate on defined benefits criteria with the government guaranteeing a minimum rate of return on assets and benefiting from returns above this minimum. This solution would raise some problems of compliance with the Stability and Growth Pact. If the government were called to pay part of the pensions, the deficit could easily exceed the 3% threshold set by the Maastricht Treaty.

In conclusion, there is considerable consensus among pension experts that a comprehensive package including a faster implementation of the 1995 reform, some

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[54] Messori and Scaffidi (1999) formulate proposals about the tax treatment of pension funds and the reassignment of severance-pay contributions to pension funds.

parametric changes in the pension regime established by that reform, and an acceleration of the development of funded schemes would avoid the expected rise of the pension expenditure to GDP ratio and reduce the negative effects of the systems on the labour market and employment. The acceleration of the implementation of the 1995 reform would provide some budgetary margins for a gradual reduction of the contributions to the PAYG system, which could be implemented in parallel with the development of funded schemes. [55]

The optimal mix of PAYG-pensions and funded pensions remains open to discussion. However, high present contribution rates and budgetary constraints limit the speed of the transition to funding. It is likely that the Italian pension system will remain for a long time predominantly based on PAYG criteria. If funding were to assume a bigger role than PAYG, the optimality of coupling a funded defined contribution system and a PAYG defined contribution system (rather than a defined benefit system) should also be discussed.

8 Conclusion

The reforms introduced in the 1990s have significantly changed the outlook of the Italian pension system. Perspective expenditure growth has been contained. The harmonisation of the different schemes is well under way. The incentives for early retirement have been reduced.

The reform process is not yet completed. A faster implementation of the 1995 reform and some parametric changes in the pension regime established by that reform would avoid further increases in payroll taxes and make some resources available for other social benefits. An increase in effective retirement age would shift the focus of expenditure control from the reduction of replacement ratios to the reduction of the ratio of pensioners to workers ad make the pension system more sustainable. Moreover it is important to fully exploit the incentive effects and the self-equilibrating mechanism of the new actuarially based system. An acceleration of the development of funded schemes would allow a gradual reduction of PAYG contribution rates. The system would remain predominantly PAYG, but it would be better suited to deal with different shocks. Some changes in policy-making may also be required, in terms of preliminary work, communication to the public, forecasts. It is important that further changes reduce uncertainty about the future prospects of the pension system and pension rules are perceived by public opinion as long-lasting.

Italian experience provides some indications about the issue of pension reform. It points to the fact that late reform are necessarily less gradual and more painful than desirable. The delay in introducing a reform has imposed high costs on Italian pensioners and perspective pensioners in terms of unexpected reductions in purchasing power (e.g., those produced by the partial suspension of price indexation in 1993) and sudden changes in expectations (e.g., those related to the fast increase in the standard retirement age).

Moreover, a lengthy reform process introduces additional burdens. The widespread perception that more adjustments are required increases uncertainty and induces elderly workers to retire at the earliest possible date. This increases public expenditure and negatively affect the labour market. Moreover, while most experts consider that further changes are required, public opinion experience adjustment fatigue. Figure 6 shows that the employment rates of Italian males in the 50 to 64 age-brackets significantly declined over the 1990s in spite of the increase in the age limit for old-age pensions.

Finally, it seems clear that an actuarially based pension system, such as that introduced in Italy in 1995, can deliver the expected labour market benefits only if the link between contributions and benefits is transparent, easy to grasp and perceived as stable by citizens. This may not be the case in Italy, where a large number of workers are not affected by the new pension regime and further reforms are expected by public opinion.

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[55] Pizzuti (1998) takes a critical position on the development of supplementary pension funds, pointing to their costs and effects on income distribution.

Italy by D. Franco

Figure 6 Employment Rates

Males (left-hand scale)   Females (right-hand scale)
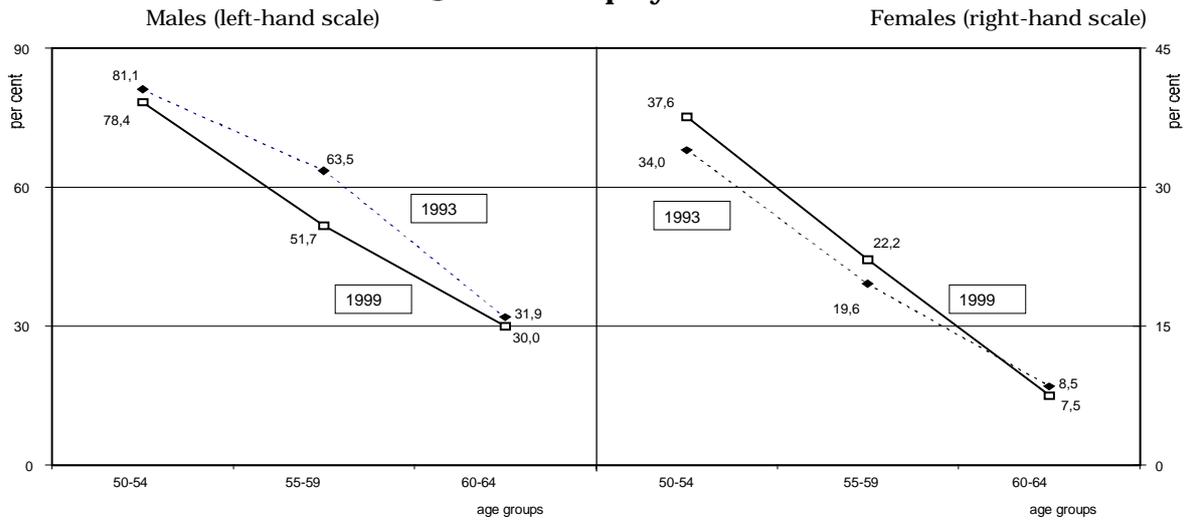
References

Alvaro G., Pedullà G. and Ricci L. (1987), "Sull'evoluzione del sistema economico italiano e dei trattamenti pensionstici agli inizi del 2000", in INPS, *Il futuro del sistema pensionistico italiano*, Roma.

Aprile R., Fassina S. and Pace D. (1996), "Equilibrio ed equità in un sistema a ripartizione: un'ipotesi di riforma", in Padoa Schioppa Kostoris F. (ed.), *Pensioni e risanamento della finanza pubblica, Il Mulino, Bologna.*

Aronica A. (1993), "Il trattamento di fine rapporto: dall'autofinanziamento al mercato finanziario", in Pace D. (ed.), *Il risparmio previdenziale e i fondi pensione*, Franco Angeli, Milano.

Artoni R. and Zanardi A. (1996), *The evolution of the Italian pension system*, mimeo, MIRE, Milano.

Ascoli U. (1984), "Il sistema italiano di Welfare", in Ascoli U. (a cura di) *Welfare State all'italiana*, Laterza, Bari.

Baldacci E. and Inglese L. (1999), *Le caratteristiche socio-economiche dei pensionati in Italia. Analisi della distribuzione dei redditi da pensione*, Riunione Scientifica Gruppo MURST, Messina, 22-23 November.

Baldacci E. and Tuzi D. (1999), *Gli effetti delle riforme degli anni '90 sull'evoluzione della spesa per pensioni*, XI Riunione Scientifica della Società di Economia Pubblica, Pavia, 8-9 ottobre.

Banca d'Italia (1991), "The Pension System: Reasons for Reform", *Economic Bulletin*, No. 13, October.(1995), "The 1995 Pension Reform", *Economic Bulletin*, No. 21, October. (1999), *Relazione Annuale*, May, Rome.(2000), *Relazione Annuale*, May, Rome.

Becchi Collida' A. (1979), *Politiche del lavoro e garanzia del reddito in Italia*, Il Mulino, Bologna.

Beltrametti L. (1994), "Su alcuni aspetti redistributivi della riforma del sistema previdenziale", in Rossi N. (ed.), *Secondo rapporto CNEL sulla distribuzione e redistribuzione del reddito in Italia*, Il Mulino, Bologna.

Beltrametti L. (1996), *Il debito pensionistico in Italia*, Il Mulino, Bologna.

Beltrametti L. and Soliani R. (1999), *Il sistema pensionistico italiano nel periodo 1919-39: alcuni effetti macroeconomici e redistributivi*, Dipartimento di economia e metodi quantitativi, Univerità di Genova, mimeo.

Brugiavini A. (1998), "Social Security and Retirement in Italy", in Gruber J. And Wise D. A. (eds.), *Social security and retirement around the World*, Univerity of Chicago Press, Chicago.

Brugiavini A. and Peracchi F. (1999), *Reforming Italian social security: Should we switch from PAYG to fully funded?*, paper prepared for the 6th Conference "Le nuove frontiere della politica economica", Rome, June 7, 1999.

Cannari L. and Franco D. (1990), "Sistema pensionistico e distribuzione dei redditi", *Contributi all'analisi economica*, No. 6, Banca d'Italia. (1997), "La povertà tra i minorenni in Italia: dimensioni, caratteristiche, politiche", *Temi di discussione*, No. 294, Banca d'Italia. (1999), *Poverty Among Children in Italy: Dimensions, Characteristics, Policies*, Paper prepared for the Conference: Child Well-Being in Rich and Transition Countries, Luxembourg, September 30-October 2, 1999

Cardarelli R. and Sartor N. (2000), "Generational Accounts for Italy", in Banca d'Italia, *Fiscal Sustainability*, Roma.

Castellino O. (1976), *Il labirinto delle pensioni*, Il Mulino, Bologna. (1995), "La previdenza sociale dalla riforma Amato alla riforma Dini", *Rivista Internazionale di Scienze Sociali*. (1996), "La redistribuzione tra ed entro generazioni nel sistema previdenziale italiano", in (a cura di Fiorella Padoa Schioppa Kostoris), *Pensioni e risanamento della finanza pubblica*, Il Mulino, Bologna.

Castellino O. and Fornero E. (1997), "Privatizzare la previdenza sociale? Condizioni, modalità e limiti", *Politica Economica*, No. 1, April.

CER (1993), "*Fondi pensione: una legge da riformare*", *Rapporto*, No. 2, Roma.

CER (1994), "Pensioni: e ora la riforma", *Rapporto CER*, No. 6, Roma.

Cichon M. (1999), "Notional defined-contribution schemes: Old wine in new bottles?", *International Social Security Review*, Vol. 52, No. 4.

CNEL (1963), *Relazione preliminare sulla riforma della previdenza sociale*, Roma.

Commissione per l'analisi delle compatibilità macroeconomiche della spesa sociale (1997), *Relazione Finale*, February 28th.

Fausto D. (1978), *Il sistema italiano di sicurezza sociale*, Il Mulino, Bologna. (1983), "La diffusione delle pensioni di invalidità: una piaga non esclusiva del Sud", *Mezzogiorno d'Europa*, n.1.

Ferrera M. and Gualmini E. (1999), "Rescue from Without? Italian Social Policies 1970-1999 and the Challenges of Internationalisation", *European University Institute Working Papers*, No. 13.

Ferraresi P. M. and Fornero E. (2000), "Costi e distorsioni della transizione previdenziale ed effetti correttivi di alcune proposte di riforma", *Politica Economica*, No. 1.

Folster S. (1999), "Social insurance based on personal savings accounts: a possible reform strategy for overburdened welfare states?", in Buti M., Franco D. and Pench L. (eds.), *The Welfare State in Europe*, Edward Elgar, Cheltenam.

Fornero E. (1995), "Totally Unfunded versus Partially Funded Pension Schemes: the Case of Italy, *Ricerche Economiche*, Vol. 49, pp. 357-374. (1999), *L'economia dei fondi pensione*, Il Mulino, Bologna.

Forni L. and Giordano R. (1999), *Can Italy Fund its Social Security System?,* Banca d'Italia, mimeo.

Franco D. (1993a), *L'espansione della spesa pubblica in Italia*, Il Mulino, Bologna. (1993b), "Il sistema pensionistico fra provvedimenti di emergenza e riforme di struttura", in L. Bernardi (ed.), *La finanza pubblica nel 1993*, Franco Angeli, Milano. (2001), "Italy: A Never-Ending Pension Reform", in Feldstein M. and Siebert H. (eds.), *Coping with the Pension Crisis – Where Does Europe Stand?*, Chicago University Press.

Franco D., Gokhale J., Guiso L., Kotlikoff L., Sartor N. (1992) , "Generational accounting. The case of Italy", in Ando A., Guiso L. and Visco I. (eds.), *Saving and the Accumulation of Wealth*, Cambridge University Press.

Franco D. and Frasca F. (1992), "Public pensions in an ageing society: the case of Italy", in Mortensen J. (ed.), *The Future of Pensions in the European Community*, CEPS, Brassey's, London.

Franco D. and Morcaldo G. (1986), *Un modello di previsione degli squilibri del sistema previdenziale*, Istituto Poligrafico e Zecca dello Stato, Roma. (1989), "The origins, functions and planned reform of some features of the Italian pension system", in Ministero del Lavoro e della Previdenza Sociale, *Social Security and its Financing*, Istituto Poligrafico e Zecca dello Stato, Roma. (1990), *La spesa per la tutela degli invalidi in Italia*, Franco Angeli, Milano.

Giarda P. (1998), "La revisione del sistema pensionistico nel 1997: come avrebbe potuto essere", *Economia Politica*, Vol. 15, No. 2.

Gronchi S. (1989) "The long term outlook for the Italian social security system", in Ministero del Lavoro e della Previdenza Sociale, *Social Security and its Financing*, Istituto Poligrafico e Zecca dello Stato, Roma. (1997), "Un'ipotesi di correzione e completamento della riforma delle pensioni del 1995", *Studi e Note di Economia*, No. 2. (1998), "La sostenibilità delle nuove forme previdenziali ovvero il sistema pensionistico tra riforme fatte e da fare", *Economia Politica*, Vol. 15, No. 2.

Gronchi S. and Aprile R. (1998), "The 1995 Pension Reform: Equity, Sustainability and Indexation", *Labour*, Vol. 12, No. 1.

Hamann A. J., "The Reform of the Pension System in Italy, *IMF Working Paper*, WP/97/18.

INPS (1970), "Sviluppi dell'assicurazione obbligatoria per l'invalidità, la vecchiaia ed i superstiti nel suo primo cinquantennio di applicazione", in *Settant'anni dell'Istituto Nazionale della Previdenza Sociale - Cinquant'anni dell'Assicurazione Generale Obbligatoria per l'Invalidità e la Vecchiaia - Raccolta di Studi, Roma*. (1989), "Il Modello INPS e le Prime Proiezioni al 2010", Supplement to *Previdenza Sociale*, No. 3, Roma. (1991), *Il nuovo modello previsionale INPS per le pensioni - Caratteristiche generali e risultati di sintesi della proiezione al 2010 del Fondo pensioni lavoratori dipendenti*, Roma. (1993), *Le pensioni domani*, Il Mulino, Bologna.

IRS (1995), *Vecchie e nuove pensioni: la proposta Dini*, Milano.

ISAE (1999), *Rapporto Trimestrale – Finanza Pubblica e Redistribuzione*, Ottobre.

ISTAT (1999), *I trattamenti pensionistici – Anno 1998*, Roma. (2000), *I beneficiari delle prestazioni pensionistiche – Anno 1998*, Roma.

Messori M. and Scaffidi A. (1999), *Lo sviluppo dei fondi pensione 'chiusi': il possibile ruolo del TFR e del regime fiscale*, MEFOP, mimeo.

Ministero del Tesoro (1981), "La spesa previdenziale e i suoi effetti sulla finanza pubblica", in *Relazione della Commissione di studio istituita dal Ministro del Tesoro*, Istituto Poligrafico e Zecca dello Stato, Roma. (1988), *Metodi per la previsione a lungo termine degli squilibri previdenziali*, Istituto Poligrafico e Zecca dello Stato, Roma. (1991), *Fondo pensioni lavoratori dipendenti: una proiezione al 2025*, Istituto Poligrafico e Zecca dello Stato, Roma. (1994a), *Audizione del Ragioniere Generale dello Stato Andrea Monorchio*, Camera dei deputati, XI Commissione Permanente Lavoro pubblico e privato, Roma, September 7. (1994b), "I rendimenti impliciti della previdenza obbligatoria: un'analisi delle iniquità del sistema", *Conti pubblici e congiuntura economica*, No. 2. (1994c), "La previdenza complementare: problemi e prospettive per il decollo", *Conti pubblici e congiuntura economica*, No. 1. (2000), "Medium and long-term trends of the Italian pension system year-2000 update of the projections based on the RGS model", *Quaderno*, No. 2, November.

Ministry of Health and Social Affairs (1994), *Pension Reform in Sweden - a short summary*, Proposal of The Working Group on Pensions in 1994, Stockholm.

Modigliani F. and Ceprini M. (1998), "Social Security Reform: a Proposal for Italy", *Review of Economic Conditions in Italy*, No. 2.

Morcaldo G. (1977), "Analisi della struttura dei trattamenti pensionistici e della sua evoluzione", *Contributi alla ricerca economica*, Banca d'Italia.

Nicoletti-Altimari S. and Rostagno M. (1999), *The dis-advantages of tying one's hands – Yield rate flexibility in unfunded pension systems*, paper presented at the Conference on "Le nuove frontiere della politica economica", Rome, June 7.

Nucleo di valutazione della spesa previdenziale (1998), *Analisi del Sistema Pensionistico Obbligatorio: i dati base e gli indicatori di gestione*, Roma, May. (1999), *Nota sugli andamenti della spesa previdenziale*, Roma, April.

Onofri P. (1998), "Nonostante tutto, un altro pezzo di riforma del sistema pensionistico", *Politica Economica*, No.1, April.

Orszag J. M. and Sower D. J. (1999), "Expanding the welfare system: a proposal for reform", in Buti M., Franco D. and Pench L. (eds.), *The Welfare State in Europe*, Edward Elgar, Cheltenam.

Pace D. (1993), "I fondi pensione e la previdenza obbligatoria in Italia", in Pace D. (ed.), *Il risparmio previdenziale e i fondi pensione*, Franco Angeli, Milano.

Paci M. (1987), "La tutela pensionistica di base", in INPS, *Il futuro del sistema pensionistico italiano*, Roma.

Padoa Schioppa Kostoris F. (1995) , "A proposito dei tassi di rendimento interno per i neopensionati italiani: 1995-2001", in Castellino O. (ed.), *Le pensioni difficili*, Il Mulino, Bologna. (1996) , "La riforma italiana delle pensioni anzianità e vecchiaia del 1995 e gli effetti di finanza pubblica", in Padoa Schioppa Kostoris F. (ed.), Pensioni e risanamento della finanza pubblica, Il Mulino, Bologna.

Palmer E. (1999), "Exit from the Labor Force for Older Workers: Can the NDC Pension System Help?", *The Geneva Papers on Risk and Insurance*, Vol. 24, No. 4, pp. 461-472.

Peracchi F. (1999), "Lavoro, retribuzioni e pensioni: Un confronto tra generazioni di italiani", forthcoming in Banca d'Italia, *Ricerche quantitative per la politica economica – 1999*, Roma.

Peracchi F. and Rossi N. (1998), "Nonostante tutto, è una riforma", in Giavazzi F., Penati A. and Tabellini G. (eds.), *La costituzione fiscale*, Il Mulino, Bologna.

Pizzuti F. R. (1990), *La sicurezza sociale tra previdenza assistenza e politica economica*, Liguori, Napoli. (1998), "Pension Reform and Economic Policy Constraints in Italy", *Labour*, Vol. 12, No. 1, pp. 45-66.

Porta P. and Saraceno P. (1996), "The Mandatory Pension System in Italy", *Contributi di Ricerca IRS*.

Regonini G. (1984), "Il sistema pensionistico: risorse e vincoli", in Ascoli U. (a cura di), *Welfare state all'italiana*, Laterza, Bari.

Rossi N. and Visco I. (1995), "National Saving and Social Security in Italy", *Temi di discussione*, No. 262, Banca d'Italia.

Rostagno M. (1996), "Il percorso della riforma: 1992-1995. Nuovi indicatori di consistenza e sostenibilità per il FPLD", in Padoa Schioppa Kostoris F. (ed.), *Pensioni e risanamento della finanza pubblica, Il Mulino, Bologna.*

Sartor N. (1998), *Il risanamento mancato - La politica di bilancio italiana: 1986-90*, Carocci, Roma. (2001), "The Long-run Effects of the Italian Pension Reforms", *International Tax and Public Finance*.

Senate of Italy (1995), "Crisi del sistema previdenziale italiano e confini tra pubblico e privato", *Incontri di studio a Palazzo Giustiniani*, No. 8.

Tamburi G. (1999), "Motivation, purpose and processes in pension reform", *International Social Security Review*, Vol. 52, No. 3.

Visco I. (1999), *Welfare Systems, Ageing and Work: an OECD Perspective*, Conference on "New Welfare and Social Security In Europe", Brescia, 10-11 September.

Vitali L. (1984), "Disability Policy in Italy", in Haveman R.H., Halberstadt V. e Burkhauser R.V. (eds), *Public Policy Toward Disabled Workers*, Cornell University Press.

Vitaletti G. (1990), "I conflitti di interesse sulla riforma pensionistica", in Pizzuti F.R. and Rey M.R. (eds.), *Il sistema pensionistico. Un riesame*, Il Mulino, Bologna. (1993), "Apparenza e realtà degli effetti dei provvedimenti di riforma pensionistica", *Economia Pubblica, Vol. 23, No. 11, pp. 491-499.*