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# *The social security reform process in Italy: where do we stand?*

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## **Abstract**

A reform process is under way in Italy. Achieving financial sustainability of the social security system has been the first objective characterizing the reforms of 1990s, but these have also introduced rules which aim at a more actuarially fair system. Indeed the social security system prevailing in Italy, financed on a PAYG basis, was, at the end of the 1980s, clearly unsustainable and also extremely unfair to some group of workers, enacting a form of perverse redistribution which is typical of ‘final salary’ defined benefit systems. It was also a system characterized by strong incentives to retire early.

In this paper we briefly describe the different regimes of the Italian pension system in its recent history and focus on some aspects of the reform process taking place during the 1990s. Since economists and policy makers are still struggling to assess the results and the long-term effects of these reforms we provide both a survey of this debate and some fresh evidence on the evaluation of the policy changes. We carry out this analysis with a particular emphasis on two aspects which are relevant in the debate. On the one hand we stress the role of economic incentives and the overall fiscal implications of changing the systems as well as these incentives. On the other hand we emphasize the intergenerational considerations and the political implications of the ageing process of the Italian population. From our description it emerges that the overall design of the Italian reform is probably a good one, and yet some more steps need to be taken to speed up some of the positive effects of the reform process that, due the adverse demographic trends affecting PAYG systems as well as the political arena, could easily evaporate.

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## **1 Introduction**

A wide debate has recently taken place on the need for pension reforms in OECD countries (see OECD, 1998 and 2000; the Report by the EU Commission, 2001 and

We wish to thank participants to the Research Workshop of the Michigan Retirement Research Center MRRC on International Social Insurance Reform in Washington (July 2003) for helpful comments. An anonymous referee has contributed to a significant improvement of the paper. Agar Brugiavini is grateful for the partial support by the European Community’s Human Potential Programme under contract HPRN-CT-2002-00235, [AGE].

Lindbeck and Persson, 2003), mainly triggered by the current aging process and by the growing concern for the financial sustainability of the PAYG pension systems. Indeed, some reforms have been implemented during the 1990s throughout Europe and in some instances their positive effects are now emerging. However, these measures may be inadequate in the light of future demographic trends. Few stylised facts illustrate this point. In all OECD countries, the percentage of people over 60 is expected to rise. Since the elderly typically require more health care, they are no longer active in the labour market, and draw pension benefits, the increase in their relative share in the population has major policy implications. These effects will be more severe in Europe, since Europeans *effectively* retire early, albeit with some exceptions. Figure 1 shows the dramatic downward trend in labour force participation for European countries, particularly for individuals in the age group 60 to 64, since the 1960s. The most striking cases of a drop in labour force participation are in France and in the Netherlands; however, also in Italy, where the participation rate in the 60s was already very low, the reduction has been larger than 20%. Moreover, although in very recent years the decline in labour force participation is less marked, there are no indications that this trend will substantially revert in the near future. As for pension spending, the European Commission (2001) has estimated, within a unified demographic and macroeconomic scenario, that demographic developments will soon put pressure on public pension expenditure over the next few decades. Ageing will add roughly 3–5% of GDP to pension expenditure in many countries, with peak values of 8% in Spain, Portugal and the Netherlands. In Italy, despite the reforms of the 1990s, pension expenditure is expected to increase by 1.6% by 2030, only to stabilize to the year 2000 value by 2050, when the reforms will be completely phased in.

Although pension systems in Europe differ along many dimensions, such as for instance the combination of public, typically PAYG, system (the first ‘pillar’) and private occupational plans (the second ‘pillar’), virtually every European country has recently adopted some reform (more structural or less structural, also referred to as ‘parametric’) of its pension system. The notable exceptions are Italy, Poland and Sweden, where there has been a more structural shift from a defined benefit (DB) to a notional defined contribution system (NDC). Diamond (2002) and Lindbeck and Persson (2003) offer a taxonomy of pension reforms based on three dimensions: defined contribution versus defined benefit (i.e. the contribution rate is exogenous in the former, while it is endogenous in the latter in order to balance the social security budget), funded versus unfunded and actuarial versus non-actuarial pension systems. Although the distinction between features of social security systems according to these three dimensions is not always clear-cut, we could safely argue that the majority of European countries has enacted marginal changes from non-actuarial versus more actuarial systems (both in the macro sense of ‘actuarial balance’, i.e. financial viability and in the sense of more actuarially fair at the individual level). As we argued Italy, while maintaining an unfunded financing method, has leaped toward an almost actuarially fair system and, in the long run, a more actuarially balanced one.

However, a prompt assessment of the effects described by Lindbeck and Persson of these reforms, which takes into account the demographic and macroeconomic

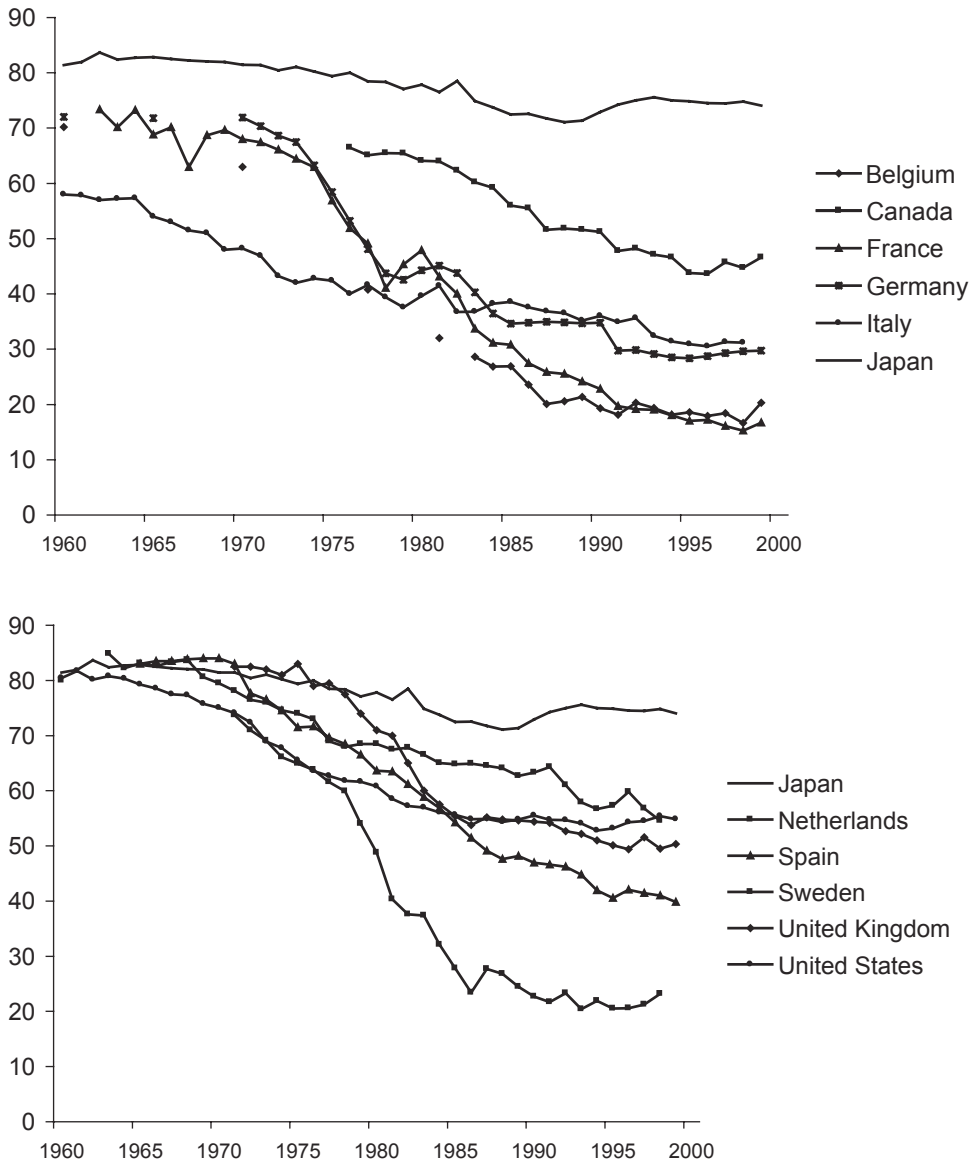


Figure 1. Labor force participation trends for men aged 60–64  
 Source: EU, Labor Force Survey.

scenario, is not easily done. To this respect, the importance of timely data availability has been stressed by the European Commission (2000a and 2000b), by Boeri *et al.* (2001) and particularly by the contribution of Buti and Costello (2001).

Because of the sustainability problems mentioned above more attention has been devoted by several countries at the ‘mechanism’ of pension systems and the incentives of pension provision affecting labour supply and saving. Only has recently it been recognized that one fundamental explanation for the falling trend in labour force

Table 1. *A comparison of incentive calculations for a representative individual (man)*

Last year of work	Italy		Spain		USA	
	Replacement rate	Tax/subsidy	Replacement rate	Tax/subsidy	Replacement rate	Tax/subsidy
54	–	0	–	–	–	0
55	0.726	0.245	–	0.201	–	–0.022
56	0.744	0.308	–	0.096	–	0.046
57	0.761	0.338	–	0.152	–	0.060
58	0.780	0.372	–	0.355	–	0.069
59	0.798	0.401	0.590	0.279	–	0.072
60	0.799	0.697	0.661	–0.074	–	0.071
61	0.804	0.711	0.730	0.010	0.403	0.064
62	0.805	0.718	0.816	0.032	0.440	–0.028
63	0.805	0.729	0.895	0.167	0.476	–0.005
64	0.809	0.746	0.996	0.264	0.703	0.031
65	0.809	0.756	0.998	0.729	0.749	0.188
66	0.809	0.772	0.996	0.725	0.798	0.225
67	0.809	0.787	0.988	0.718	0.845	0.269
68	0.809	0.803	0.981	0.677	0.872	0.439
69	0.809	0.818	0.973	0.636	0.898	0.455

Source: Gruber and Wise (1999) Social security and retirement around the world.

participation lies in the incentives to retire inherent in the generous retirement benefits provided by the social security and welfare system. Table 1 shows the ‘implicit tax’ on continued work for three selected countries (Italy, Spain and the US). This measure is defined as the cost for a typical worker of delaying retirement by one year: it includes the cost in terms of foregone pension benefits and the extra contributions paid, but also the (possible) advantages of building pension rights. A positive tax denotes an incentive to retire. For any worker’s age, the ‘implicit tax’ in Italy was, at the end of the 1990s higher than in Spain and in the US; and it became equal to 70% for a 60-year-old worker. The existing empirical evidence suggests a strong link between the tax incentives to retire and the age at which male workers are observed to retire in different countries.<sup>1</sup> Because of the aging process and of this retirement behaviour, unless the present incentives to retire early and other features of the old age security systems are modified, by 2030 in many European countries a quarter of the earnings of the working population will be needed just to support the elderly.

A new strand of the economic literature has argued that population aging has a crucial effect also on the political support of the pension system across Europe (see Galasso and Profeta, 2002, for a survey). Since pension systems are mainly supported by elderly people, retirees and middle-aged workers close to retirement age, the aging process – by raising the political representation of the elderly – increases the relevance

<sup>1</sup> The concept of ‘implicit tax’ as a possible cause of early retirement has been introduced by Gruber and Wise (1999) and Blöndal and Scarpetta (1999). Gruber and Wise (2003) present an empirical investigation of these incentives for several countries.

Table 2. Median age among voters

Germany	46	49	52	54	55	55
France	47	50	52	54	55	56
Italy	46	48	52	55	56	56
Spain	44	47	50	54	56	57
United Kingdom	45	47	50	51	52	53
United States	47	50	52	53	53	53

Source: Galasso and Profeta (2004).

of the pension issue in the policy-makers' agenda. A synthetic measure of the political influence of the elderly is given by the median age among the voters, which we report in Table 2.

In this paper we briefly describe the Italian pension system and in particular some aspects of the reform process, indeed Italy has seen a flurry of reforms during the 1990s and economists and policy makers are still struggling to assess the results and the medium-term and long-term effects of these changes. We do not fully adapt to the framework proposed by Lindbeck and Persson because, besides providing more country-specific details, we focus also on the political economy of these reforms. From our description, it emerges that the overall design of the Italian reform is probably a good one, and yet some more steps need to be taken to speed up some of the positive effects of the reform process that, due the adverse demographic trends affecting PAYG systems, could easily evaporate.

In Section 2 we provide an overview of the Italian pension system with an historical perspective by focusing the attention on the reforms. In Section 3 we present some lines of 'evaluation' of the reforms and Section 4 provides some conclusions.

## 2 An overview of the Italian pension system and its reforms

The Italian pension system relies on three pillars: (i) mandatory old age insurance, also providing insurance to survivors and disability benefits; (ii) collective (occupational) pension funds; and (iii) private annuities or individual accounts. The first covers the majority of the working population (almost all private sector employees and all public sector employees) and is financed through a PAYG (Pay-As-You-Go)<sup>2</sup> method, while the remaining forms of insurance provide additional coverage outside (or, in a few cases, substitutes for) the public program. Pension funds are generally partially funded and non-mandatory (unless they substitute the public program, as it happens for professional categories such as lawyers, engineers etc.). In this paper we define the social security system to be a mandatory public insurance program collecting payroll taxes both from employers and employees to provide old-age benefits, benefits to survivors and disability insurance to its members.<sup>3</sup> The social security

<sup>2</sup> I.e. an unfunded method of financing.

<sup>3</sup> The Italian SS system has had a major role in providing a safety net for low-income households both explicitly (through special provisions which are part of the INPS Administration, e.g. income maintenance provisions to the needy and very old) or implicitly through disability benefits.



program is based on a number of Institutions administering public pensions. A vast majority of the population is insured with the *National Institute for Social Security (INPS)*. This is itself responsible for a number of separate and independent funds; the most important one is the *FPLD (Private Sector Employees Fund)*. Although a description of the INPS-FPLD gives a fairly good idea of the system as a whole, it should be borne in mind that a wide variety of cases actually exists: the second most important pension institution is INPDAP, administering pensions for public sector employees. Within the INPS itself there are segments for other occupations, such as some categories of self-employed or for employees in the agricultural sector, which adopt different rules. To give some order of magnitudes: INPS provides insurance to approximately 18 million workers, and, of these, private sector employees constitute more than 12 million workers. Covered public sector employees in INPDAP account for approximately 3 million workers.<sup>4</sup>

### 2.1 A historical perspective

The first pension plans were established in Italy for public employees 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 funded, was managed by INPS. It was financed by a payroll tax and provided old age and disability benefits on a contributory basis. After 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 as only a small part of assets was invested in shares and real estate. Hence Italy adopted (together with many other developed countries) a PAYG financing system. The transition was completed in 1952, when new rules were eventually introduced, at the same time a guaranteed minimum pension level was also introduced (Franco, 2002).

By the end of the 1950s, frequent changes had taken place, almost invariably increasing the generosity of the system. Public pension coverage was extended to the self-employed,<sup>5</sup> to work-disabled citizens (in 1966) and to elderly persons with low incomes (in 1969). In 1969 pension benefits for private sector employees started to be computed on the basis of earnings (final salaries). The change was seen, particularly by unions, as a major achievement in guaranteeing pensioners a standard of living correlated with that of active workers. An early retirement option was also introduced in 1956, making age requirements irrelevant, provided that the worker had a minimum contributory period. No evaluation of budgetary costs was carried out at the time of these reforms, which altogether have been estimated to involve a net

<sup>4</sup> Other relevant public funds are for managers (INPDAL, part of INPS from the year 2003), employees of post offices and mail services (IPOST) and workers in media and movies/theatre sector (ENPALS). There is then a large number of special self-employed and professionals funds for lawyers, engineers etc. ... where participation is compulsory and the general rules set by law, for example there is an explicit PAYG element, but the funds are privately run since 1996. All together these 'other funds' account for 1.5 million workers.

<sup>5</sup> 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.

transfer to living generations of about 80% of GDP (Castellino, 1996). During the 1960s and the first half of the 1970s the social support functions of the pension system were extended in various dimensions. Pension expenditure helped in easing social conflicts, and started to play the role of ‘soft landing’ devices, partly through new provisions (a ‘citizen’ benefit for persons over 65 lacking adequate means of support and for the disabled) and partly through abuse of the existing ones (e.g. disability insurance).<sup>6</sup> The 1980s saw the first steps towards rationalising the rules, prompted by increasing expenditure on retirement provisions leading to difficulties of the public finances (coupled with a growing explicit debt). For example, in 1984 the eligibility requirements for disability pensions were tightened: from loss of earning capacity to a proper ‘work disability’.

## ***2.2 The Italian SS System before the reforms***

In this section we describe the main features of the legislation governing the Italian pension system just before 1992. Some of the basic features are still present in the system (e.g. a large first pillar), but a number of important reforms have occurred during the 1990s. We will then provide a detailed account of these reforms (see Table 3).

### *2.2.1 Payroll SS taxes*

The inflow of resources into the system comes from the employers’ contributions and employees’ contributions: when outlays exceed revenue, the deficit is financed by the Central Government. The payroll tax is unevenly shared between employer and employee. For the INPS-FPLD, this is approximately one-third falling on the employee and two-thirds on the employer. A further 7.41% should be added for employees for a ‘severance pay fund’ referred to as TFR (Trattamento di Fine Rapporto).<sup>7</sup> This is retained by the employer and builds up in a fund, directly managed by the employer, who provides a lump sum benefit at the time of separation from the firm. The tax base on which payroll taxes are paid is not capped: this is a point long debated in the literature, as social security benefits used to be capped (until 1992) and are now indexed in a staggered fashion (i.e. the benefit system is progressive).

### *2.2.2 Eligibility*

Before 1992 eligibility requirements were met when a man reached age 60 (a woman 55) and had contributed for at least 15 years.<sup>8</sup> However the early retirement option

<sup>6</sup> DI benefits were granted on the basis of the inability to earn income more than on actual physical disability, and this was assessed in the light of the socio-economic conditions of the applicant’s province of residence. See Franco (2002).

<sup>7</sup> Some authors prefer to talk about ‘deferred wage’, because TFR is not part of social security as such and because the actual nature of this insurance is not clear. As we will clarify, the link with social security comes from the recent legislation which aims at transferring the TFR to pension funds.

<sup>8</sup> Retirement is non-mandatory, but individuals who intend to work beyond the normal retirement age are not protected by the law. However, before the 1992 Reform a worker could postpone retirement (up to age 65 in the private sector) if this would allow him to complete 40 years’ tax payments. The 1992 Reform

Table 3. *Key features of the pre-1993 regime, and the 1992 and 1995 reforms (at the steady-state)*

	Pre-1993 regime	1992 reform	1995 reform
Normal retirement age	60 (men), 55 (women)	65 (men), 60 (women)	Any age after 56 (for both men and women)
Transitional period		Until about 2032	Until about 2035
Pensionable earnings	Average of last 5 years real earnings (converted to real values through price index)	Career average earnings (converted to real values through price index + 1%)	Career contributions (capitalized using a 5-year moving average of GDP growth rate)
Pension benefit	2%*(pensionable earnings)*( $t$ ), where $t$ is years of tax payments (at most 40)	2%*(pensionable earnings)*( $t$ ), where $t$ is years of tax payments (at most 40)	Proportional to capitalized value of career contributions, the proportionality factor increasing with age at retirement (from 0.04720 at age 57 to 0.06136 at age 65)
Pension indexation	Cost of living plus real earnings growth	Cost of living	Cost of living
Pension to survivor	60% to spouse, 20% to each child, 40% to each child (if no spouse)	Same	Same
Years of contributions for eligibility	15	20	5
Early retirement provision	Any age if contributed to SS for 35 years or more, no actuarial adjustment	Any age if contributed to SS for 35 years or more, no actuarial adjustment	No early retirement provision
Total Payroll tax	24.5% of gross earnings	27.17% of gross earnings	32.7% of gross earnings

often made the age-requirement irrelevant as a worker in the private sector could claim early retirement benefits at any age if 35 years' tax payments had been completed. For a male public sector employee, 20 years of tax payments were required

encouraged workers to postpone retirement (until age 65) even if 40 years' contributions had been completed by providing a slightly higher return in the benefit computation formula.

(15 years for a married woman).<sup>9</sup> In general, a year of work is completed if 52 weeks of SS tax payments have been recorded by the SS Administration.

From this brief description of eligibility criteria it emerges that the SS System was actuarially unfair and enacted redistribution of resources across the population. In particular, there was an incentive to early retirement as no actuarial penalty applied to early retirees. For example, a private sector employee who started work at age 16 could retire at age 51 while the same worker could retire at age 36 in the public sector. This might explain why detachment from the labour force increased significantly over time in the age group 50–60 as well.

### *2.2.3 Benefit computation*

Before 1992 for a private sector employee (INPS-FPLD) benefits were computed by first averaging the last five years' earnings (prior to the retirement age) and generating a basic amount known as 'pensionable earnings'. Actual earnings of each year were taken before tax and converted to real amounts by means of a consumer price index.<sup>10</sup> Pensionable earnings were converted to the first social security benefit by applying a 2% factor (referred to as 'rate of return') for each year of payroll tax payment up to a maximum of 40 years. Hence a worker could get at most 80% of his pensionable earnings. If retirement was postponed, additional years of work beyond a total of 40 did not count for benefit computation; however, they were included in pensionable earnings as they replaced earnings of earlier years. The system was progressive both because of capping on earnings and because of old-age minimum benefit levels. It is worth recalling that public-sector employees had their benefit level based on final salary rather than average earnings of the last five years.

For all funds, benefits increased at regular intervals with nominal wages, i.e. consumer price growth plus real earnings growth. The former was measured by the consumer price index, but implemented in a slightly staggered fashion (e.g. if the SS benefit amounts to more than three times the 'minimum benefit', indexing is based on 75% of the price change). Wage growth was measured by changes in real wages both in the private sector and public sector.<sup>11</sup>

### *2.2.4 Minimum benefit*

This is a relevant concept in the Italian SS system, both because the number of retirees involved is non-negligible, and because the minimum benefit is often used as a benchmark against which to set incomes for other provisions. In practice, if the benefit formula gives a retiree a benefit level below a given threshold the benefit

<sup>9</sup> However it should be added that normal retirement age for the public sector was (in the pre-1995 legislation) 65 for both genders.

<sup>10</sup> This is an index provided by the Central Statistical Office (ISTAT) in which weights applied to prices are taken from a large sample of the Italian population based on a sampling frame of blue-collar and white-collar employees (Indice dei prezzi al consumo per le famiglie di operai e impiegati).

<sup>11</sup> Indexation to nominal wage started, for INPS-FPLD, in 1975: the legislation has changed several times in the last few decades tending to extend this feature to more groups of the working population. The timing of indexation has also changed several times: during the 1970s it was done quarterly.

itself is set in line with that threshold. This income transfer to low income retirees is conditional on means-testing: up to 1992 this test would involve only the claimant's income and exclude the income of the spouse. More recently, a similar limit applies to singles, but for married couples what matters is the sum of incomes of both spouses, which has to be below four times the minimum level. While SS taxes are not subject to income taxes (as these are paid after the SS tax), SS benefits are taxed at current income tax rates.

### *2.2.5 The TFR*

This provision applies both to private sector and public sector employees. In the private sector, a non-negligible fraction of annual earnings (7.41 %) are ear-marked by employers towards an end-of-job one-off payment. This money does not contribute to any pension fund but is directly managed by the firm, which uses it as internal funds.

The TFR was originally set up in the private sector as a form of unemployment benefit, while firms encouraged the growth of this fund in order to both reduce workers' mobility and create an extra source of internal financing. The TFR cannot be considered as part of the 'pension package' as such, nor can it be regarded as unemployment insurance. There are essentially three cases in which TFR is paid out fully: at retirement, when the worker is fired or at the time of separation, if the worker voluntarily leaves the firm. However, a relevant fraction of the TFR can be withdrawn by the worker during employment under special circumstances, such as the onset of illnesses or for home purchase. The legislation concerning the lump sum benefit computation differs from sector to sector and, prior to 1982, from occupation to occupation within the private sector. Since 1982, the fund built up each year is capitalized at a rate given by the sum of two components: a fixed 1.5% plus 75% of the growth in prices recorded in the month of December of the previous year. In periods of high inflation this growth rate would be below the price growth rate and much below nominal wage growth. For this reason, it is often argued that workers would be better off if they could invest that money with a financial institution. While 7.41% of gross earnings is retained by the employer for the TFR fund in the way described above, a further 0.2% of the worker's gross earnings is paid by the employer to the INPS Administration, which does not contribute to the employee's TFR benefit, but it contributes to a guarantee fund to protect workers against insolvency risks. The employee's contribution to the TFR is exempt from income tax, the TFR lump sum is subject to separate income taxation at favourable tax rates.<sup>12</sup>

### *2.2.6 Old age insurance through private schemes*

Before 1992 saving through Pension Funds was available for a limited number of individuals in specific occupational sectors and was almost invariably a voluntary additional supplement to the basic pension. More recently, the need to alleviate part

<sup>12</sup> Income tax is paid on the TFR only above a given minimum level. This tax-exempt level changes over time.

of the burden of pension provision that falls on Social Security has shifted attention to a system in which, in addition to the public pension scheme, there should exist a non-own-managed pension fund and possibly a private old-age insurance contract. The recent reforms intend to channel the enforced 'low-return' savings of the TFR into pension funds (particularly for newly hired employees), provided the firm/industry and the Fund itself abide by a number of requirements. The need for a funded pillar became apparent around the time of the first reform (and indeed it was one of the motivations of that reform of 1992), hence a description of this point is provided below along with a discussion of the reforms.

### 2.3 The recent reforms

Some of the issues raised in the above description of the Italian social security system have been tackled by the recent reforms. A first reform (known as the Amato Reform) was passed by Parliament in 1992. Once phased in, it would reduce pension outlays and iron out major differences among various sectors and occupations. However, this left the rules governing the early retirement provision almost untouched, and, according to many, did not produce the much-needed savings in the SS budget. Hence the second reform (known as the Dini Reform) in 1995 totally changed some of the basic rules for granting benefits to future retirees and attempted to harmonize the actuarial rates of return for early and late retirees.<sup>13</sup> The Amato Reform had a major impact on retirement behaviour, as it was the first signal of a coherent redesigning of the SS System. Both reforms are characterized by a rather long transitional period affecting all the cohorts of post-1992 retirees: the provisions for the transitional periods involve a *pro rata* method of establishing eligibility and benefit computation criteria. This method allows the legislation of the old regime to apply to the share of years in employment under that regime, while the remaining share is regulated by the new rules.

#### 2.3.1 The 1992 reform

The 1992 Reform took place at a time when pension expenditure had increased from 7.4% of GDP in 1970 to 10.2% in 1980, and to 14.9% in 1992. Demographic pressure explained only part of this trend, generosity of the system coupled with the timing of a large number of cohorts coming to 'maturity' of their vesting rights did the most. At the same time early retirement had become a widespread phenomenon due to the incentives embedded in the system and to the advantage of workers and firms. In other words, there was a high 'implicit tax' on continuing to work (Brugiavini, 1999), which is typical of defined benefit systems, but implied a heavy distortion because of the lack of actuarial penalties for early retirement. This situation was reflected in the low employment rates of older men and women.<sup>14</sup> Furthermore,

<sup>13</sup> Table 3 summarizes some of the key features of three regimes: the regime prevailing before the Amato-Reform (denoted as pre-1992 Regime), the one prevailing at the steady state after the Amato-Reform (post-1992 Regime) and the one prevailing after the Dini-Reform (post-1995-Regime).

<sup>14</sup> In 1990 only 32% of individuals in the age-group 55–64 were employed. In 1995 this percentage was down to 27% and was far below the percentages recorded in most other Western countries. See OECD (2000a).

the segmentation into several funds, each one operating with its own rules, hampered the mobility of workers and allowed for extremely uneven provisions (depending on sex, age, seniority, sector of employment etc.) hence generating serious equity problems within the welfare system (even within generations). In this situation, immediate expenditure cuts seemed politically unfeasible and the issue of harmonization remained at the core of the policy debate until the beginning of the 1990s.<sup>15</sup>

In detail, the 1992 reform implied several changes:

- raised the normal retirement age (over a ten years transition) from 55 to 60 for women and from 60 to 65 for men in private employment;
- the reference period for calculating pensionable earnings was also extended (over a ten-year transition) from 5 to 10 years. However for younger workers (less than 15 years of contributions in 1992) it was extended to the whole working life. Past earnings were to be converted in actual amounts at a rate equal to the growth in the cost of living index plus one percentage point per year;
- the minimum number of years of contributions for eligibility to an old-age pension was raised (over ten years transition) from 15 to 20;
- indexation of benefits was based on prices rather than nominal wages, but the government was allowed to introduce discretionary additional adjustments through the Budget;
- the minimum number of years of contributions required for public sector employees to become eligible for early retirement was gradually raised to 35 (i.e. it was harmonized to the requirement already in effect for private sector workers).

The parametric reform implemented in 1992 substantially changed the outlook for pension expenditure. According to Beltrametti (1994), total outstanding liabilities<sup>16</sup> were reduced from 389% to 278% of GDP (a 29% cut). Using estimates by Beltrametti (1995 and 1996), D'Amato and Galasso (2002) suggest that the largest burden of the reform was born by individuals with less than 44 years (see Table 4). 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, 37% for workers with long working history, 42% for those with short or discontinuous careers.

### 2.3.2 The 1995 Reform

The 1995 reform adopts a 'notionally defined contribution' (NDC)-based method of benefit calculation. This is a model that, while being unfunded, i.e. PAYG, is designed to guarantee a closer link between contributions and benefits with respect to a defined benefit (DB) model, where benefits are based on average salary or final salary (Disney, 1999). Some authors call this model 'virtual funding'. In the Italian

<sup>15</sup> See Franco (2002) for a detailed account.

<sup>16</sup> 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.

Table 4. *The effects of the reforms on the net pension wealth by age*

	Amato Reform <sup>a</sup>			Berlusconi Proposal <sup>a</sup>			Dini Reform <sup>a</sup>	
	Before	After	Δ	Before	After	Δ	After	Δ
15–19	28	–31	–59	–48	–52	–4	–56	–8
20–24	152	–50	–202	–101	–116	–15	–128	–27
25–29	276	–43	–319	–112	–131	–19	–145	–33
30–34	347	46	–301	–20	–56	–36	–63	–43
35–39	415	198	–217	139	71	–68	99	–40
40–44	504	282	–222	227	174	–53	227	0
45–49	497	349	–148	306	251	–55	306	0
50–54	533	441	–92	402	338	–64	402	0
55–59	394	360	–34	339	238	–101	339	0
60–64	183	177	–6	168	160	–8	168	0
65+	79	76	–3	74	74	0	74	0
Workers	3.407	1.802	–1.605	1.375	997	–378	1.225	–151
Retirees	2.660	2.527	–133	2.710	2.710	0	2.710	0

Note: <sup>a</sup>In billion of Italian liras in 1992.

Source: Beltrametti (1995, 1996), D'Amato and Galasso (2002).

version of the NDC system the first SS benefit is the annuity equivalent to the present value (at retirement) of past payroll taxes, capitalized by means of a five-year moving average of the nominal GDP growth rate. The relevant tax rate is 33% and an age-related actuarial adjustment factor is applied to the resulting figure as explained below.<sup>17</sup> Capping is applied on the present value of contributions rather than on pensionable earnings. As for the early retirement provision, the 1992 Reform ironed out differences among programs (contributions had to be paid for at least 35 years; irrespective of type of occupation, sector, etc.), with no adjustment of retirement benefits, while the 1995 Reform introduced – at the steady state – a *window* of pensionable ages with actuarially based adjustment of pensions. These vary between age 57 and 65 with ‘actuarial adjusted rates of return’ between 4.720% and 6.136% respectively. Coefficients, which make the present value of future benefits equal to capitalized contributions, 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 payroll taxes. Contribution requirements changed from the initial 15 years, to just five years after 1995. Payroll taxes jumped to 32.7% of gross earnings, to be split between employer and employee approximately for two-thirds and one-third respectively.<sup>18</sup> The other provisions were basically unchanged, though following the new eligibility requirements and benefit formula, the rules governing ‘minimum benefits’ became tighter.

In spite of the change in the design of the pension system, the 1995 reform did not significantly affect expenditure trends during the 1990s. At the time Rostagno (1996)

<sup>17</sup> Hence the benefit is: (33%)\*(adjustment factor)\*(present value of SS taxes).

<sup>18</sup> The increase (from approximately 27% in 1995) was partly artificial as it was simply the result of re-labelling under one SS tax rate several contribution items.



estimated that, in the medium run, the reform increased the liabilities of the private sector employees pension scheme by 4% to 9% of GDP, depending on the rate of growth of GDP. Moreover, the implementation of the reform was (and still is) 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.<sup>19</sup> Only individuals beginning to work after 1995 will receive a pension computed entirely on the basis of the new rules. Hence the length of the transition phase and other aspects of the reform may significantly reduce its expected benefits. In fact, according to D'Amato and Galasso (2002), only those individuals who were younger than 40 years experienced a reduction in their net pension wealth.

### 3 Evaluating the reforms of the Italian pension system

A first round of evaluations of the reforms became available throughout the 1990s and these studies gave some positive assessment of the 1995 Reform. Some of these evaluations were based on 'generational accounting studies' (Sartor, 2000). For example, by making use of the data available in 1998, it was estimated that in order to close the gap between the net taxes paid by the last newly born generation (on the basis of current policies) and those paid by future generations (taking into account policy actions to restore government solvency) 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%.

However it was immediately clear that the rules introduced in 1992 and 1995 would become fully operational only after a long transitional period. This was motivated by the political decision to exempt senior workers from all the important changes: about 40% of those employed in 1999 could fully retire under the pre-1992 regime. For these people, the incentive to retire early was even increased by the expectations that retirement conditions might be tightened (Franco, 2002). At the same time the budgetary problem was not gone. According to Italian Treasury (Ministero del Tesoro, 1999), the ratio of public pension expenditure to GDP, which despite the reforms introduced during the 1990s reached 16% in 1999, was likely to rise by another 1.4 percentage points by 2015. The prospect clearly signalled potential infringements of the Stability and Growth Pact.

#### 3.1 A general assessment of the reform

The 1995 reform envisaged, amongst others, two main long-term improvements: restoring actuarial fairness with a move toward a NDC system and limiting early exits. The former should be achieved through a new benefit formula, which, like in any defined contributions (DC) system, fixes the contributions rate and lets the

<sup>19</sup> The benefits 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.

benefit level be obtained residually. The latter is obtained both through a minimum age requirement (57 years of age for both men and women) and through an incentive to work beyond age 57 in order to obtain higher pension benefits.

A number of considerations can be raised on both features, not only regarding the balancing mechanism between 'pension assets' and 'pension liabilities', but also the insurance properties involved in the different pension regimes. A discussion on these issues emerged at the time of the reform and is still occupying the political arena. Indeed, there is now a better understanding, also thanks to the other parallel reforms in Sweden and Poland, of these issues.

In Italy, despite the reforms, expenditure trends will still require either larger transfers from general taxation or a further increase in social security contribution rates, which are already extremely high, and in any case cannot be tampered with, if the route of the NDC system is taken seriously. This means that the balancing system between 'pension assets' and 'pension liabilities' does not operate to guarantee a balanced budget, or, analogously, that the implicit return promised to retirees is still too high, as compared with the long-run return of an unfunded system.

A balanced budget scheme could have been achieved, in principle, by switching to a funded system, in which contributors receive, upon retirement, a stream of pension benefits, which corresponds to their capitalized contributions. Unlike in the notional defined contribution system, however, capitalization occurs at the market interest rate, as contributions are typically invested in private assets. This system may typically lead to the different treatment, in terms of pension benefits, of otherwise identical generations of workers, depending on the stock market situation at the time of their retirement. As argued by Modigliani *et al.* (1999), a partial insurance across generations, against this stock market risk, may be achieved in a funded system, if the government is willing to run a buffer fund to compensate individuals who retire with below average returns on their pension funds, while taxing individuals who retire with above average returns. However, as many authors pointed out, for Italy a full privatization of the pension system was not feasible.

Although the post-1995-system is based on a close link between contributions and benefits for each individual, it is still vulnerable to demographic and economic shocks (Franco, 2002), also known in the literature as the 'direct risk'. In fact, since the system remains PAYG, it is still affected by changes in the dependency ratio as determined by the demographic dynamics. Increases in life expectancy would automatically reduce new pension benefits, via the conversion coefficients, if these coefficients were revised frequently. 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, because reductions in mortality rates that take place after a pension is awarded do not affect its level. The ten-year interval between revisions in coefficients represents an incredibly long adjustment lag. Likewise, a decline in the rate of GDP growth would not affect the amount of accumulated contributions (i.e. the accrued rights) and the pensions already awarded. A lasting (permanent) decline in the ratio to GDP of earnings assessed for social security contributions can only affect new pension benefits. As in the case of changes in life expectancy, financial equilibrium would be restored very

slowly. In the face of adverse demographic and economic trends, cash deficits may occur. Gronchi and Aprile (1998) argued that the predetermination of an implicit rate of return on accumulated contributions (equal to 1.5%) introduces unnecessary inflexibility in the system. If GDP growth were lower than 1.5%, there would be once again a budgetary problem. Sweden has partly overcome this problem by making use of a 'buffer' fund that should be used when negative shocks occur while should be accumulating when there are positive shocks to the GDP growth rate. At the same time, in the Swedish pension system indexing rules for the pension formula are applied asymmetrically according to two series. A slower indexation applies both to pension benefits for retirees and of the notional pension capital of workers for all the periods in which, due to negative shocks, the 'pension assets' do not meet the pension liabilities, a faster indexation applies when the system is in balance or even in surplus.<sup>20</sup> AQ1

Italian economists have not paid enough attention to the issue of insulation from different risks and the risk-sharing properties of the new pension system. A NDC system should protect more individuals, because there is an implicit risk-sharing mechanism *vis-à-vis* shocks to earnings and demographic shocks, as pension benefits depend endogenously on aggregate GDP. Hence, in principle, these risks should be shared by all workers as well as retirees. However, in Italy this is less so, first because, as argued above, the timing of adjustment of the conversion coefficients is too slow and there is no *ex post* automatic mechanism to immediately counteract these shocks one-for-one, of the type existing in Sweden. But even more worrying is the fact that the Italian system, due to the periodic adjustments rule, is not totally insulated from political risk.<sup>21</sup> All this on top of the long transitional period that obviously leaves a number of generations 'out' from this mechanism.

In Italy there is also discussion about indexation of past wages and of future earnings, which is mostly concerned with the redistribution of resources between generations. The 1995 reform was designed to achieve a replacement rate at retirement which, for individuals retiring at 62 after 37 years of seniority, was close to the pre-reform rate. However, price indexation of benefits implies that the purchasing power of pensioners declines over time in comparison with that of workers and younger pensioners.<sup>22</sup> Two aspects may make this solution problematic in Italy over the long run: workers are allowed to retire rather early and the adjustments to price increases of pensions are slightly progressive. These factors may generate sizeable disparities among pensioners depending on the year of retirement and in turn create political pressure for discretionary increases of pension in real terms (Gronchi and Aprile, 1998; Peracchi and Rossi, 1998).<sup>23</sup> Moreover, as we argued, revisions of conversion

<sup>20</sup> See Settegren (2001).

<sup>21</sup> The NDC is obviously much less affected by political risk than a system of the defined benefit type (see Lindbeck and Persson (2003).

<sup>22</sup> 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).

<sup>23</sup> 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.

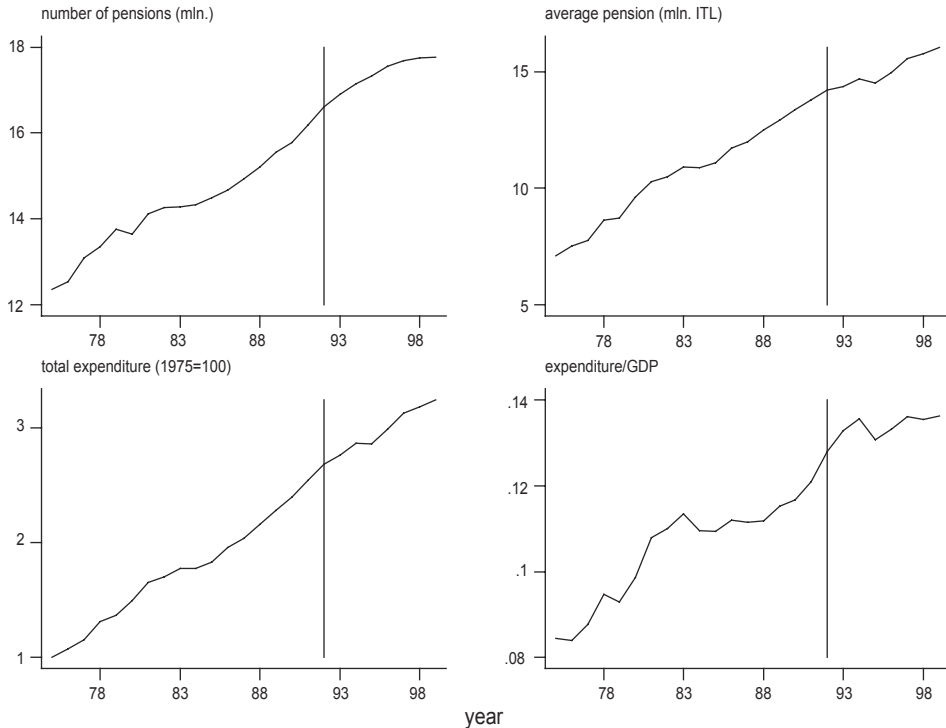


Figure 2. Number of pensions, pension expenditure, average pension and expenditure/GDP ratio, 1975–98 (old-age, disability and survivor pensions)  
 Source: ISTAT, I Trattamenti Pensionistic, several years.

coefficients at ten-year intervals may produce large differences in the treatment of contiguous generations of pensioners.

Overall, while some obvious positive effects should be expected in the long run, mainly achieving financial soundness and actuarial fairness, very little has been done to clearly spell out and estimate the magnitude of these effects, the actual time profile of the potential fiscal saving, the possible efficiency gains and welfare effects.<sup>24</sup> The fiscal savings of the changes in benefit computation of the 1995 reform are still under scrutiny, as they will be most felt in the future. Figure 2 provides a first impression of the recent trends: after a sudden fall in expenditure over GDP following the reforms, the underlying trend of increasing spending prevails to show a ‘hump’ in the next decades.

### 3.2 Behavioural effects of the reforms

In the discussion taking place at the end of the 1990s, the focus was on benefit cuts, while limiting eligibility seemed to play a relatively modest role despite the growing evidence on the effects and the magnitude of early retirement (Brugiavini, 1999). At the same time a number of European countries modified the legislated ‘normal

<sup>24</sup> Lindbeck and Persson (2003) discuss also the welfare enhancing properties of NDC type reforms.

retirement age' (NRA). However, this was often implemented as a simple eligibility requirement without adopting appropriate actuarial penalties for early retirees or without tightening eligibility rules in other programmes (such as disability insurance or unemployed insurance) offered to the over 50. For example currently in Italy there is still no actuarial penalty affecting early retirement.<sup>25</sup> In some cases the minimum age restriction to become eligible for early retirement is totally overcome by a seniority rule based on the number of years of contributions (see again Italy). The results of increasing the NRA may be nullified by exits through early retirement or alternative options, if there exists an incentive to do so (e.g. if the system is generous with early retirees).

Following the rules of the 1992 reform the NRA age has just become (in the year 2000/2001) 65 for men and 60 for women. However the minimum age requirement to become eligible for retirement is still substantially lower than the NRA, provided the worker has accrued a given number of years of contribution (see Table 5). The 1995 reform envisages a window (between age 57 and age 65) with actuarial adjustment, but this will become fully effective only in 2035. The 1997 reform introduced tighter and more harmonized restrictions on eligibility requirements for early retirement. But not even at the steady state will the system achieve complete age-neutrality (see Table 6).

It is too early and particularly hard to isolate the effects of the changes of the 1990s in terms of retirement age, given the overlapping of different trends in the economy. For Italy some empirical work has been done on the evolution of early retirement on available data: Italy gives an interesting example of the 'delayed effects' that the 1992 reform has achieved in terms of retirement decisions. In particular, Brugiavini and Peracchi (2003) look at labour force participation on quarterly data for Italy and can detect a reversion of the trend out of the labour force for the younger cohorts of older workers (ages between 50 and 57) only in the years 1999 and 2000 (Figure 3). This is mainly the effect of the tightening of the rules on minimum age requirements.

Besides the actual reduction in the number of pensions, it is clearly very hard to place a precise number on the advantage to the economy from delaying retirement, the European Commission (2001) estimates that a generalized increase to age 65 of the effective retirement age would increase per capita GDP by 13% in European countries by 2050. In Italy, given the starting point, this growth could be even higher. An evaluation of the recent reforms has been carried out by a specially appointed Ministerial Committee, which has provided an overall assessment of the effects of the 1995 (and 1997) reform.<sup>26</sup> The results of the Italian Committee Report show that the savings obtained between 1996 and 2000 are essentially due to curtailing early retirement.

But these estimates do not fully take account of the labour supply effects of the reforms. In order to further clarify how the 1995-reform has affected Italian workers and whether there exists room for further reforms we present some calculations based

<sup>25</sup> For a discussion on this point see Brugiavini, Peracchi and Wise (2003).

<sup>26</sup> Relazione Finale della Commissione Ministeriale di 'Verifica del sistema previdenziale ai sensi della legge 335/95 e successivi provvedimenti, nell'ottica della competitività, dello sviluppo e dell'equità', October 2001.

Table 5. *Italy current retirement eligibility rules*

Year	INPS (private sector) Age and years of contribution	INPS-(private sector) Only years of contribution	INPDAP (public sector) Age and years of contribution	INPDAP (public sector) Only years of contribution	Self-employed Age and years of contribution	Self-employed Only years of contribution
1998	54 and 35	36	53 and 35	36	57 and 35	40
1999	55 and 35	37	53 and 35	37	57 and 35	40
2000	55 and 35	37	54 and 35	37	57 and 35	40
2001	56 and 35	37	55 and 35	37	58 and 35	40
2002	57 and 35	37	55 and 35	37	58 and 35	40
2003	57 and 35	37	56 and 35	37	58 and 35	40
2004	57 and 35	38	57 and 35	38	58 and 35	40
2005	57 and 35	38	57 and 35	38	58 and 35	40
2006	57 and 35	39	57 and 35	39	58 and 35	40
2007	57 and 35	39	57 and 35	39	58 and 35	40
2008	57 and 35	40	57 and 35	40	58 and 35	40

*Source:* Ministero del Lavoro – INPS. Rules prevailing after 1998 according to the Law 449/1997. These rules apply to white-collar employees, they differ only slightly for blue-collar employees.

Table 6. *Actuarial adjustments for early retirement after the 1995 reform (at the steady state)*

Age	Increment of the actuarial adjustment	Implied Penalty
57	—	0.231
58	0.030	0.208
59	0.030	0.184
60	0.031	0.159
61	0.033	0.131
62	0.034	0.101
63	0.035	0.070
64	0.034	0.038
65	0.040	0.000



Figure 3. Recent trends in labor force participation rates and employment rates, October 1992–April 2000 (index October 1992 = 100)

on the Gruber and Wise (2002) methodology.<sup>27</sup> This builds on previous econometric work (Brugiavini and Peracchi, 2003) which estimates exists from the labor force for a sample of Italian workers in the context of an ‘option value’ approach, i.e. modeling

<sup>27</sup> This methodology is developed in the context of the Gruber and Wise NBER project which looks at the sustainability of pension systems throughout the world by estimating the total fiscal effects of the reforms and is implemented, for Italy, by Brugiavini and Peracchi, 2002.

Table 7. Total fiscal effect of the Dini reform for three cohorts of workers (1938–1939–1940)

	Base case	Dini reform	Total effect	Behavioural effect	Mechanical effect
Social security wealth	166,778	99,171	–67,607	–493	–67,114
Taxes: total			–10,415	3480	–13,895
Net change			–57,192	–3973	–53,219
Change as a % of base benefits			–34.29 %	–2.38 %	–31.91 %

the choices of individuals who consider whether to work or retire in the next year, given that they work in the current year and given their current information. In the present exercise we simulate the effects of the Dini Reform at the steady state. We focus on three cohorts of individuals born in 1938, 1939 and 1940 and look at their social security wealth (present value of social security benefits), a dynamic measure of this wealth measure (the option value) and their retirement behavior. By taking the pre-1992 system as the baseline we estimate the conditional probability of exit at any age between 50 and 70 and simulate the exit behavior before and after the reforms have taken place. This way we can assess the impact of the reform *per se* (reduction in benefits), referred to as the mechanical effect, and the further effects due to induced delayed exits (behavioral effect). It should be stressed that, since we simulate the steady state, we assume that workers who are on the verge of retirement around the years 1990–2000 face immediately the new regime, hence our results cannot be generalized to the entire population and we are looking at a hypothetical sudden change.

In Table 7 we present the results of the simulation. The table contains estimates of social security wealth for a typical individual of the selected cohorts who takes decisions as from age 50, plus the total fiscal impact of the reform for those cohorts. The total fiscal impact contains not only the changes of gross social security benefits (in the form of social security wealth), but also changes in present value of contributions, should the individual continue her work, plus changes in income taxes and VAT taxes, so that the total net change for those cohorts is evaluated.<sup>28</sup> It is clear that the total fiscal impact is substantial (recall that we simulate the steady state): around 48% of the baseline value of benefits. However, the Brugiavini–Peracchi approach, by hinging essentially on the changes of the option value variable between the two regimes, predicts small changes in retirement behavior after age 57. Should workers substantially delay their retirement after age 57, more than our model is capable of predicting, this behaviour should produce further revenue increases. Our calculations suggest that if the Dini Reform is applied to all active cohorts, including senior workers, the total fiscal impact is substantial.

The distortionary effects of pension systems could also characterize the consumption/saving behaviour of individuals. A move toward an NDC system might

<sup>28</sup> From the point of view of the typical individual this change is a loss when it has the negative sign, which corresponds to a gain in revenue for the social security administration.



reduce distortions and induce welfare gains; in the Italian case there could also be an increase in saving, which normally in a life cycle context could be observed in the data over a relatively long period of time. However, in Italy a ‘quasi-experiment’ situation occurred in the years around the 1992 reform, which allows researchers to make some predictions on whether Italian households are actually responding to the 1995 reform in their saving behaviour. Italian households traditionally have very high saving rates (Brugiavini and Padula, 2003). From the beginning of the 1980s, however, the saving rate of Italian households has decreased considerably. Almost invariably changes in the social security legislation taking place after the 1950s went in the direction of increasing the generosity of the system and many economists argue that the decline in the saving rate has been driven by the increase in public pension wealth that took place starting in the early 1970s.

It should be recalled once again that the rules in place for the transitional period after the 1992 reform affected the normal retirement age, the benefit calculation and the access to early retirement on the basis of seniority, i.e. on the basis of accrued rights in 1992. For senior workers (those who had accrued 15 years of contributions in 1993) the increase in normal retirement age was introduced only gradually, the benefit calculation rules were almost untouched and, most importantly, restrictions on eligibility to early retirement were implemented very gradually.

Hence the transitional period left almost unaffected social security rights for workers who were on the verge of retirement while greatly affecting younger workers. Younger workers were potentially losing a substantial share of their pension wealth from the reform, particularly if their age–earnings profile was sufficiently steep. It is relevant to note that the seniority criterion outlined above does not affect only the very young, i.e. those entering the labour market in 1993, but, to a larger extent, those who had contributed to the system for a substantial number of years in 1992.

Attanasio and Brugiavini (2003) measure pension wealth for each household in a household sample before and after the Amato Reform, they then relate changes in this variable to changes in saving for different groups. The authors use a simple regression framework and they exploit the fact that the reduction in public pension wealth was far from uniform across households. It is the variability in the changes in pension wealth across well-defined groups of Italian households that has been used to identify the effect that pension wealth has on saving rates. The results indicate that pension wealth is a substitute for private financial wealth (more specifically for private saving), especially for individuals in the middle of their life cycle. Hence, following Attanasio and Brugiavini, we should expect that for the cohorts who are mostly affected by the Dini Reform (i.e. who experience a drop in expected pension wealth), an increase in saving should result in the next decades.

### *3.3 The move toward a funded pillar: still to come?*

We have mainly discussed the features of the ‘parametric’ reforms enacted in Italy, however it should be noted that both reforms addressed the problem of introducing a second pillar. One has to look hard at the European landscape to find a clear-cut

experiment of a structural change: in most cases the introduction of a second pillar is normally enacted very gradually.

It is worth recalling that in Italy the first pillar is monolithic and the second pillar basically non-existent. In the early 1990s it became clear that 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.<sup>29</sup> 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 spells (Fornero, 1999).

Legislations were 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 enroll in an open fund only if a closed company or industry fund is unavailable. Funds are usually based on defined contribution criteria.

The development of supplementary pension funds has been rather slow. 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'. In particular these contractual funds are very often multi-employer sectarian 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, at time even perverse (Fornero, 1995).<sup>30</sup>

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Recently the Italian government took further actions: tax deduction thresholds for contributions to the funds were 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.

<sup>29</sup> 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.

<sup>30</sup> The tax treatment was unfavourable and cumbersome. In particular, when legislation concerning funded supplementary pension schemes was introduced in 1992, contributions to funded schemes were subjected to a 15% 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% of the contributions paid to pension funds.

The new rules<sup>31</sup> introduced a more careful legislation on tax incentives (or rather lifted some previous unfavorable taxation on pension funds). These rules currently envisage an 11 % tax on net returns from the fund; contributions to the fund are tax deductible up to a ceiling. The ceiling is the minimum between 12 % of gross income (but below 5 thousand Euros) and twice the amount of TFR going into the fund. Benefits emerging from the fund in form of an annuity are subject to income tax only for the part that did not attract tax during the contribution phase. If benefits emerge in the form of a lump sum at retirement the tax is applied in different tiers with the higher tax rate applying to the higher tier. In other words the Law wants to discourage retirees from opting for a lump sum.

It is widespread opinion (see also the recent Ministerial Report, 2001 and Reports by the Pension Fund Supervision Authority; Covip, 2001 and 2002), that in Italy the funded component has not yet taken off. The 1995 reform was the first structured attempt to re-organize the tax treatment of future (or newly born) pension funds, while preserving the fundamental principle that the pay-as-you-go social security component of the pension programme is the basic pillar. However the available data clearly show that the growth in the number of pension funds is minute (for a total of about 100 funds between 1996 and 2000) and also the number of workers participating is at most 30 % (this is the peak reached in the private sector, much less elsewhere) for a small amount of total contribution. In 1999 about 400,000 workers were enrolled in these funds and assets amount to 0.015 % of GDP (Banca d'Italia, 1999). Basically only some large private firms have in place a functioning pension fund and the typical worker joining the fund is middle-aged. This is worrying in view of the fact it is the younger workers who will have a lower replacement rate as a result of the 1995 reform, once this reform is fully phased in.

For example, Fornero and Castellino (2001) estimate that with only 35 years of contribution the replacement rate will be lower by about 13 % points, while for longer careers it is not too far from previous levels (approximately 75 %). However women and younger workers (with interruptions in their careers) could possibly end up with a replacement rate as low as 50 %. The slow take-up of pension funds is at odds with the finding of Attanasio and Brugiavini (2003) described above, which suggests an increase in saving earmarked to retirement in response to reduced replacement rates. Hence there must be elements both on the supply side and on the demand side which explain this sluggishness.

Besides the basic reasons discussed above, other features make the contractual pension funds potentially less appealing than the TFR, particularly in recent years. There is no minimum pension guarantee fund to face insolvency risks (this is despite recent discussions on an 'umbrella fund' akin to the one existing for the TFR). The investment choice set is rather limited and asset allocation strategies are typically very risk averse. These features have been looked at very favorably in the light of the recent financial scandals involving also pension funds, but they clearly place an upper bound on gross returns of pension funds (see also Covip, 2002). Finally, lack of flexibility in the portfolio allocation and portability rules

<sup>31</sup> Law: lgs 47/2000 'attuazione Delega Visco'.

has reduced one of the comparative advantages of investing in pension funds *vis-à-vis* the TFR.

However, we agree with the Ministerial Report and the Covip Reports that, overall, the obstacles to the growth of pension funds are essentially related to the lack of legislation and lack of political support. Workers and firms still see in the end-of-career (TFR) benefit an effective unemployment device (the firms also value the cost-free access to liquidity), hence there is little incentive to convert the TFR fund into a proper pension fund, when given the option, despite the ‘hypothetical’ excess return which workers could gain. Also the taxation scheme maintains the ‘Exempt the contribution-Tax the capital/return-Tax the benefit’ (ETT) format rather than EET, while the latter normally prevails in the rest of the world.

### ***3.4 Political effects of the reforms***

The Italian reforms of the 1990s aimed at a reduction in the growth in pension spending, at an increase in the distributive equity of the system through specific provisions that reduced its generosity, and at a stabilization of the proportion between contributors and beneficiaries (the dependency ratio). From an economic and political viewpoint, the most important features of the reforms have been: the increase in the retirement age (Amato); the reduction in the incentives to retire early (Dini); the price rather than wage indexation (Amato); and the adoption of a defined contribution formula for the computation of the pension benefits (Dini).

Several studies have indicated the lengthy transition to the new regime as the main weakness of the reforms. During this transition – to be completed in 2036 – for the political reasons addressed in section 3.4, the treatment of successive generations of workers will be arbitrarily different, thereby creating concern about the distributive equity. D’Amato and Galasso (2002) cast some doubts also on the long-run consistency of the provisions introduced by the reforms, because of possible manipulation of the formula that calculates the pension benefits for electoral purposes. In particular, in the new regime, the generosity of the system may still be easily changed by modifying some ‘conversion coefficients’, which transform – at retirement – the capitalized contribution into a pension annuity. According to the Dini Reform, these coefficients obey actuarial principles and depend on the expected residual life at retirement.

D’Amato and Galasso (2002) simulations suggest that the Amato and Dini Reforms are not sufficient to stop the increase in the public spending for pension provision, which is set to grow even further. The contribution tax rate is estimated to increase from 38% in 1992 to a remarkable 53.2% or to 48.9% for a statutory retirement age of respectively 62 and 65 years. This is mainly due to population aging, which greatly increases the political power of the elderly: the median age among the voters increases from 44 years in 1992 to 57 years in 2050. The long-run political sustainability of the Amato and Dini Reforms in our aging society thus requires an increase in the contribution tax rate.

According to D’Amato and Galasso (2002), the impact of each provision in the reforms on the size of the system is quite different. The adoption of the defined contributions formula has mainly an intragenerational effect, by transferring

resources from agents with a steep income profile to agents with a flat profile. Price indexation has virtually no effect on the size of the system, since voters anticipate future reduction of pension benefits, in terms of real wage, and vote for a larger replacement rate at retirement and therefore for a larger tax rate. The most effective provision to limit the growth of the pension expenditure is to increase the retirement age. This measure reduces the profitability of the system by increasing the period of contribution for an agent while reducing the residual life at retirement, and thus the period of pension benefits collection. Moreover, this provision reduces the dependency ratio, i.e., the ratio of retirees to workers, and thus increases the profitability of the system. In D'Amato and Galasso (2002) simulations, the former effect dominates the latter, and an increase of one year of the statutory retirement age reduces the contribution tax rate by one percentage point.

To summarize, the main message of D'Amato and Galasso (2002) is – at least partially – encouraging. The Amato and Dini Reforms went some way in achieving the long-term financial sustainability of the Italian pension system, and paved the road – along the lengthy transition – for a steady rise in the effective retirement age. Such increases would reduce the support by future voting majorities for a larger pension system.

#### **4 Some forecasts of the future of the Italian Pension Programme**

The Italian example makes clear that substantial reforms are complex: both because the starting point matters and because the process requires an effort from the different actors of the economy who participate the reform process. Any assessment or projection on the likely impact of introducing a substantial second pillar requires a large body of knowledge and data, even more than is the case when looking at parametric reforms. Hence forecasts are normally restrained within the framework of the first pillar.

The Italian Ministerial Report<sup>32</sup> of 2001 shows that a modest decline of pension spending over GDP occurs between 1999 and 2000, however the level is still a striking high (13.5%). Forecasts of the future trend of pension spending over GDP for Italy show a well known ‘hump’: pension spending declines until the year 2001 to approximately 13.5%, it then grows to reach more than 15% in 2030 and gradually peters down to 13.5% in 2050 (see Figure 4). These projections are obtained on the basis of assumptions about demographic trends (within 2050 life expectancy will increase of 3 years and immigration will be substantial, about 120,000 workers per year) and for a GDP growth rate of 1.5%. If this done by making different assumptions about the GDP growth rate, one has three paths according to whether GDP grows at 1%, 2% or 3% (Figure 5). It requires a growth rate of GDP of 3% to reach levels of pension spending over GDP close to 10% by the year 2050.<sup>33</sup>

As we argued, most of the saving in public spending occurs in the current years and it is mostly due to the changes in early retirement rules. The saving seems to ‘vanish’

<sup>32</sup> See footnote 25.

<sup>33</sup> The differences in the year-profiles between Figure 4 and Figure 5 are due to slightly different assumptions on demographics.

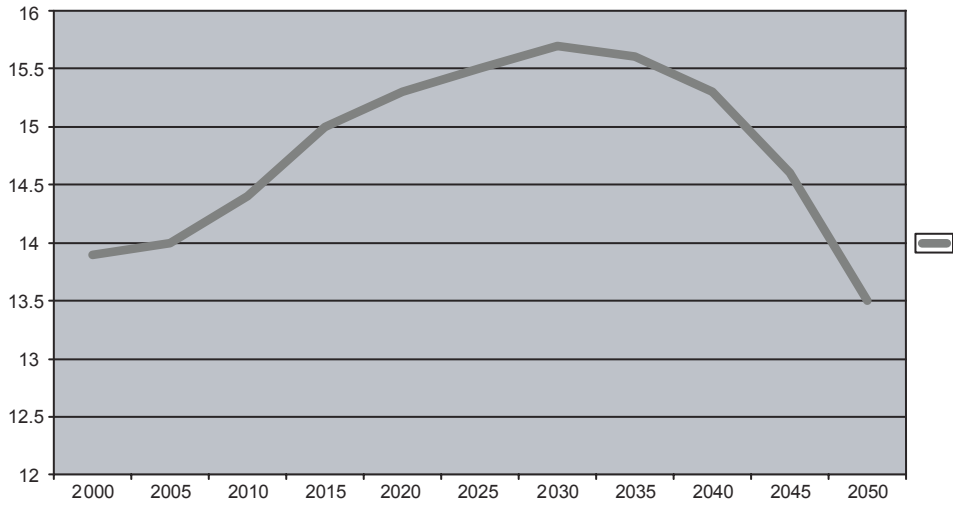


Figure 4. Pension spending as % of GDP (1.5% growth)

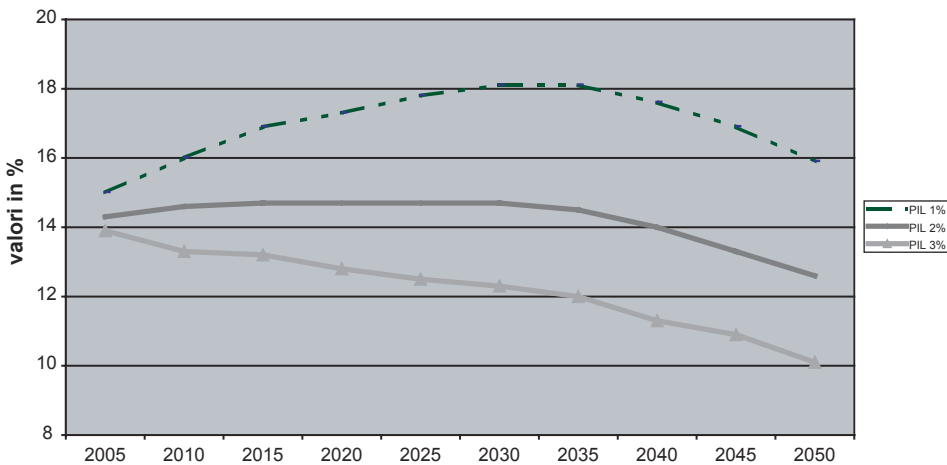


Figure 5. Pension spending as percentage of GDP

once early retirement becomes less of a problem, because the cohorts approaching retirement would not have the same work history as previous cohorts. The figures on the growth of future pension spending mean that, on the one hand, there will be new substantial generations of Italian retirees in the near future (the baby boomers, see Figure 6). This immediately translates into a hump in the future number of pensions (see Figure 7). However part of the story is that the system is still quite generous in terms of benefit computation.

### 5 Conclusions

The Italian Reforms have seriously taken the challenge of a ‘good reform’. First both the 1992 Reform and the 1995 Reform have taken steps to reduce financial

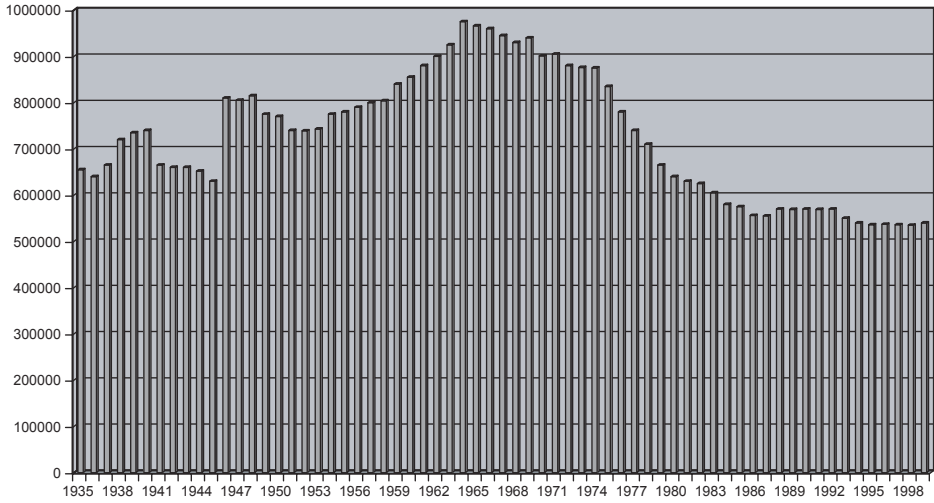


Figure 6. Italian population by year of birth

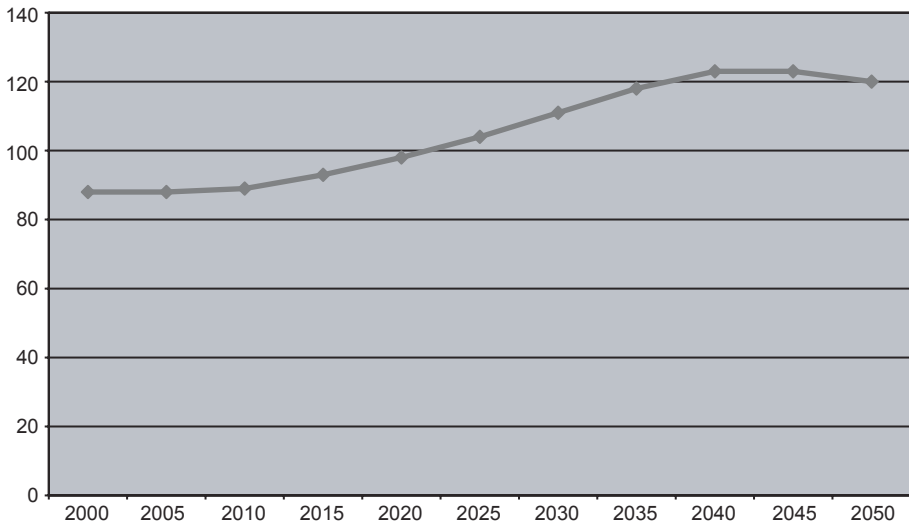


Figure 7. Number of pensions over insured population (in %)

imbalances. Secondly, there has been some serious effort in introducing transparency and equity into the system by linking benefits to contributions. The microeconomic distortion in the area of labour supply should be minimized in the long run, thanks to introduction of a window on retirement ages which leaves choice to individuals while preserving some age-neutrality of the pension provision. The long-term forecasts show that eventually there will be a substantial decrease in pension spending as a fraction of GDP, more in line with the EU average and consistent with the Stability and Growth Pact. However the reforms seem to be very weak in the short to medium term as there will be a growth of pension spending in the next couple of decades. Also, in that time-span different generations will be treated differently and some privileges

will persist for some groups of workers. However, even in the long run, the Italian pension system does not seem fully insulated from macro shocks in earnings and demographics because the adjustments mechanisms of the benefit levels is not automatic and is far too slow. This is even more worrying if one thinks that there is a strong element of discretion in the way the adjustment is done, so that there is no protection against political risk (i.e. one political party or coalition favoring one group in the population).

The other major weakness of the Italian reform process is in the lack of growth of a funded second pillar, which will become essential for a large number of workers who will face lower replacement rates as a result of the reforms, particularly younger workers. Lack of timely legislation is probably the basic obstacle to reaching a more balanced pension portfolio for Italian workers, but we think that a serious attempt should be made at evaluating all the supply-side and demand-side elements which make the market for pension funds a thin one.

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