FINANCIAL CONSTRAINTS AND POLICY OPTIONS: 
THE PENSION REFORM PROCESS IN ITALY 
AND ITS RELEVANCE TO ASIAN COUNTRIES

by

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1. Introduction

In the 1990s, several West European countries introduced major reforms in their pension systems. In general terms, the main purpose of these reforms was to improve financial sustainability within the context of an ageing population and a decreasing ratio between active and non-active population. These changes in the demographic structure and in labour markets as well as their impact on pension systems had been known for years, indeed for decades, but little or no action had been taken. However, pension reforms were triggered only when the public finance constraint became visible and tangible through the 1992 financial crisis that jeopardized the European Monetary System (EMS) and forced some EMS countries, including Italy, to request a suspension from the European exchange-rate agreements. The financial and economic constraints become even more apparent with the decision to create a common European currency, the euro. This required all participating countries to aim at clear-cut, measurable targets and meet specific deadlines to reduce annual public finance deficits and the stock of public debts and achieve the same level of interest rates and a viable financial market in the overall euro area.

Pension reforms in Italy are exemplary in that, after a long phase of inconclusive discussion in the 1980s, when the need for major adjustment was already apparent, the process was only started up after the 1992 foreign exchange and public finance crisis; it continued in following years under the pressure of meeting Italy’s goal to be one of the founding members of the European Monetary Union (EMU). Thus, albeit the major differences in per-capita income, structure of the economy, role of the government and depth and breadth of the welfare state, the pension reform process has several analogies with the challenges currently faced by industrialized

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1 E.g. Austria froze benefits in 1996 as a part of the “sparpaket” (austerity package) in 1996 and increased retirement age, cut early retirement provisions and reduced benefits for public sector employees in 1997-2000; Denmark introduced a special levy on higher gross pensions, cut early retirement benefits and increased normal retirement age in 1994-1999; France modified downward benefits in the private sector pension system in 1993, ended favourable early civil-service retirement in 1995 and introduced the basis for a two-pillar system through private pension plans in 1997; Germany changed indexing on pensions, phased out early retirement options and increased retirement age for women in 1992, introduced a demographic factor in benefit calculation in 1997 and made further reduction in benefits in 1999; these changes prelude a major pension reform approved in 2000; the Netherlands linked benefits to the ratio between active to non-active population in 1992 and privatized the civil service pension fund in 1995-97; Sweden designed a new pension system in 1998: gradual increase in minimum age for pension entitlement, benefits based on working life earnings; introduction of fully-funded individual accounts. The UK diminished benefits of the State earnings-related pension scheme, introduced private individual pensions and ended special early retirement schemes in 1998/89 and revised solvency standards for pension funds in 1995 (Boeri, Brugiavini, Calmfors, 2001).
and industrializing Asian countries. That is, an external crisis as a trigger and the need for long-term financial stability as the lever to achieve an effective, efficient, sustainable and equitable pension system as a part of a well-functioning social safety net and welfare system for a high income developed country such as Italy. An external crisis is also the lever to develop a safety net for Asian developing countries. Although focused on the Italian case, the paper includes lessons for the Asian development countries now in the process of designing their own pension and welfare systems.

After this introduction, the second section of the paper depicts the general development of the Italian pension system, emphasizing the aspects relevant to Asian countries and the problems it faced in the late 1980s. The third section summarizes the attempts to handle the problems before the 1992 financial crisis. The fourth section focuses on the interaction between the 1992 crisis and the start of the reform process. The 1995-97 pension reforms are outlined in section five. The sixth section charts five models for further change and development. In the seventh section we summarize the lessons to be learned from the Italian experience. In the eight and final section we focus more specifically on the relevance of the Italian case to Asian developing and industrializing countries.

2. General Features of the Italian Pension System and its Evolution in the 20th Century

In short, in the late 1980s the Italian pension system was a highly fragmented, occupational pay-as-you-go scheme, financed by payroll taxes and employers and workers’ contributions; it also featured a level of benefits linked, by and large, to earnings in the latest or best years of working life.\(^2\) It appeared dramatically out of line with the pension systems of the rest of Europe:

a) albeit, at nearly 25% of GDP, Italian public expenditures on welfare were broadly in harmony with the European average, as much as 60% of these expenditures were channelled to over 100 different public pension schemes and absorbed 13% of GDP (whereas the European average placed public pension spending at 40% of welfare expenditure and at some 10% of GDP);

b) the ratio of payroll taxes and contributions to wages and salaries was twice as much that in France and Germany and four times as much as in the UK (and greatly impinged on Italian labour costs and competitiveness);

c) transfers from active population to pensioners were estimated at 2,500 trillion lire, in terms of resources additional to those drawn from payroll taxes and

contributions paid by current pensioners when they had been active workers; this caused a socially unacceptable intergenerational inequity;

d) OECD and IMF estimates pointed out that, without major reforms, annual public expenditures on pensions would have reached 21% of GDP by 2030 and the public debt on pensions would have peaked at six times the GDP by 2050, jeopardizing public and private spending on other social and economic activities;

e) econometric studies clearly showed that such an imbalanced pension system had severe static and dynamic implications on the allocation of labour and capital markets; the sluggish level of growth of the Italian economy was caused by this burden.

It is interesting to see how and why the pension system had evolved into such a key issue over a comparatively short period (less than a century) during which Italy, like many Asian countries, transformed its economy and society from an agrarian-based structure to a post-industrial, high value-added service-oriented one. In the Italian experience, each stage of economic growth and transformation had a different pension system; but cumulative errors were made in the changeover between systems, creating severe financial and economic problems in the late 1980s.

The beginning of a compulsory pension system went hand in hand with the start of industrialization in the inter-war period. As the population moved from country and rural areas to towns and from agriculture to manufacturing, schemes had to be developed to look after the aged because they could no longer rely on the traditional extended family network to support them after their working life. The solution was found in compulsory savings schemes that would provide an income when the worker could no longer be employed. Employers were required to contribute to these compulsory savings because it was thought they should help support the aged after making use of their human capital and skills during their working life. The pension system developed into a fully-funded occupational scheme similar to those evolving around the same period in Germany and France; alongside this, labour legislation and practices would provide, first de facto and later de jure (with legal constraints), for life-time employment in the growing Italian manufacturing sector. The mechanism were gradually extended to employment outside manufacturing and the civil service, the first sector to borrow the idea and adapt it to its own needs; commerce, banking, self-employed workers and professionals and, naturally, also farming developed their own fully-funded occupational pension schemes.

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3 Flora and Heidenheimer (1983).
These schemes worked relatively well before World War II; in certain periods, they even provided a surplus to the general budget because of a marked difference between actual and expected financial yields. Many Asian industrial and industrialising countries have fully-funded occupational pension schemes, especially for workers in the large enterprises and in the public sector, with analogous features to the development of Italy’s funds during its industrial period.

In Italy, the fully-funded occupational system did not break down because of long-term changes in the population’s age profile and in the labour market. Well before these trends had become apparent, World War II and its aftermath had brought about high inflation, turmoil in financial markets and extremely low yields for occupational pension funds placed in real estate and government bonds. To avoid a dramatic and sudden impoverishment of those already on pensions, the fully-funded scheme was gradually modified to become a mixed system with features of both the fully-funded and the pay-as-you-go schemes. The system was still structured along occupational lines and mostly financed by payroll taxes and employer-employee contributions. However, increasing claims were made on general taxation through special “countervailing funds” to offset part of the implications of the financial and economic consequences of World War II on pensions. In some Asian countries similar “transition funds” have been established to mitigate the ramifications of the 1996-97 financial crisis on current and future pensioners.

The changes haphazardly made to various elements and segments of the system, each occupational category’s scramble to obtain a better pension than the others, as well as, finally, the short-sighted view that current payments (payroll taxes and contributions) could always be manipulated to meet the pensions bill, all helped to create a real “pension maze”. The “maze” contained serious inequities between workers of the same generation (but belonging to different occupational segments) and even more severe disparities between workers of different generations. Italy was then, in the final years of its “economic miracle”, consisting of a young and expanding labour force, high multifactor productivity, a very low unemployment rate (around 3% of the labour force) and a sustained GDP growth rate (about 5% p.a.). Political parties and trade unions thought that a general overhaul of the system would help “to ensure that, after 40 years of work and contributions, workers would be entitled to a pension based on 80% of the average wage of their last three years in employment”. Three years later, Act 238 of 18 March 1968 further specified the

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5 Coppini (1994).
6 Castellino (1975).
characteristics of the new scheme, aimed at establishing “the most advanced pension system in the world”; the following year, Act 153 of 30 April 1969 introduced a general old-age pension for all Italians over 65 but devoid of any other income, with benefits indexed to wage increases and not to the cost of living (so pensioners would profit from increases in general productivity); it also allowed early retirement after 35 years of service (much less in the civil service and even lower for working mothers). As benefits were based on earnings in the last or best years of working life and not on payroll taxes and contributions, the system was named “pay-as-you-go earnings-related pension system”.

Albeit maintaining an occupationally based system (and for certain categories providing for even more generous benefits than those described above) the legislation was to have met two main requirements: to compensate for inequities between the same generation (and related political tensions) and to allow older workers to reap the benefits of the “economic miracle”\(^7\).

These objectives, however, could only be reached by a series of technical corrections to the mixed system based on both fully funded and pay-as-you-go schemes as developed from the late 1940s to the late 1960s. Instead, the changes were strongly politicised. Workers and employers’ contributions were no longer seen as a means to finance the system but as a levy on employers, often seen as the “exploiters” of the working class. Benefits were no longer linked to productivity and/or to financial yields but to the general purpose of maintaining the standard of living between a “floor” (minimum pensions) and a ceiling (maximum pensions) which would favour workers with comparatively less successful careers during their active life.

Just a few years after the overhaul, it was apparent that changes in demography and the labour market meant that the new system was not financially and economically sustainable in the long term; the ratio between active and non-active population had gone from 4.6 to 1 in the 1950s to 1.2 to 1 in the 1990s. The system also had built-in incentives that would create new inequities as well as elusion and evasion of payroll taxes and contributions: employers and workers would tend to evade and elude payments for payroll taxes and contributions specifically earmarked to the pension system, except for the years relevant to the computation of the benefits. Inefficiencies, ineffectiveness and inequities were exacerbated as Italy’s economic and social structure changed from large manufacturing groups to burgeoning small enterprises both in industry and services. The labour market also evolved from life-

\(^7\) Ferrera (1994).
time employment practices to increasing mobility from firm to firm, sector to sector and location to location.

Briefly, the 1965-69 reforms were based on faulty premises; an entire catalogue of what should not be done when re-adjusting pension schemes - even after the trauma of World War II and its aftermath. Already in the mid 1970s it was clear that the 1965-69 system would not be financially, economically and socially sustainable in the long run. However, in just a few years, opportunistic free riding and cheap riding in the 1965-69 period made any reform extremely difficult.

For the Asian industrializing countries more significant than the faulty premise of the 1965-69 reform is the change in social value systems and Government objective functions underlying the successive structural adjustments in the Italian pension system. The initial compulsory system established at the beginning of the 20th century was basically considered as a social insurance mechanism to protect against the “risk of ageing”: at the time only a very limited proportion of the Italian population had a life expectancy at birth estimated to reach the pensionable age and to benefit from retirement for several years. Thus, the funded system worked as an insurance scheme; it was compulsory and forced a virtuous circle of savings for old age on the paternalistic capitalism assumption that if left to their own whims and devices, individuals would not practice a virtue which, albeit private, had a strong public interest dimension: preventing putting on welfare rolls impoverished old men and women no longer able to work.

Such paternalistic capitalism moulded the “Liberal Governments” of the earliest part of the 20th century, as shown, for instance, by their protectionist foreign trade policies; thereafter, it was an essential component of the corporate state during Fascism. A young demographic structure and public policies strongly in support in large family formation was fully consistent with this view.

Also, after World War II the change from a fully funded insurance based system and the pay-as-you-go mechanism mirrored not only the cash requirement to provide a steady in-flow to finance ongoing retirement claims after the depletion of funds retained by the insurance based social security institutions; its underlying assumption was to strive for intra-generational redistribution within a general background of a still quite young demographic structure and high growth rate of the economy. As a

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8 Papandreu (1971)
10 Esping Andersen (1996)
11 Janossy (1966)
matter of fact, at the time, the savings rate was quite high and channelled towards high productivity investments both in the private sector and public infrastructure; thus, it appear sensible policy to maintain living standards and consumption of people on retirement nearly at the same level they had reached in final phase of their working life; neo-keynesian policies were then, being introduced in Italy\footnote{Forte (1966)}; a pay-as-you-go system was fully consistent with this approach and, in addition, appeared to satisfy also long-term intergenerational aspects by “binding” the mechanism and providing clear cut entitlement.

The drastic transformation of the Italian society in the 1970s and 1980s was not foreseen when the late 1960s reform were designed approved; rapid secularisation of a previously strong Roman Catholic country had major effect on gender role, on family size. In parallel, the industrialization model was drastically revised: from large plant in basic manufacturing to small and medium size firms in industrial districts; the rigidities of the formal labour legislation provided an added incentive to the growth of highly informal employment in the shadow sector\footnote{De Luca, Bruni (1993)} . In parallel, the compulsory pension system was called upon to take up the slack in other areas of welfare policies (unemployment, disability) where Italy had lagged behind the other Western European countries; this resulted in the “maze”\footnote{Castellino (1975)}. Conceptually, underpinning the “maze” there was a muddy and unclear objective function: from an insurance against the “risk” of becoming old to an instrument to sustaining living standard (viz. consumption) and providing a reasonable degree of intragenerational and intergenerational equity, the pension system had gradually became a catch-all device to meet many and often contrasting aims and objectives. This is at the root of the long and still unfinished journey toward reform started in the 1990s.

From this reconstruction, a key lesson stems for the Asian countries now in process of designing and developing their pension systems: keep their objective function – viz. their aims and objectives – simple. And keep equally simple their design and make allowance for a sufficient built-in flexibility to adapt them to changing circumstances.

3. Attempts to Reform the System in the 1980s and Why They Failed

It might help to recapitulate the attempts made during the 15 years between 1978 and 1992 to remedy at least some of the most unsustainable, distorting and inequitable features of the 1965-69 system. The Italian public in general is not fully
aware of these attempts and they are seldom treated in Italian literature on pension reforms\textsuperscript{15}; they provide, however, useful information for an international audience. They reveal that, contrary to conventional thinking, longer-term and structural changes in the pension system were promoted by the Ministers of Labour and Social Security rather than by the Ministers of Treasury; the latter were more interested in shorter-term financial issues and were generally satisfied enough if the annual budget and final accounts balanced, whilst the former often had a more far-sighted view. The attempts also show the positive and constructive role of the larger unions. The negative outcomes of these efforts however prove one of the basic theorems of neo-institutional economics: faced with abrupt and far-reaching changes, the “old institutions” become more rigid and more “path dependent”\textsuperscript{16} until a drastic exogenous determinant breaks them up. In sensitive areas like pensions, reform-mongers must have the capability to feel that such an external determinant is coming and the capacity to join forces to seize it\textsuperscript{17}. These lessons may be quite pertinent to Asian Governments keen on reform.

In 1978-1980, after a major study of the pension system by an independent committee (including trade-unions and employers’ representatives), the Minister of Labour Mr. Scotti attempted a “four-pillar rationalization” of the 1965-69 system: a) to gradually increase the pension age requirement (to 65 years for men and 60 for women; b) to harmonize the various “social security regimes” (at that time nearly 120) under the overall pay-as-you-go pensions scheme; b) to modify the mechanisms allowing retirees to cumulate pensions and wages; c) to define new rules for self-employed workers; and d) to introduce incentives for private pension funds and other forms of individual retirement systems. After two years of negotiations and in spite of a change government (although Mr. Scotti kept his position as Minister of Labour), this “rationalization” was blocked by the small and fiscally-sensitive Republican Party. Their argument was that the transition costs would be high because the programme included an early implementation of improvement in benefits for retirees at the lowest level of the income ladder; Mr. Scotti had had to make this concession to the unions and to the Left-wing opposition.

In 1980, the new Minister of Labour, Mr. Foschi, obtained only marginal changes: a) an increase in the pension ceiling; b) streamlining of pension payments; c) new procedures for computing certain forms of supplementary pensions. The key issues

\textsuperscript{15} For an exception see Cazzola (1992).
\textsuperscript{16} North (1990).
\textsuperscript{17} Hirschman (1990, 1991).
of financial, economic and social sustainability could not be tackled; indeed, they
could not even be considered. The corollary of the minor changes introduced was a
negative policy externality. Pushing for a very high level of legislative pension
production for small particularistic reasons was the result of negotiations with small
corporatist groups rather than the major trade unions and employers’ associations.
This meant a limited vision rather than a broad, long-term view.

In 1982 the new Minister, Mr. Di Giesi, tried again to harmonize the over 100
“regimes” making up the system and increase the pensionable age to 60 years for
women and 65 for men. A bill was eventually drafted after consultations with unions
and employers’ associations; it sailed through the Council of Ministers but
Parliament initiated a lengthy debate as to whether changes in the 1965-69 system
would be “constitutional” because of the discrimination they would produce
between different categories and generations of workers. Parliament was dissolved
and new elections took place before the critical sections of the bill came up for
debate and voting.

In 1983-87, the Ministry of Labour had the same minister, the dynamic and
energetic Mr. De Michelis, for a comparatively long spell of time. He charted a
“great and general pension reform” and his staff drafted four successive bills based
on the increase in pensionable age and pension ceiling, on new procedures to
calculate benefits and on fiscal incentives and other instruments to promote pension
funds. One of the bills was approved by the Council of Ministers; an extensive
Parliamentary debate ensued, with a flood of proposals for amendments from both
majority and opposition; the legislature ended before the bill was fully examined.

After the 1987 general election, the new Minister of Labour Mr. Formica had two
separate bills Parliament only acted on the increase in the pension ceiling and on the
lengthening to ten years the period for the average wage to be considered for the
computation of benefits. Fresh attempts were made in 1990 by the new Minister of
Labour Mr. Donat Cattin and in 1991 by his successor Mr. Marini (a former trade
union leader). The basic outlines were similar: a) gradual reduction of benefits; b)
increase to 65 years of the eligibility requirement for both man and women; c)
extension from 35 to 40 years for early retirement (at whatever age) ; d) ways and
means of promoting private pension funds. Even though transition to the new rules
would not be completed until 2016, no action was taken.

Therefore, year after year similar proposals were put forward without any of them
tackling the central issues. The failure to introduce even comparatively minor
modifications cannot only be imputed to the overall resistance to change mentioned at the beginning of this section, but rather to the fact that in the 1980s the central policy issue in Italy was how to develop a non-inflationary growth path after the inflationary no-growth path of the 1970s. This former was not only a requisite for participation in the European exchange-rate agreements but also had a high social priority because of increasing unemployment. Policies were thus focused mostly on wage and salary indexing and a benign neglect of pension matters was often used as a means to reach an agreement on these issues.


With the 1992 financial and foreign-exchange crisis, policy priorities shifted drastically to controlling public expenditure and to reforms in factor and product markets, including the pension system; this crisis was a real “turning point” in Italian development just as the 1996-97 crisis triggered major changes in Asian countries.

The reasons for the 1992 crisis were similar to those of 1996-67 in Asian countries: a) a pegged exchange-rate mechanism which appeared to have stabilized exchange rates but had not achieved an effective convergence of monetary and economic policies; b) a creeping overvaluation of the exchange rate with negative implications on export competitiveness; and c) a high level of short-term financing on the international market. In addition to these general causes, there were two specific political developments: a) at the European level, the high cost of German reunification and scepticism of financial markets about the decision to move from the EMS (namely, an exchange-rate stabilization mechanism through short-term financing mutual support) to a fully fledged European Monetary Union (replacing national currencies with a new currency, the euro) especially after the Danes had rejected the EMU and the French only approved it by a very slight majority; b) in terms of public finance, Italy was the furthest from the EMU Treaty targets, Italian exports were losing ground because of the overvalued exchange rate; moreover the Italian ruling class was undergoing a series of judicial investigations and trials which increased market scepticism about the capability of the Italian emerging - and most likely inexperienced - political leadership to come to grips with the financial and economic requirements for joining the EMU. Between September 1992 and February 1993, in spite of massive interventions of the European central banks in the foreign-exchange market and the depletion of the Bank of Italy’s foreign

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reserves\textsuperscript{20}, the EMS nearly collapsed. Italy asked for a suspension from the exchange-rate mechanism and let its currency float; the Italian lira depreciated by nearly 30\% on foreign-trade weighted average.

Against this background, the Italian government enacted a supplementary budget (Order in Council 333 of 11 July 1992) to increase revenues and reduce expenditures in the second half of 1992, with the hope of stemming the coming crisis. A second Order in Council (384) was approved on 19 September 1992, the day after the decision to leave the EMS and let the currency float; this order formed the basis of Act 421 of 23 October 1992 which envisaged a huge supplementary budget and prepared the ground for major reforms in the areas of pensions, public-health services, labour-market regulation and local authorities’ finances. There are three relevant points for the purposes of this paper: a) the government received “delegation authority” to change the pension system within general guidelines provided by Parliament, without any requirements for negotiations with employers and trade unions; b) the pension reform was not isolated but went hand in hand with reforms in other key elements of the social safety net, such as public-health services and labour market; c) the new pension policies (as well as health and labour-market ones) were triggered by the financial crisis and formulated in a very short period, thus lacking the long-term vision required to design a sustainable, effective and efficient new system.

The main aspects of the 1992-93 pension reform (called “the Amato reform” after the name of the Prime Minister then in office) are as follows:

a) the retirement age was established at 65 for men and 60 for women starting in 2002;

b) the eligibility for old-age pension was extended from at least 15 to at least 20 years of contributions; the “earnings” mechanism for computation of old-age benefits was drastically revised for those with less than 15 years of contributions when the new legislation became effective: reference earnings were extended from the last ten years to the whole working life with adjustment of past earnings for inflation and one percent real growth;

c) the yield coefficient of the various schemes was harmonized at 2\% p.a. (with a few notable exceptions for certain powerful occupational categories);

d) the indexing of pensions was based on cost of living not on real earnings indexes, with the possibility, however, of future legislative adjustments if great differentials between real earnings and inflation emerged due to a greater than estimated growth in productivity;

\textsuperscript{20} Banca d’Italia (1993).
e) the contribution rates were set at 26.5% of earnings (two-thirds for employers) for employees and 15% for the self-employed;
f) the pensionable age for seniority and long-term service pensions was raised to 35 years of contributions for all workers;
g) a 15% withholding tax was introduced on funds deposited for private pension funds.

In short, the “Amato reform” did not change the basic design of the pay-as-you-go pension scheme designed in the late 1960s (section 2 above). It revised downward benefits by extending the reference period for earnings to be included in the computation (see c) above), by reducing the yield and especially (see d) by revising indexing (see e). This last measure proved the most effective in terms of reducing future pension expenditures\textsuperscript{21}. On the other hand, however, the “Amato reform” introduced a very serious discrimination between workers by sharply differentiating the benefit computation procedure between those with less than 15 years of contribution and the others. It thus drastically heightened intergenerational inequities. More significantly, as an emergency measure, it did not tackle the basic conceptual flaws of the “pay-as-you-go pensions scheme”. Albeit saluted as the definitive pension reform, to be taken as a standard by all European and non-European countries\textsuperscript{22}, the following year the new government had to introduce a temporary freeze with Act 537 of 21 December 1993. After the 1994 election, the government once more had pension reform as one of its main items on the political agenda. However, the government coalition dissolved precisely on the pension reform issues and, more specifically, on the proposal to abolish seniority pensions and drastically revise the benefit computation mechanism. A technical non-elected government was convened by the President of the Republic and received Parliamentary approval. A new financial crisis was looming with downward pressures on the exchange rate and upward pressures on interest rates\textsuperscript{23}: under pressure from the market but not in the wake of an overall crisis, the pension system was finally overhauled.

5. The 1995 reform

Following the measures enacted in 1992, in 1995 Italy introduced a major reform of its pension system. As described before, the 1992 reform was targeted to improve the financial sustainability of the pension system, basically by abolishing the

\textsuperscript{21} Ministero del Lavoro e della Previdenza Sociale (2001a).
\textsuperscript{22} INPS (1993).
\textsuperscript{23} Tivegna-Chiofi (2001).
indexation to real wages as well as by extending the period of the reference earnings on which the pension benefits would be computed. The 1995 reform, instead, aimed at stabilising the incidence of pension expenditure on GDP, at increasing the efficiency of the labour market by reducing its distortions and the ‘tax on labour’, and at making the overall pension system more equitable.

The 1995 reform strongly modified the basic structure and functioning of the pension system. To strengthen the relationship between benefits and contributions paid on an individual basis, the government decided to eliminate the ‘earnings reference’ for computation and to introduce a notional defined contribution mechanism; according to this mechanism, benefits are strictly tied to contributions paid during the working career through the application of a special transformation coefficient on the total amount of notional contributions paid during the working years. The coefficient is deemed to be fair on an actuarial basis. Essentially, the reform implied a shift from a defined benefits to a defined contribution scheme, according to which the notional accumulated contributions are transformed into an annuity upon retirement.

The main characteristics of the reform are the following:\(^24\):

a) the pension benefit is computed by multiplying the balance of the individual account by an age-related conversion coefficient which renders the present value of future benefits equal to capitalised contributions. This coefficient can be updated and modified every 10 years on the basis of changes in life expectancy at birth of the overall population, of the rates of growth of GDP and of earnings assessed for social security contributions.

b) the age of pension becomes flexible and workers can choose it at any year between 57 and 65.

c) the social security payroll tax rate was increased up to 32.7 per cent of wage/salary to reduce the structural revenue-expenditure imbalance of the public pension fund for employees in the private sector (see table 1, which shows the history of social security contribution tax rate and the increases expected in the near future); it is worthwhile to note the significant increase of the tax rate realized for the sector of craftsmen and shopkeepers, which should take these categories to the level of nearly 20 per cent by the 2010;

d) because of the current political and social constraints, the reform implementation will be very gradual and initially concern only people who began working after 1995, who will receive a pension entirely calculated on the basis of new rules. The reform segmented the present universe of pensioners into three groups of beneficiaries: those with more of 18 years of contribution in 1995, who will be subject to the same rule existing before the 1992 reform (the earning scheme); those with less than 18 years of contributions, who will be submitted to a pro rata regime, in the sense that the new rules established in 1995 will be applied only to contributions paid after that date; and finally, the last group of newcomers, who started to pay contributions after 1995 and who will be subject to the new scheme. Finally, in 1997 another set of measures was proposed by the Government and enacted by Parliament with the aim at unifying the different pension regimes and revising the seniority pension system.

The reforms introduced in the last five years in Italy have influenced those being carried out in Sweden and Germany, especially in terms of structure of the pension system and of the notional contribution mechanism to compute benefits. They have meant major changes in the Italian pension system; however, as indicated the transition will be very gradual and the reformed system will produce benefits only in the long run, viz in 15-20 years; it is estimated that only in 2070 the new system will be fully into effect because the last beneficiary of survivors’ pension would have passed away. In the short run, the efficiency, effectiveness and equity issues will tend to remain unchanged and unresolved; further measures seem already needed and at present are being prepared by the Government and negotiated with the unions and the employers’ associations.

6. Issues to be resolved: prospects for further development

The Italian pension system still needs a major structural reform which, by taking seriously into account the future demographic structure and labour market conditions, can definitively stabilise the ratio of pension expenditure to GDP in the long run and usefully develop a funded pillar.

A recent government Commission\textsuperscript{25} has reviewed and ascertained the positive financial effects of the 1995 reform. These reform has had significant implications on the rate of growth of pension expenditure: in fact, as shown in Table 2, the average rate of increase of pension expenditure has consistently slowed down during the last few years: e.g. from an average annual rate of increase of 12,2 per cent in the 1990-1992 period, to 3,1 per cent rate in 1998-200. The most significant reduction in the rate of growth has been achieved in the area of pension payments for private

\textsuperscript{25} See Ministero del Lavoro (2001a).
sector employees; from an annual rate of 11 per cent in 1990-1992 to an average increase of 2.6 per cent between the 1998 and the 2000. A less significant slowdown in pension expenditure has been achieved in the sector of craftsmen and shopkeepers (from the 14 per cent of 1990-1992 to the 6.1 per cent of the 1998-2000). In the public sector the slowdown has been significant (from 15.9 per cent to 4.4 per cent) albeit the average annual rate of expenditure growth remains still high in relative terms. There has not been a significant decline in living standard for current retirees; such a decline, however, may be inevitable for future cohorts of retirees as a consequence of the ageing of the Italian society as well as the need for further reforms.

A confirmation of the importance of the measures already implemented in Italy comes from table 3, which shows the projections of public pensions expenditure as a ratio of the GDP up to 2050. The incidence of Italian pension expenditure on GDP will remain somewhat stable until 2020. However, from the 2020 onward, the baby boom generation will reach the retirement age; this will cause a modest rise in the level of the expenditure (15.9 per cent of GDP in 2030, 15.7 per cent of GDP in 2040) which would then decline to 13.9 per cent in 2050.

The process of retirement of the baby boom generation will take place in Italy (especially between 2030 and 2040) and also in other important countries (notably, Spain and Germany); it is mirrored by the evolution of the old age dependency ratio within the countries of the European Union, as shown in Table 4. The aging of the Italian population will significantly increase and the old age dependency ratio will reach in 2040 and in 2050 the percentage of 63.9 and 66.8 respectively. Therefore, notwithstanding the results obtained with the reforms of the last few years, Italy needs more incisive measures for the long term so as to increase the average rate of retirement and the rate of employment of the cohort of people in the age between 55 and 65. As the period under analysis is still relatively short – five years – there are no data on the 1995 reform incidence on savings and investments or on employment patterns.

To improve the current situation there are some possible directions of reform:

a) a feasible way could be to improve the actuarial mechanism introduced in 1995 by strengthening the link between benefits and contributions on an individual basis, for example with the abolition of any differences between the computation rate and
the financing rate in the assessment of contributions. An additional measure could be to unify the system of pensions indexation to the increase of nominal GDP and not to the retail price index. Finally, to equalise the rates of return for the different individuals, it could be necessary to apply new rules for the computation of benefits to everyone, even to those who had paid more than 18 years of contributions in December 1995 (pro rata method). This set of measures would have the political advantage of leaving the basic design of the 1995 reform mostly unchanged; indeed, this design would be carried to its logical implication since, as illustrated in para. 5, the political conditions to fully implement the new conceptual framework did not exist six years ago.

b) another possibility would be to move to a mixed pension system by creating a new fully funded pillar with the old pay-as-you-go scheme, to spread the risk of pension accumulation more efficiently over two pillars. The practical solution would be to let people opt out voluntarily from the public pay-as-you-go system and to shift a share of the current flow of social security contributions of all workers to private pension funds. The new scheme could be a two or a three-pillar system where, in addition to private personal plans, occupational pension plans would also be allowed. This solution would strengthen property rights on resources accumulated and therefore would strongly limit the interference of politicians in pension matters (the political risk). A two-three-pillar system could better diversify the economic, demographic and financial risk of pension accumulations and increase the consensus of workers enrolled in the new mixed system on the rules of the game. Any change would be very visible and therefore politicians would have their hands tied and their possibility of manipulation reduced to the minimum.

c) to give more flexibility to individuals in the choice of their pensionable age: for example, by offering fiscal and monetary incentives to workers who decide to remain in their jobs and by allowing people to add income from an independent activity to that from their pension. These measures could stimulate individuals to postpone the date of retirement, with an evident cut in overall pension benefits; they

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26 The computation rate is the basis for calculation of pension benefits; the financing rate is the actual rate levied on wages and salaries. There are major differences in financing rates between various categories of workers and, thus, of future beneficiaries, especially between those in wage/salary employment and those in self-employment.

27 Gronchi (1997)


29 For example, by allowing people who decides to postpone the retirement to get a part (or the total) of the tax wedge.

30 The so-called ‘possibility to cumulate income from labour to the income from pension’ (the cumulo).
would also reduce the area of the irregular economy, with evident benefits for the
growth of employment, the base of social security contribution and the national
income.\textsuperscript{31}

d) to introduce a fully-funded pension system run by the government. Such a system
would be, by and large, modelled on a compulsory provident fund. Transition would
take nearly seventy years and, in the initial decades, would require an increase in
overall contributions as well as the transfer of sums currently set aside for severance
payments into new funds. First of all, the transition period would be overly long and
cause a further increase in overall labour costs. More significantly, at the eventual
steady stage, there would be enormous corporate governance issues because the new
fund would de facto become a major stockholder of all Italian large and medium size
firms.\textsuperscript{32}

Whichever route is eventually selected, the average level of benefits is likely to
decrease by the pension system would become more equitable, more efficient and
more effective in targeting to low income social groups.

7. Lessons to be learned from the Italian experience

The main findings of the review of the Italian experience with the pension reform
are the following:

a) Pension and welfare systems are the result of a delicate balance of economic,
social and political power. Shocks may forestall reforms but they can also accelerate
it. Students of market-supporting institutions know that sometimes several large
shocks are needed for change: for policymakers and politicians, periods of crisis
can sometime provide opportunities, at least in certain particularly critical sectors, to
undertake bolder institutional reforms – and these opportunities are to be seized. In
a seminal book, Timor Kuran\textsuperscript{34} shows how crisis can break through “public lies”
and “the process of preferences falsification” in economic and social policies,
especially in such sensitive sectors as pension and welfare systems and reforms.
More recently, Dani Rodrik\textsuperscript{35} demonstrates how crises forestall conservative
attempts by the “politically losers” not to change obsolete institutions; if properly
nurtured, they can be a lever towards high quality institutions. In Italy, as well as in

\textsuperscript{31} Vitaletti (2000)
\textsuperscript{32} Modigliani, Ceprini, Muralidhar (1999)
\textsuperscript{33} Rajan and Zingales (1998).
\textsuperscript{34} Kuran (1995).
\textsuperscript{35} Rodrik (2000).
other European countries, the 1992 foreign exchange and financial crisis, first, and the path towards EMU, later, have gradually moded a major change in the unions’ outlook, which in the past had often been a stumbling block in pension, welfare and labour market reforms; from a corporatist and conservative posture in favour of the “old institutions” of the “old economy” to a broader, more socially responsible attitude geared to ease the transformation process towards a flexible high value-added production structure. “Nurturing” towards reform as well as towards higher quality institutions in the social policies area, however, is a difficult process by itself. The Italian case shows that reforms were feasible, and were made, under the Damocles’ sword of the foreign exchange and financial crisis (in 1992) and of the threat of being denied access to the Eurogroup of EMU founding fathers (in 1995-97). Thereafter, the momentum has been gradually lost; in spite of the opportunity of designing a new and definite reform with a longer view and without an emergency policy framework, no substantive action appears to have been taken after the 2001 “check-up”; none of the five models for further development illustrated under section 5 of this paper; nor a combination of them, is being selected for the needed further changes and reforms. If properly nurtured, the recent slowdown of the world economy and fear of a new wind of crisis may be seized as an opportunity by reform mongers. Asian countries share with Italy many a point: once again, after the 1996-97 crisis, there are opportunities to be seized by reform mongers intending to establish an efficient, effective, sustainable and equitable social safety net.

b) The 1992 and 1995-97 reforms and models for further development summarized under section 5 are all, by and large, based on moving from a one-pillar pay-as-you-go-system to a two- or three-pillar system with an increasing role and a fully funded scheme. Asian countries are attempting to develop pension systems mostly anchored to fully-funded mechanisms. The review of the theoretical models raises some doubts about the conventional wisdom on funded systems, on their advantages and costs; there are basically three major points:

i) can a funded system guarantee higher real returns?
The most frequent reason given in the pensions debate for a funded system is the apparently superior performance of the capital market in terms of the rate of return on investment it can offer. Between 1960 and 1990, most pay-as-you-go systems have indeed offered elevated returns to the first generation enrolled, often higher than rates provided by the market. This was possible because at that time the pay-as-you-go systems had not yet reached maturity and had benefited from high GDP growth rates and rising contributions on wages. However, after 1990 the basic

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scenario dramatically changed. If we look at real yields of investments in financial markets during the last 30 years we notice very high real returns. A recent study by Siegel\(^{37}\) shows for the USA an annual real rate of returns in the order of 6-7 per cent - for stocks and shares - while some other works by Jorion\(^{38}\) point out rates between 4 and 5 per cent for the same country\(^{39}\). Hence pension funds with investments in financial markets for a sufficiently long period of time seem able to provide very high real rates of return. If we make a simple comparison between the returns of the two different pension systems, we could easily conclude that the shift to a funded system shows evident advantages in terms of rates of return. But this is true only if we compare the pure returns of the two systems. The advantage tends to fade – if not to disappear – if we also consider the transition taxes, that is, the taxes – the tax burden – that the generation which is making the transition to the new system will have to bear in order to finance (and pay) the existing pensions\(^{40}\).

ii) Does a new funded system imply an improvement in the economic welfare of society as a whole? Many authors have expressed quite different opinions on this point. Some authors\(^{41}\) have constructed models that generate efficiency gains from a transition to a funded system; others\(^{42}\) have instead argued that a welfare improving transition to a funded system is not possible. In general terms, the answer is no. The advantages for future generations tend to be somewhat offset by costs on present generations. A more interesting point however is to question whether funding is able to increase the national saving and the stock of capital, whether it can stimulate the growth of financial markets and in this way increase the national income. If the pie becomes bigger, then the distribution conflict between generations, which inevitably rises on the transition to a new pension scheme, can be successfully alleviated.

iii) Does funding insulate from demographic shocks? As the aging of population tends to have a certain effect on funded schemes too, an older population will also end up affecting funded pension schemes. Soon or later, pension funds will have to sell their assets to a diminished active population; and if a given stock of assets is sold to a lower number of buyers, the price of assets can be

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\(^{37}\) Siegel, 1999.

\(^{38}\) See Jorion 2000.

\(^{39}\) This figure does not include dividends. Goetzman and Jorion (1997) show for the UK, in the period between 1970 and 1995, a rate of 6.39 per cent, for Germany 5.5 per cent, 8.8 per cent for the Netherlands and 4.45 per cent for France (same period).

\(^{40}\) The same applies if we finance the payment of existing pension rights with the issue of public debt; in fact, someone has to shoulder the burden of interest related to this debt (the debt service) and this is equally true for new taxes.


negatively affected, with evident repercussions on the resources available for pensioners\textsuperscript{43}.

c) Finally, the Italian experience proves that pension reforms soon and easily come to a standstill if they are not included in broader welfare-state and labour-market institutional reforms. As indicated in section 1 of this paper, a feature of the Italian social welfare system is its concentration on pensions; for this reason, pension reform became a visible and high priority issue in the 1992 crisis and in the 1995-97 path towards EMU.

The highlight on pension reform, albeit essential, diverted focus from another and lesser-known feature of Italian social policies: taxes-and-transfer schemes have very poor targeting properties among people of working age and in general, weak anti-poverty properties. Modest attempts were made after 1995 to remedy this situation but they have been mostly unsuccessful; and the lack of an efficient monitoring and evaluation system has meant that very little has been learned from them. “Less pensions, more welfare” is not merely a slogan but a call to broadly revamp social policies\textsuperscript{44}. Such a call must include labour market reform towards flexibility and decentralized wage bargaining as well as breaking down the barriers between the formal and informal employment sector\textsuperscript{45}; only such a broader social policy adjustment would prevent pension reforms from coming to a halt in a loop with the other elements of the welfare state. The recent Government “white paper” on labour policies\textsuperscript{46} augurs well. If the Italian pension system is gradually transformed from an essentially one-pillar pay-as-you-go system to a two- or three-pillar system with a growing fully funded leg, the emphasis should be on integrating the fully funded pension element with unemployment insurance through individual savings accounts\textsuperscript{47}, an approach which by many Asian countries could also find useful.

### 8. Relevance of the Italian experience to Asia

How pertinent is the Italian experience to the Asian countries? There many a difference in general socio-economy development and more specifically in the coverage, structure and maturity of the pension system. In line with most Western

\textsuperscript{43} Or, if the elderly people in the goods market demand a higher amount of goods than those currently produced by active people – pensioners' desired consumption exceeds workers' desired savings – this will cause price inflation, reducing the purchasing power of pensioners’ annuities.

\textsuperscript{44} Boeri and Perotti (2001).

\textsuperscript{45} Pennisi (1997).

\textsuperscript{46} Ministero del Lavoro e delle Politiche Sociali (2001b).

\textsuperscript{47} Stiglitz and Yun (2001).
European retirement schemes, the Italian pension system is universal in that it covers all the population in the formal employment sector; indeed, it provides basic social retirement income to older workers of the informal sector if at the appropriate pension age, they have too low an income level. Instead, even the most comprehensive Asian retirement scheme – e.g. those based on national provident funds – cover only those in medium and large size firms, as well as civil service and the public sector at large, whilst workers in small size enterprises and in the large informal sector are outside the pension system; for old age support they still rely on the extended family system. The structure of the Italian pension system is founded upon a few large public sector institutions, running over 50 different “retirement scheme” still in the process of harmonization and eventual unification. Instead, with the exception of a few and generally small countries featuring a national provident fund, Asian old age security is distributed in a large variety of employment related system, often linked to the fortunes of individual enterprises. More significantly, the Italian pension system is a mature system; indeed, it is a system which has not aged quite well and is still plagued with many a fundamental issue in the areas of fiscal sustainability equity, efficiency and effectiveness. On the other hand, Asian fledgling social protection and pension systems are in countries and societies under many an aspect similar to those at the level Italy was at the beginning of the 20th century.

The sharpest difference is the present and expected population structure. In 1990, in the Oecd area the ratio of older people to people of traditional working age was 19 per cent but it is estimated to reach 37 per cent by 2030; even more dramatic the change in Italy where the total dependency ratio is estimated to increase from 45.5% in 1990 to 73% in 2020. Italy is already classified by certain authors as a “pensioner State”; a recent appraisal paints an even bleaker picture, notwithstanding generous assumptions concerning migration inflows of young workers as contributors to the labour market and to the overall cost of the pension burden. On the other hand, with half of the total world population, the Asian and Pacific region is young: 40 per cent of its 3.1 billion people are children and youth. As a result, ageing is not a major issue in designing, developing and, if required, reforming pension systems. Instead, a major issue is that more than 1.8 billion (60 percent of the total population) lives in rural areas and is deprived of

48 Estimated to be equivalent to between 20% - 30% of total formal employment.
49 World Bank (1997)
50 Oecd (1996)
51 Esping Andersen (1966)b
52 Ideazione (2001)
53 Ortiz (2001)
adequate access to social services and adequate employment opportunities; thus for the large majority of the Asian population it is still an enormous task to design a system to collect contribution and deliver pensions when they reach old age.

The first question to be raised is if the development of a pension system should be the top priority of Asian Government. Most likely, in the Asian context, protective security and more significantly “shared security” requires an imaginative and aggressive targeting on the poor and on the socially excluded; pension and retirement schemes are only a brick of such schemes, and not necessarily the most important brick at this time.

The second question is whether the lessons from the Italian experience are nonetheless useful in opening ploughshares on which to build a well conceived pension development path. A two-pronged approach appears suitable: a funded social insurance system for those in large and medium size firms (as well as in public establishment) and a gradually extending general basic core system for those in the rest of the wage modern sector, whereas other, more specific and better focussed and targeted instruments should be used to attack rural poverty and destitution in urban areas and shanty towns.

This two pronged approach has an important implication: on the one hand, eventually the pension system would become a unified two or even multi pillar system (a universal basic core system complemented by employment based pension funds and incentives to individual pension accounts); on the other hand, retirement schemes and other poverty alleviation and eradication objectives, and related instruments, would be clearly kept quite distinct from the pension system. Thus, the Italian muddle between pension system and other elements of the social protection policies would be avoided.

Looking more closely at the Italian experience and at Asian prospects, it appears that two other faults of the Italian case can be kept at bay. Firstly, the multi pillar system would evolve quite naturally; to set it up, there would be no need of a series of difficult reforms similar to those Italy embarked herself since the early 1990s, under the pressure of financial crises as well as of the requirement for membership in Emu. Secondly, the universal basic core pillar would be financed by the general tax revenue rather than by contribution or various forms and means of payroll levies. Indeed, in its infancy and initial stages the basic core pillar can be seen only as financed on the Exchequer because of the huge administrative costs to exact contribution in the small enterprises and semi-informal sector. This may make Asian pension systems path dependent on a

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54 Sen (2000)
virtuous trail, rather than on the vicious avenue chosen by Italy in the late 1960s and still at the roots of many a current difficulties.
Table 1
Social Security Payroll Tax Rate in Italy

<table>
<thead>
<tr>
<th>Year</th>
<th>Private sector employees</th>
<th>Craftsman lump sum contribution (lire)</th>
<th>Craftsman tax rate</th>
<th>Shopkeepers lump sum contribution (lire)</th>
<th>Shopkeepers tax rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>14.41</td>
<td>7,778</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1965</td>
<td>18.58</td>
<td>14,928</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>1970</td>
<td>20.56</td>
<td>14,928</td>
<td>0</td>
<td>14,928</td>
<td>0</td>
</tr>
<tr>
<td>1975</td>
<td>20.77</td>
<td>72,528</td>
<td>0</td>
<td>72,528</td>
<td>0</td>
</tr>
<tr>
<td>1980</td>
<td>23.90</td>
<td>428,416</td>
<td>0</td>
<td>429,236</td>
<td>0</td>
</tr>
<tr>
<td>1985</td>
<td>24.51</td>
<td>944,620</td>
<td>4</td>
<td>941,121</td>
<td>4.20</td>
</tr>
<tr>
<td>1989</td>
<td>25.92</td>
<td>1,358,780</td>
<td>4</td>
<td>1,355,280</td>
<td>4.20</td>
</tr>
<tr>
<td>1990</td>
<td>25.92</td>
<td>0</td>
<td>12.00</td>
<td>0</td>
<td>12.00</td>
</tr>
<tr>
<td>1991</td>
<td>26.09</td>
<td>0</td>
<td>12.75</td>
<td>0</td>
<td>12.75</td>
</tr>
<tr>
<td>1992</td>
<td>26.49</td>
<td>0</td>
<td>13.50</td>
<td>0</td>
<td>13.50</td>
</tr>
<tr>
<td>1993</td>
<td>26.97</td>
<td>0</td>
<td>14.29</td>
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<td>14.29</td>
</tr>
<tr>
<td>1994</td>
<td>26.97</td>
<td>0</td>
<td>15.00</td>
<td>0</td>
<td>15.00</td>
</tr>
<tr>
<td>1995</td>
<td>27.16</td>
<td>0</td>
<td>15.00</td>
<td>0</td>
<td>15.00</td>
</tr>
<tr>
<td>1996</td>
<td>32.70</td>
<td>0</td>
<td>15.00</td>
<td>0</td>
<td>15.09</td>
</tr>
<tr>
<td>1997</td>
<td>32.70</td>
<td>0</td>
<td>15.00</td>
<td>0</td>
<td>15.39</td>
</tr>
<tr>
<td>1998</td>
<td>32.70</td>
<td>0</td>
<td>15.80</td>
<td>0</td>
<td>16.19</td>
</tr>
<tr>
<td>1999</td>
<td>32.70</td>
<td>0</td>
<td>16.00</td>
<td>0</td>
<td>16.39</td>
</tr>
<tr>
<td>2000</td>
<td>32.70</td>
<td>0</td>
<td>16.20</td>
<td>0</td>
<td>16.59</td>
</tr>
<tr>
<td>2002</td>
<td>32.70</td>
<td>0</td>
<td>16.60</td>
<td>0</td>
<td>16.90</td>
</tr>
<tr>
<td>2004</td>
<td>32.70</td>
<td>0</td>
<td>17.00</td>
<td>0</td>
<td>17.30</td>
</tr>
<tr>
<td>2006</td>
<td>32.70</td>
<td>0</td>
<td>17.40</td>
<td>0</td>
<td>17.70</td>
</tr>
<tr>
<td>2008</td>
<td>32.70</td>
<td>0</td>
<td>17.80</td>
<td>0</td>
<td>18.10</td>
</tr>
<tr>
<td>2010</td>
<td>32.70</td>
<td>0</td>
<td>18.20</td>
<td>0</td>
<td>18.50</td>
</tr>
<tr>
<td>2012</td>
<td>32.70</td>
<td>0</td>
<td>18.60</td>
<td>0</td>
<td>18.90</td>
</tr>
<tr>
<td>2013</td>
<td>32.70</td>
<td>0</td>
<td>18.80</td>
<td>0</td>
<td>19.10</td>
</tr>
<tr>
<td>2014</td>
<td>32.70</td>
<td>0</td>
<td>19.00</td>
<td>0</td>
<td>19.30</td>
</tr>
</tbody>
</table>

Source: Ministero del lavoro (2001a)

even after the 1995 reform, pension payments are not based on actual payroll tax rate contribution but on notional contributions significantly higher than the payroll tax
Table 2  
Average rate of increase of pension expenditure in Italy  
(%)  

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>private sector employees</td>
<td>11.0</td>
<td>6.3</td>
<td>2.6</td>
<td>6.6</td>
</tr>
<tr>
<td>public sector employees</td>
<td>15.9</td>
<td>8.8</td>
<td>4.4</td>
<td>9.6</td>
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<tr>
<td>Independent workers</td>
<td>11.1</td>
<td>9.1</td>
<td>3.0</td>
<td>8.0</td>
</tr>
<tr>
<td>of which craftsmen and shopkeepers</td>
<td>14.0</td>
<td>12.7</td>
<td>6.1</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>12.2</strong></td>
<td><strong>7.3</strong></td>
<td><strong>3.1</strong></td>
<td><strong>7.5</strong></td>
</tr>
</tbody>
</table>

Source: Ministero del lavoro (2001a)
Table 3
Projections of public expenditure on pensions
as a % of GDP in EU countries

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Belgium</td>
<td>9.3</td>
<td>8.7</td>
<td>9.0</td>
<td>10.4</td>
<td>12.5</td>
<td>13.0</td>
<td>12.6</td>
<td>3.7</td>
</tr>
<tr>
<td>Denmark</td>
<td>10.2</td>
<td>11.3</td>
<td>12.7</td>
<td>14.0</td>
<td>14.7</td>
<td>13.9</td>
<td>13.2</td>
<td>4.5</td>
</tr>
<tr>
<td>Germany</td>
<td>10.3</td>
<td>9.8</td>
<td>9.5</td>
<td>10.6</td>
<td>13.2</td>
<td>14.4</td>
<td>14.6</td>
<td>4.3</td>
</tr>
<tr>
<td>Greece</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>Spain</td>
<td>9.4</td>
<td>9.2</td>
<td>9.3</td>
<td>10.2</td>
<td>12.9</td>
<td>16.3</td>
<td>17.7</td>
<td>8.3</td>
</tr>
<tr>
<td>France</td>
<td>12.1</td>
<td>12.2</td>
<td>13.1</td>
<td>15.0</td>
<td>16.0</td>
<td>15.8</td>
<td>na</td>
<td>3.9</td>
</tr>
<tr>
<td>Ireland</td>
<td>4.6</td>
<td>4.5</td>
<td>5.0</td>
<td>6.7</td>
<td>7.6</td>
<td>8.3</td>
<td>9.0</td>
<td>4.4</td>
</tr>
<tr>
<td>Italy</td>
<td>14.2</td>
<td>14.1</td>
<td>14.3</td>
<td>14.9</td>
<td>15.9</td>
<td>15.7</td>
<td>13.9</td>
<td>1.7</td>
</tr>
<tr>
<td>Luxembourg</td>
<td>7.4</td>
<td>7.4</td>
<td>7.5</td>
<td>8.2</td>
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<td>9.5</td>
<td>9.3</td>
<td>2.1</td>
</tr>
<tr>
<td>Netherlands</td>
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<td>8.3</td>
<td>9.1</td>
<td>11.1</td>
<td>13.1</td>
<td>14.1</td>
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<td>6.2</td>
</tr>
<tr>
<td>Austria</td>
<td>14.5</td>
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### Table 4
Old-age dependency ratio in the EU countries

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