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The Spanish Social Security: Prospects of the Pension and Health-Care Systems

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Abstract

The social security system in Spain has steadily expanded since the late 1970s. Currently, social security expenditure exceeds 15 percent of GDP, being a factor of fiscal imbalance. This paper reviews achievements and the current situation of the social security system, discusses changes in the financing of health-care expenditure in view of the need for fiscal consolidation by the general government, and analyzes the scope for a partial prefunding of future liabilities of the pension system.

JEL Classification No. H55, H53

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Summary

The social security system in Spain has steadily expanded since the late 1970s. The public health care system currently provides an almost universal coverage for the population, while the pension system has permitted a significant improvement in the standard of living of the aged population. Contemporary to these major achievements, however, social security expenditure has also increased; it reached more than 15 percent of GDP in 1994 and is an important factor in the fiscal imbalance of the general government.

Currently, the central government funds more than two thirds of the budget of the health care system, the rest being supported by social security contributions. Given the need for fiscal consolidation by the general government to allow Spain to attain the targets set by the Maastricht Treaty, as well as the difficulties involved in trimming health care expenditure, a new source of fiscal revenues appears to be needed. This source should be broadly based, have a minimum impact on price levels, not be regressive, and enable social security contributions to fund only wage-related benefits. The paper suggests that a flat-rate tax levied on the income from labor and capital, earmarked for funding health care expenditures and yielding about 1 percent of GDP, would respond to these requirements.

The main challenge to the pension system lies in the future. The demographic changes that will take place in Spain after the first decades of the next century will significantly increase the proportion of the population aged 65 years and older. For a pay-as-you-go scheme, such as exists in Spain, this increase in population age will be reflected in a large increase in contributions.

The future increase in pension contributions can be moderated by changes in some parameters of the system (for example, the contribution period), greater flexibility in the labor market (which would raise the ratio of employed to working-age persons), and the partial prefunding of future liabilities. Illustrative projections are presented in this paper suggesting that, if these actions are taken soon, the increase in contributions by the time of the retirement of the current "baby-boom" generation would be halved in relation to a scenario in which no action is taken. These projections also point to the importance of building a surplus in the pension system at an early stage.

I. Introduction

Expenditure on the two main branches of social security in Spain--pensions and health care--expanded significantly during the 1970s and has recently risen further (Chart 1 and Table 1). The initial growth of social security expenditure was motivated by the new aspirations of the population, following the transition to a democratic regime. The financial consequences of this growth, however, are large and have only partially been addressed by reforms introduced since the mid-1980s. The main issues currently facing the pension and health-care systems entail both deepening the earlier reforms and putting the social security system in a position to face the coming demographic changes. The financial pressures on the health-care system are more immediate than those on the pension system and the impact of health-care expenditure on the central government deficit is more direct, because the public health-care system is largely financed by transfers from the central government. The ballooning of health-care expenditure in Spain--owing to the aging of population and more sophisticated and expensive medical techniques--has to some extent paralleled the experience in other developed countries. In Spain, however, it has been aggravated by regulations on services (such as on pharmacies) and labor (such as doctors), and by the universalization of services as established by the 1986 General Health Act.

The main challenge to the pension system, on the other hand, will take place in the future, when the current slowdown of the birth rate and the increase in life expectancy will translate into a more aged population. As a result of that increase in the ratio of old-age persons to workers, contributions necessary to sustain the current level of benefits and coverage, on a pay-as-you-go basis, would have to be much higher than at present. Such a change could be made less abrupt through early changes in some key parameters ruling the public pension system and the beginning of prefunding its liabilities. 1/

1/ Spain already has a legislation permitting the organization of private pensions funds and, hence, this issue is not discussed here. The 1993 National Financial Accounts indicate that pension plans' reserves amounted to close to Ptas 4 trillion (7 percent of annual GDP). As an example of the continuous attention to the matter, the Government has recently presented a bill requiring firms to take pension assets out of their balance sheets.

Table 1. Spain: Social Security Finances

(As percentage of GDP)

	Revenues		Expenditure		
Year	Contrib.	Transfers	Pensions	Health	Other
1986	9.3	2.9	7.4	3.6	1.5
1987	9.3	3.0	7.3	3.6	1.6
1988	9.2	3.1	7.3	3.7	1.6
1989	9.5	3.3	7.4	4.0	1.6
1990	9.7	3.4	7.5	4.2	1.8
1991	9.9	3.5	7.7	4.2	2.1
1992	10.4	3.8	8.0	4.9	2.3
1993	10.8	4.1	8.7	5.0	2.3
1994	10.5	4.2	8.9	4.7	2.1
1995	10.5	4.4	9.2	4.7	1.7

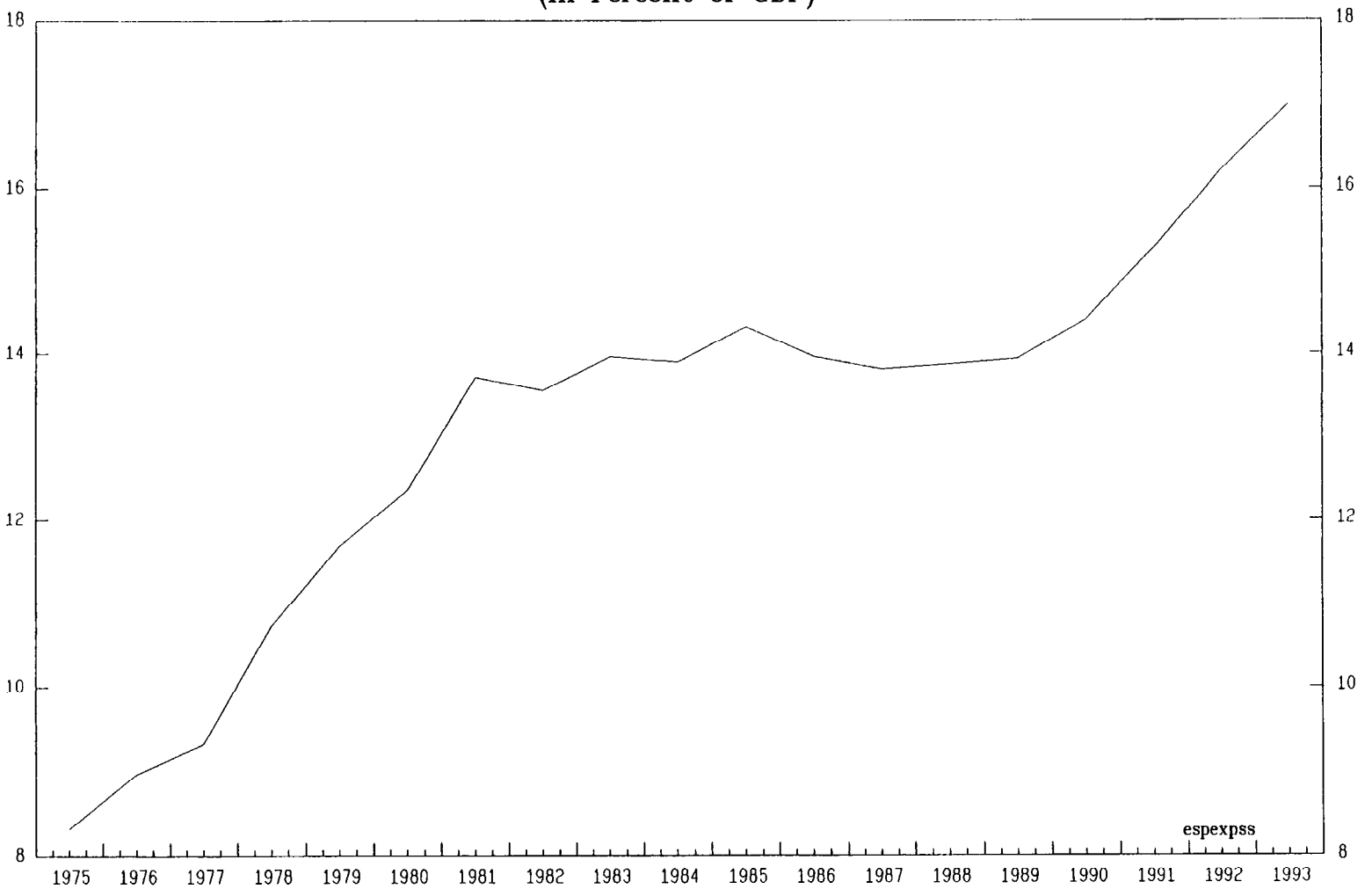
Source: Ministry of Finance.

This study attempts to provide an overview of the social security system in Spain and its role in the process of consolidating the government finances in the short- and medium-term, and to present possible measures to address the policy challenges of the longer term. The paper is organized as follows. Section 2 presents an analysis of the finances of the social security system. Section 3 provides a description of the pension system and recent policy measures, and presents projections of the financial situation of the pension system in coming decades. Section 4 describes the health-care system, some of its problems, reform proposals, and recent measures. The section also discusses issues raised by the financial requirements of the health-care system. It reviews the pros and cons of financing public health care through taxes, and options to reduce the burden on transfers out of general revenues, while avoiding increases in social security contributions. The main conclusions are summarized in section 5.

CHART 1

SPAIN

TOTAL EXPENDITURE ON SOCIAL SECURITY
(In Percent of GDP)



Source: OECD

II. The Financing of the Social Security System and the Fiscal Balance of the General Government

The expenditure on social security corresponds to one third of general government expenditure and a little more than one sixth of GDP. 1/ Revenues comprise contributions paid by workers and employers and transfers from the central government. 2/3/ Contributions finance 60 percent of the expenditure; transfers from the central government finance most of the rest. 4/ Although transfers amount to most of the revenues from the VAT, this tax is not earmarked for that purpose.

The arithmetic of the social security accounts is such that contributions at the existing rate could fully finance all wage-related pension expenditure--including the administrative cost of the pension system

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1/ More precisely, 36 percent of the consolidated budget of the Central Administration (the budgets of Territorial Authorities have not been approved yet, but should correspond to about 10 percent of the general government budget) and 15.9 percent of GDP.

2/ Contributions to social security are divided in two classes: basic contributions and contributions to occupational-risk insurance. The occupational-risk insurance is run by the social security and mutual groups (mutuas) formed at the level of firms and industries. Other contributions from labor (payroll taxes) are for the unemployment insurance (7.8 percent), technical training (0.7 percent) and FOGASA, the compensation fund for workers of bankrupted firms (0.4 percent). These programs, however, are not managed by the social security system.

3/ The basic rate stands at 28.3 percent, computed as a share of wages up to three times the professional minimum wage. Employers pay 23.6 percent of wages as contribution (84 percent of total contribution) and the remainder is paid by employees. The rate was reduced by 1 percentage point in January 1995. Rates on overtime work are between 50 percent and 100 percent higher than on normal hours depending on the cause of the overtime. The State contributes to social security on behalf of the unemployed. The contribution rate to social security has fluctuated over time, being lowered in the early 1980s and increased afterwards. Because of the small dispersion of minimum wages across professions and of the ceiling on individual contributions, the top annual contribution (that of engineers and other employed professionals) is less than 5.5 times the lowest contribution--implying that contributions to the social security are similar to a regressive payroll tax. In particular, the maximum and minimum bases for contributions by engineers were Ptas 0.35 million a month and Ptas 0.11 million a month, respectively, in 1994. Reflecting the small dispersion of minimum wages across professions, the lowest bases ranged between Ptas 0.07 million a month and Ptas 0.11 million a month. The rate applied in every case was the same.

4/ Resources transferred or lent by the central government to the social security system amount to 5 percent of GDP (of which lending represent 0.6 percent of GDP). Other resources (e.g., capital income) correspond to less than 2 percent of total social security revenues.

and the supplements to low pensions--but are not enough to finance health care (Table 2). 1/ This is not incompatible with the institutional framework adopted in Spain where health care is to be financed by taxes. Nevertheless, given the need of a sharp reduction in the general government deficit (currently at around 6 percent of GDP) with views to meet the Maastricht convergence criteria, and the large size of health-care expenditure (5 percent of GDP), a separation of the accounts of the social security suggests the need of both a systematic trimming of these outlays and the search of new source of revenues. 2/ Such a strengthening in revenues, of about 1 percent of GDP, could be achieved by raising social security contributions. Following this course would, however, be inconsistent with the separation of the social insurance from universal benefits and could be disadvantageous to economic growth and to labor demand because social security contributions, although not particularly high in Spain, fall only on labor. Therefore, mechanisms other than an increase in contributions are discussed in latter sections of this study.

1/ The amount raised by social security contributions is equivalent to the expenditure on contributive benefits, i.e., wage-proportional retirement pensions and family allowances, temporary disability pensions, and occupational-risk insurance, but part of these contributions (amounting to about 1.0 percent of GDP) is used to help finance health-care expenditure. General taxes finance the balance of health care expenditure, as well as supplements for low pensions and benefits to the handicapped and those of age over 65. The share of health-care expenditure financed by transfers from the central government corresponds to 3.7 percent of GDP.

2/ The imbalance on the social security accounts is likely to remain despite the expected increase in tax revenues due to the recovery started in 1994.

Table 2. Spain: 1995 Social Security Budget

	In billions of pesetas	Percent of GDP
Revenues	10,849	15.6
Contribution-based revenue	7,310	10.5
Social security contributions	7,200	10.4
General regime	5,213	7.5
Other regimes	994	1.4
Occupational risk insurance	458	0.7
From INEM on behalf of the unemployed	535	0.8
Other revenue 1/	110	0.2
Noncontribution-based revenue	3,539	5.1
From government	3,489	5.0
Transfers	3,088	4.4
Loan	402	0.6
Other revenue	50	0.1
Expenditure	10,849	15.6
Contribution-related expenditure	7,154	10.3
Contribution-related pensions	6,177	8.9
Temporary disability pensions	533	0.8
Family allowances	55	0.1
Other 2/	389	0.6
Noncontribution-related expenditure	3,695	5.3
Health services 3/	3,223	4.6
Noncontributive pensions	178	0.3
Family allowances	43	0.1
Social services 4/	251	0.4
Memorandum items:		
Contributions		
To health	670	1.0
Government transfers	3,088	4.4
To health	2,494	3.7
To complement minimum pensions	232	0.3
To social services and other noncontributive expenditure	323	0.5
Noncontributive pensions	234	0.3

1/ Fees and fines.
2/ Administration cost of non-health benefits, maternity leave, payments due to occupational risk (mutuas) and the Navy.
3/ Excludes costs of occupational risk insurance.
4/ Services for the handicapped, the aged and other vulnerable groups.

III. The Pension System

1. Main features and recent policy measures

a. Development and coverage

The pension system in Spain evolved from a variety of regimes established at different times since the beginning of the century. As in many other countries, these regimes differed widely. Many were pre-paid, but poorly funded, and all were hard hit by changes in the economic environment.

The system has been reformed four times in the last 30 years. The first reform followed legislation issued in 1963, taking effect in 1967. It converted almost all regimes to a pay-as-you-go system, improved some pensions, but made the financing of social security systematically dependent on government transfers by setting contributions at low levels. In 1972, the second reform made contributions proportional to wages, while loosening eligibility criteria significantly. A third reform, beginning in 1977, attempted to harmonize the many regimes existing and to provide them with an integrated administration. The differences in the value of the pensions paid by distinct systems were reduced (generally by increasing the lower pensions), and the administration of the pension system was put under the newly created National Social Security Institute (INSS). The ensuing expansion in coverage and increases in the real value of pensions raised the financing needs of the system so sharply that a fourth reform became necessary. In 1984-85, there was a tightening of eligibility criteria for disability pensions and a lengthening of contribution periods to obtain pensions and an increase in the number of years of salary considered when computing the wage-related pensions.

Currently, the system comprises six basic regimes and the occupational-risk insurance regime. 1/ The number of pensioners in all regimes increased from 3.8 million in 1977 to 6.8 million in 1994 (Chart 2, top). This increase reflected both the broadening of eligibility criteria and the

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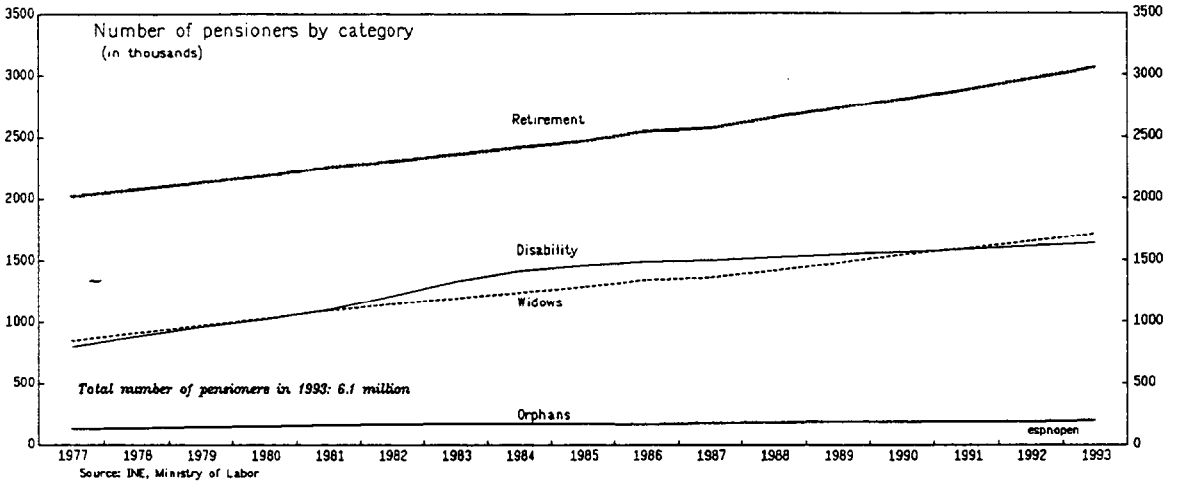
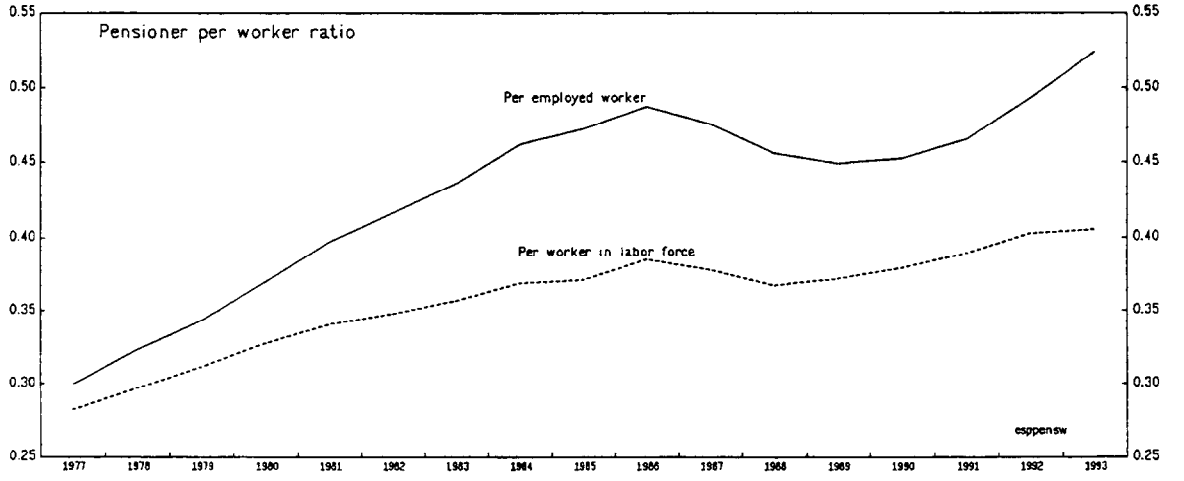
1/ The basic regimes are the general regime, the regime for workers in the agriculture, the miners' regime, the seaworkers' regime, the household workers' regime and the self-employed's regime.

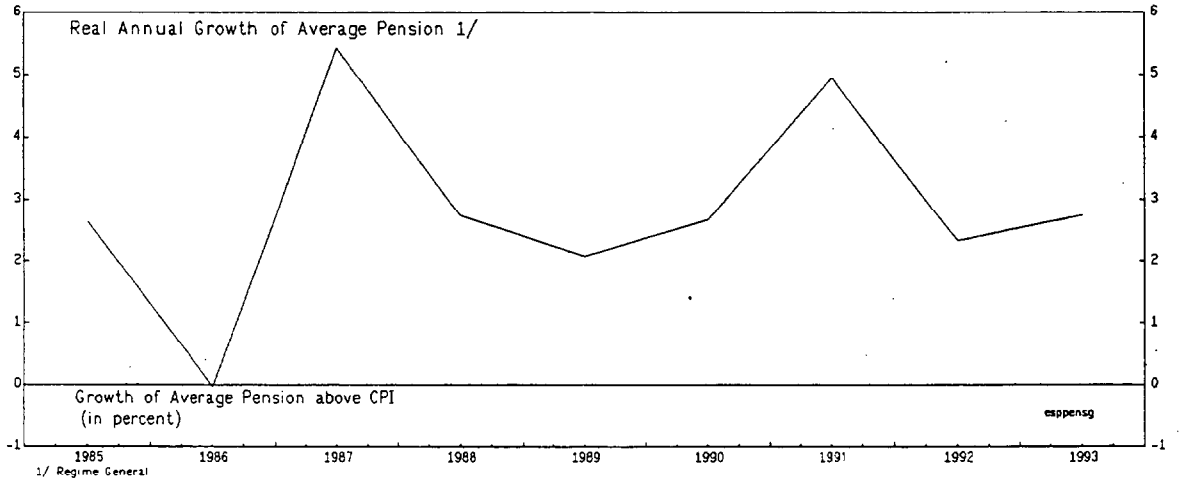
CHART No 2

SPAIN

Selected Characteristics of the Pension System, 1977-93







aging of the population (Chart 2, middle). 1/ Among the current basic regimes, the general regime is the which coverage has expanded most significantly since 1977, in part due to the incorporation of several small regimes. 2/ It covers about 70 percent of the participants in the social security system (Table 3) and, together with the regime for the self-employed, is among the only regimes expected to have a growing number of participants in the future.

Table 3. Spain: Number of Pensions and Contributors

(In millions)

	Pensions	Contributors
General regime	3.40	8.44
Other regimes	3.41	3.69

Source: INE (Instituto Nacional de Estadística).

Compared with other European pension systems, the minimum retirement age is relatively higher, but the contribution period is short. The standard retirement age is 65 years, with a full pension granted after a

1/ The share of the population more than 65 years of age increased from 11.3 percent in 1980 to 14.8 percent in 1993; the corresponding pensioner per worker ratio increased from 0.30 in 1977 to 0.53 in 1993. Sluggish employment growth in period and the low participation rate of the population of age 16 to 65 also contributed to the increase in this ratio. The participation rate in Spain stands below 50 percent of the population in Spain, contrasting with the rate of, for instance, France, which stands above 55 percent. As a result of the higher participation rate, the dependency ratio there is around 10 percentage points below that in Spain, although in France the social security is well developed and the population over age 65 is nearly as high as in Spain, corresponding to 14.5 percent of the total population.

2/ The last integration was in 1993, and few new integrations are expected in the future.

contribution period of 35 years. 1/2/ Although perhaps reasonable in the past, when coverage was still increasing, such a short contribution period is now more of a disincentive for continuous payment of contributions than an instrument for social justice. On the other hand, a high retirement age penalizes those who started to work earlier, a situation that would be worsened if the retirement age were raised. Instead, a lengthening of the contribution period could reduce the number of new pensioners, while not discriminating against those entering the labor force earlier.

b. Financing

Expenditure on public pensions reflects the systematic increase in the real value of pensions in the last 10 years. The average value of pensions increased by about 2 percent per year in real terms over the last 10 years (Chart 2, bottom). Compounded with the growth in the number of retirees, it meant that the share of GDP spent on pensions has steadily increased in the last 10 years, reaching 9 percent in 1994.

As noted, contributions are currently enough to cover the so-called contributive benefits. Minimum pensions, on the other hand, are financed by the government. The latter have increased significantly over the years, reflecting the policy of raising and harmonizing minimum pensions, and have required increasing supplementary transfers. 3/ Currently, about 30 percent of retirement pensions and 40 percent of the widows' pensions benefit from some supplementary benefit. However, because in many cases the

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1/ Early retirement is permitted in special cases, in particular for those who started to contribute before 1967, but in principle implies a reduction of 8 percent of the value of the pension for each year before 65. Entitlement to a pension under the general regime at age 65 requires 15 years of contributions, including two years immediately before retirement. For those retiring after age 65, the pension is normally reduced by about 2 percent for each year short of a full career span. Early retirement resulting from collective layoffs are regulated by special legislation.

2/ The value of the pension is proportional to wage-based contributions in the last 8 years prior to retirement (adjusted by the CPI) and to the number of years of contributions. In 1994, the minimum annual retirement pension was Ptas 0.8 million (around US$6,500) for married pensioners above 65 years of wages, and Ptas 0.7 million for those married below 65 years of age. The latter is approximately the value of the minimum wage, adjusted for taxes. Surviving spouses get 45 percent of normal pensions, if the principal deceased before retirement, and 60 percent if after retirement.

3/ In the 1986-90 period, minimum pensions increased 15 percent more than standard pensions.

difference to be covered is not very wide, supplementary outlays ("complementos por minimos") correspond to less than 4 percent of total pension payments (i.e., about 0.3 of GDP). 1/

c. Problems, reforms, and outlook

In the past, the main problems of the pension system have been fraud and the rapid growth in the number of disability pensions. These problems have been tackled, permitting the pension system to be in a relatively strong position to face the demands of the next few years. The measures taken illustrate the ability of the system to adjust to changing conditions and are encouraging signals that the greater challenges to be faced after the year 2000 can also be met with success.

Fraudulent bankruptcies, involving the default of past social security payments, became a fairly widespread practice for firms facing financial difficulties during the economic slowdown of the early 1980s. The practice, however, was and has been combatted and it was significantly reduced in recent years even during the 1992-93 recession. There have also been improvements in the previously lax enforcement of eligibility criteria for disability pensions. This improvement was contemporary to a broader reform of disability benefits discussed in the following paragraph.

The number of permanent disability pensions swelled in the late 1970s, especially in the general regime, because the number of years of contribution permitting a full disability pension was very small. 2/ This led to curious situations. For instance, in the early 1980s, the proportion of disability pensions was higher in the general regime than in the regime of

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1/ Government also finances pensions to the old aged who do not belong to any of the pension regimes and to the handicapped, as envisaged by the 1990 Social Insertion of the Handicapped Act (LISMI). Pensions are gradually falling under the responsibility of INSS, instead of the social service arm of the social security (INSERSO). In 1995, the resources assigned to these pensions amounted to 0.3 percent of GDP.

2/ Until 1995, there were three types of disability pensions: a transient (incapacidad laboral transitoria, ILT), a temporary (invalidez provisional) and a permanent. These pensions cover both occupational and non-occupational disabilities. As explained below, the first two benefits were merged in January 1995. The value of permanent disability pensions is reduced if the worker is handicapped for the former profession, but not for other jobs, but it is increased if the worker is older than 55 years--making a disability pension sometimes more attractive than a retirement pension. Because, before 1985, the minimum period of contributions was 5 years, there were strong incentives to seek a disability pension. In 1985, the minimum period was increased to 8.75 years for those 55 years old and 11.25 years for those 65 years old.

bullfighters (Chart 3, top). 1/ Eligibility criteria were tightened in 1984. Following the implementation of such a policy, the annual growth rate in the number of disability pensions immediately fell from 6.6 percent to less than 3 percent in 1985, and continued to fall in following years, being at about 1.2 percent in 1994. 2/

Transient and temporary disability pensions created other problems. Expenditure on transient disability pensions (ILT - a sick leave paid by the social security) increased by 20 percent in the early 1990s. This is not unique to Spain, because firms in many countries have strong incentives to promote sick leaves when the economy weakens. Expenditure on temporary disability pensions were not only large, but created problems in the labor market because, while on temporary disability (which could last for up to 6 years), workers kept the right to return to their original job. 3/ These problems were addressed in two phases. Legislation establishing that sick leaves would be paid only after the 16th day of leave was issued in 1992. 4/ Legislation taking effect in 1995 merged the two types of pensions into a single temporary disability pension (incapacidad temporal) lasting no more than two years and established new screening procedures. In addition to an abatement in the future growth of expenditure, a modest reduction in its level is expected from these measures. 5/

2. Long-term financial prospects

The short- and medium-term outlook of the pension system will be favorably impacted by the moderation in the number of new retirees in the coming years, due to the effects of the 1930s civil war on natality and infant mortality (Chart 3, bottom). This trend will, however, be altered after the year 2000 by demographic changes.

1/ The statistics suggests that a larger fraction of matadors were entitled to old-age pensions (instead of physical disability pensions) than that of average workers, despite the physically dangerous occupation the former had; the proportion of widow's pensions was similar in both regimes. The bullfighters' regime was absorbed by the general regime in a later date.

2/ Despite these improvements, the INSS projects that, in 1995, disability pensions will account for 25 percent of all pensions.

3/ Temporary disability pensions were provided during a waiting period before an applicant became entitled to a permanent disability pension. They were perceived as offering more lenient conditions than permanent disability pensions and hence often fully used.

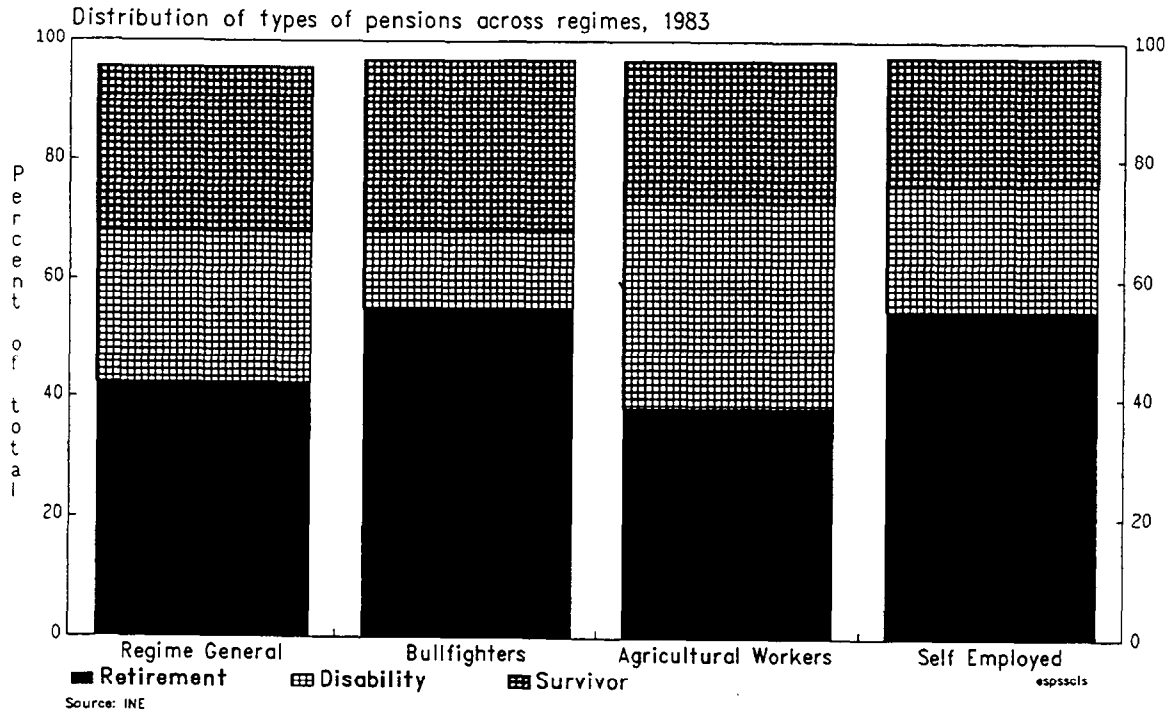
4/ Following this measure the nominal increase in expenditure on sick leaves fell to 5.3 percent in 1993.

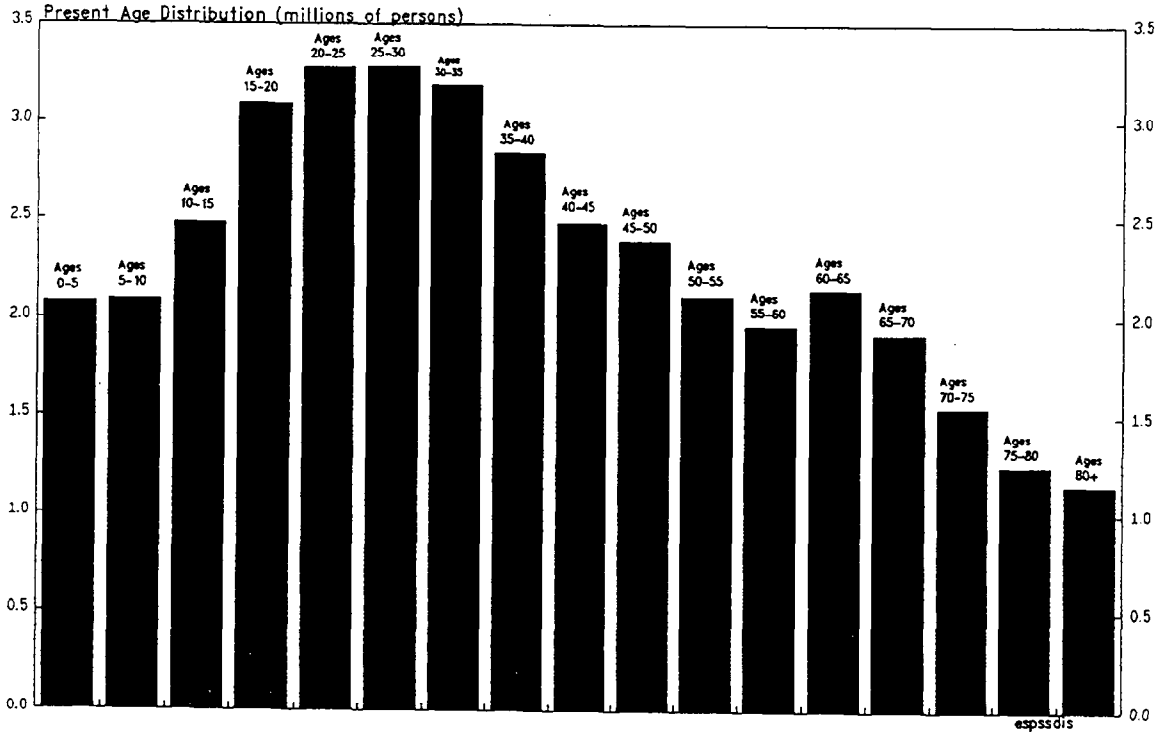
5/ The decision of granting a disability pension was shifted from employers and employees to newly created boards under the control of the social security system. The administration of the mutuas (intermediary bodies managing the occupational risk insurance) was also reformed.

CHART No 3

SPAIN

Pension Regimes and Demographics





The long-term financial situation of the social security will depend on the demographics of the next century and on the dynamism of the labor market. The so-called "baby-boom" took place in Spain some 10-15 years after than in the rest of Europe (lasting until the early 1970s). Therefore, the slump in the proportion of working-age people in total population will take place only after 2020 (Chart 4, top). Changes in the labor market itself can play an important role because, in addition to the very high level of unemployment in Spain (24 percent in 1994), the participation rate in the labor force is among the lowest in Europe. This is due to a still recent shift from agriculture, to the lower participation of women and, more generally, to rigidities in the market. In the medium term, if the labor market becomes more flexible, about 1 million new jobs could be created before the year 2000, permitting the contribution rate required to balance the pension system to be stable. 1/ In the long run, a more flexible labor market would permit an increase in the ratio of workers to working age population (Chart 4, middle) and, by allowing higher sustained growth, reduce the burden on the working force (for same level of benefits to pensioners).

For the purpose of evaluating these developments in the long run, a simplified model is simulated below. The model is not meant to provide a detailed short- or even medium-term (5 years) estimation of the social security cash flow. 2/ Instead, it permits to discuss three long-term scenarios: a baseline scenario where the current status quo is maintained, while the demographic trend unfolds; a scenario incorporating the effects of the flexibilization of the labor market; and a scenario incorporating a partial prefunding of social security liabilities. In all scenarios, it is assumed that the number of years of contribution to the social security will be gradually increased by five years after the year 2000, and that the retirement age remains at 65 years.

a. Baseline scenario

Projections are based on detailed age distribution of the population published by INE, as well as on mortality rates in Dinh (1994) and Domenech and Escribano (1989). The natality rate reflects the current fecundity. It is expected to increase in coming years, when the bulk of the "baby boom" cohorts reach the peak of reproductive age. As shown in Chart 4 (top), the ratio of old-age (> 65 years) to working-age (> 15 years and < 65 years) populations would be projected to rise from 25 percent in 1995 to more than 60 percent in 2050.

1/ If the structural changes fail to be implemented, employment growth may be limited to some 0.6 million new jobs in the next five years.

2/ The INSS is currently performing a comprehensive study to obtain such an estimation, but no deadline to its conclusion has yet been announced.

The ratio of pensioners to worker is projected to double between 1995 and 2050, with the big shift taking place after 2010, when it rises from 0.6 to 1 (Chart 4, bottom). The employed to working age population ratio is computed by maintaining the ratio by age bracket at 1990 levels.

Real GDP growth is projected using a Cobb-Douglas production function. Baseline increases in the capital stock (around 4 percent a year) and in the total factor productivity (1.4 percent a year) are exogenous (reflecting the recent history). The share of labor in total income is assumed to be of 61 percent (the average in the recent past) and yields a corresponding elasticity of output with respect to changes in employment over the period. Ipso facto, output growth will slow in the future, as the available labor decreases (Chart 4, middle). Under these assumptions, average growth rates during the first decades of the next century are projected to be around 2.0 percent a year.

Average wages are assumed to incorporate the increase in total factor productivity and thus to rise 1.4 percent a year faster than the CPI. New pensions are assumed to be a constant fraction of average wages. Reflecting the experience in Spain, old pensions are indexed to the CPI and not to wages (i.e., they are constant in real terms). The current value of new pensions is estimated using figures provided by the social security administration. 1/

The model avoids the pitfalls of simply extrapolating past growth of expenditure on pensions, which reflected a transient period of increasing coverage and harmonization of pension values. Instead, it permits an evaluation of the financial requirements of the pension system in a more stable institutional framework. 2/

In the baseline scenario, the doubling of the pensioners per worker ratio leads to a doubling in the average contribution rate required to balance the pension system; between one sixth and one fifth of GDP will be devoted to funding pensions.

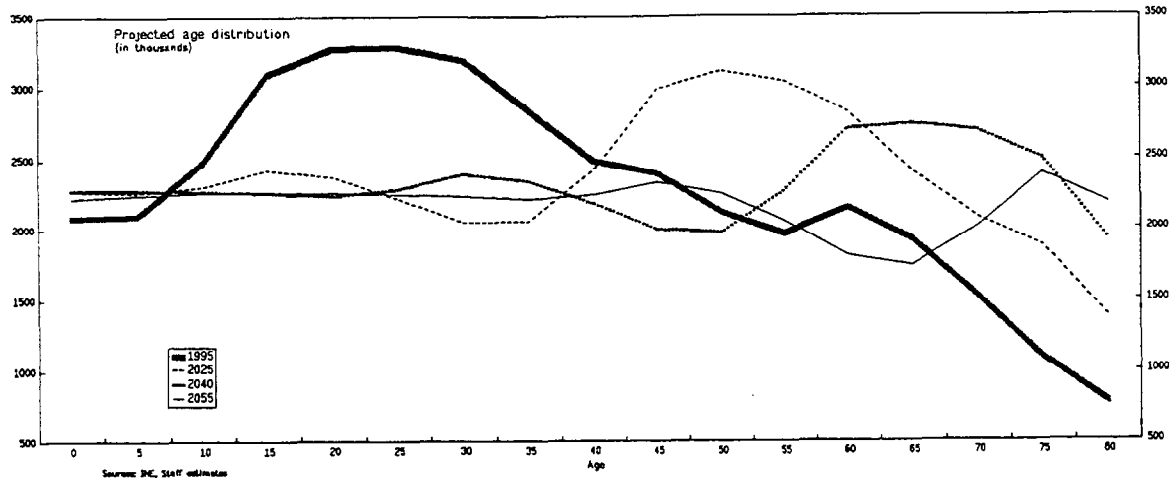
1/ The average value of new retirement pension in the first quarter of 1994 was 25 higher than the average retirement pension.

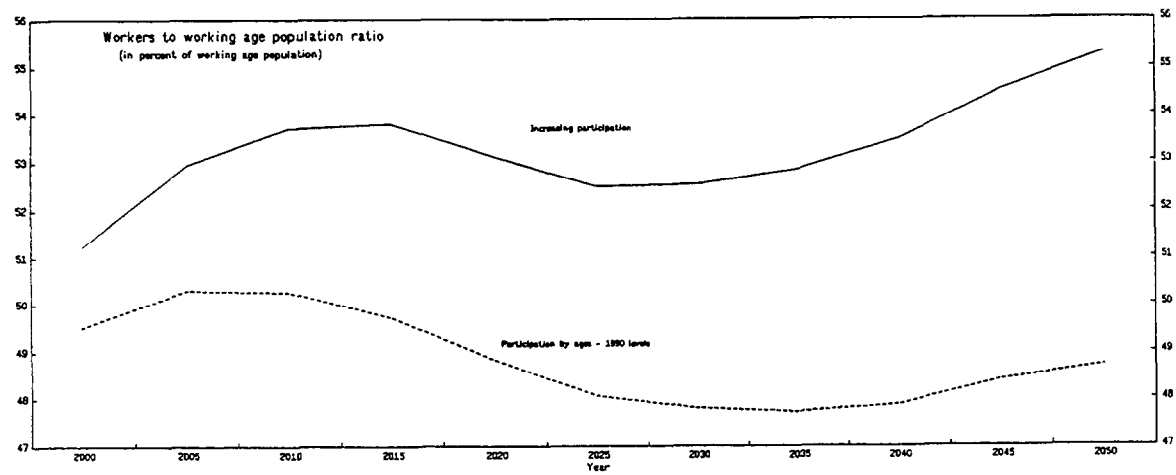
2/ See Van den Noord and Herd (1993) for a similar approach in the case of G-7 countries.

CHART No 4

SPAIN

Projected Demographic Situation of the Pension System, 1995-2055





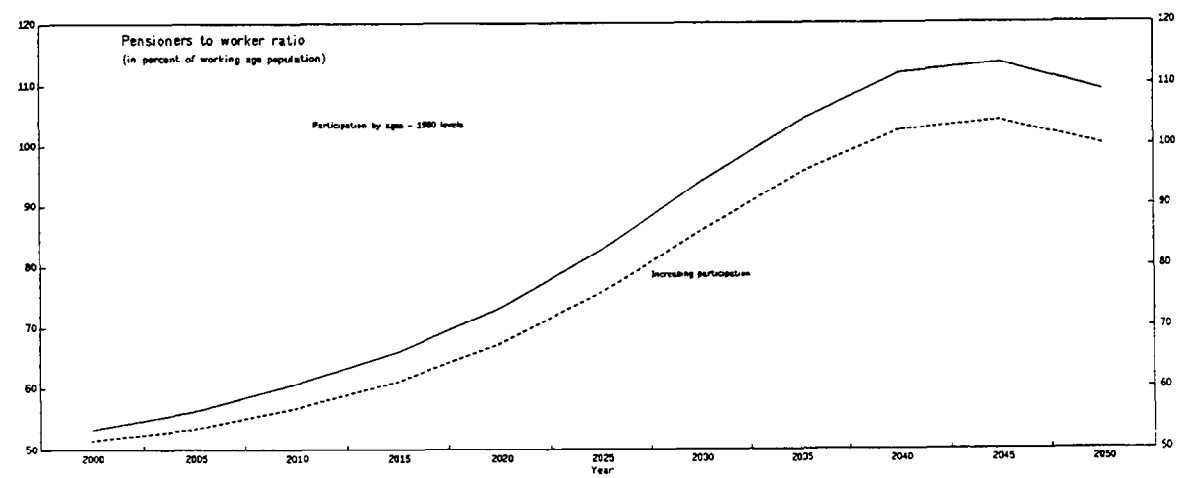


Table 4. Spain: Long-Run Financial Situation of Social Security

	1995	2000	2010	2020	2030	2040	2050
Population (in millions)	39.2	39.9	41.1	41.7	41.8	41.3	40.2
	Scenario 1: Pay-as-you-go, without significant change in labor markets						
Workers/working age population (%)	47.4	49.5	50.3	48.8	47.8	47.9	48.7
Workers/16+	39.0	39.6	39.0	36.5	33.5	31.5	31.7
Average GDP growth (% a year)	3.1	2.8	2.4	2.6	2.3	2.3	2.1
Employment (in millions)	12.7	13.3	13.3	12.7	11.7	10.8	10.6
Empl(t)-Empl(0) (in millions)	--	0.57	0.61	-0.02	-0.95	-1.85	-2.10
Empl(t)/Empl(0)	--	1.05	1.05	1.00	0.93	0.85	0.83
Pensioners (in millions)	6.2	7.1	8.1	9.3	11.0	12.1	11.5
Pens(t)/Pens(0)	--	1.14	1.30	1.49	1.77	1.95	1.86
Pensioner per worker	0.49	0.53	0.61	0.73	0.94	1.12	1.09
Pensions as % GDP	8.5	8.8	9.8	11.9	15.3	18.6	17.6
Average contribution rate to finance PENSIONS rate(t)/rate(0)	--	1.0	1.2	1.4	1.8	2.2	2.1
	Scenario 2: Pay-as-you-go, with significant change in labor markets						
Workers/working age population (%)	47.4	51.3	53.7	53.1	52.5	53.5	55.3
Workers/population of 16+ (%)	39.0	41.0	41.7	39.7	36.8	35.1	35.9
Average GDP growth (% a year)	3.5	3.0	2.6	2.6	2.4	2.4	2.1
Employment (in millions)	12.7	13.7	14.2	13.8	12.9	12.1	12.0
Empl(t)-Empl(0) (in millions)	--	1.04	1.52	1.09	0.21	-0.59	-0.67
Empl(t)/Empl(0)	--	1.08	1.12	1.09	1.02	0.95	0.95
Pensioners (in millions)	6.2	7.1	8.1	9.3	11.0	12.1	11.6
Pens(t)/Pens(0)	--	1.14	1.30	1.49	1.78	1.95	1.86
Pensioner per worker	0.49	0.51	0.57	0.67	0.86	1.00	0.96
Pensions as % of GDP	8.5	8.3	9.1	10.9	13.9	16.5	15.4
Average contribution rate to finance PENSIONS rate(t)/rate(0)	--	1.0	1.1	1.3	1.6	1.9	1.8
	Scenario 3: Partial pre-funding, with significant change in labor markets						
Saving/GDP (%)	--	0.2	0.5	1.1	--	--	--
Accumulate assets/GDP (%)	--	1.0	5.4	18.3	27.0	22.3	5.0
Accumulate assets/GDP (0) (%)	--	1.2	8.5	36.9	70.9	75.6	22.5
Average contribution rate to finance PENSIONS rate(t)/rate(0)	--	1.0	1.1	1.4	1.5	1.5	1.5

Source: INE statistics, staff projections.

b. Higher employment scenario

In the second scenario, the participation rate for most age brackets gradually increases, reflecting mainly a larger participation of young (< 35 years) and middle age (> 45 years) women and unemployment rates similar to the late 1980s. In this scenario, the employed to working age ratio increases from 47 percent in 1995 to 53 percent in 2010, staying around this figure in the following years (Chart 4, middle). 1/ Higher participation and employment permits a reduction of one seventh in the ratio of pensioners to worker ratio comparing to the baseline scenario.

A sustained increase in the labor input is reflected in stronger output growth (0.2 percentage point above the baseline scenario) and corresponding reduction of its share spent on pensions. In this scenario, the share of pensions in GDP is reduced by one seventh, not exceeding 16.5 percent at the peak of the dependency ratio (around 2040).

c. Partial prefunding scenario

This scenario attempts to assess the scope for partially prefunding public pensions. Such prefunding can take many forms and could be introduced gradually. In the simulation, funds start to accumulate at a rate of 0.2 percent of GDP a year in the initial years, with the flow of saving increasing to up to 1.5 percent of GDP per year in the first decades of the next century. In the model, the additional domestic saving helps to finance a increase in the capital stock (over the baseline value), permitting higher growth and, when withdrawals start, limiting the increase in social security contribution rates required to finance a constant level of real benefits. In the projection, cumulated funds are assumed to be fully used by the year 2050.

Under gradual prefunding and flexible labor markets, full use of cumulated assets in the 20-year period after the baby-boom generation starts to retire would halve the increase in contribution rates projected in the baseline scenario. In the simulation, contribution rates after including the part required to prefund liabilities never exceed current rates by more than 50 percent, while in the baseline scenario they go well above 100 percent. The cumulation of assets due to prefunding is also significant. At its maximum, the stock of assets cumulated by the pension system will correspond to about 30 percent of GDP.

1/ This growth reflects the assumption that, not only the number of women working will increase, but the trend of delayed pregnancies and of reentrance into the labor force a few year after childbearing will be strengthened in the future.

d. Other aspects

The projections highlight the different patterns of intergenerational transfers implied by the pay-as-you-go and partial prefunding alternatives, and the importance of directing part of social security contributions to starting to fund the pension system. It is important to note that the prefunding alternative implies higher contributions by the generation retiring before 2020, but a lesser increase in the contributions of those retiring in subsequent years. It has been indicated elsewhere (Breyer and Staub, 1993 and Raffelhuschen, 1993) that under special conditions the transition to a partially prefunded system could be achieved without significant cost to the transition generation. Because, however, these conditions may be difficult to be achieved and in any case involve changes in institutions, it is of importance to proceed with an early and ample debate of the issue before adopting key reforms. 1/

IV. The Health-Care System

1. Main features and recent measures

a. Development and coverage

The national health-care system in Spain dates back to 1942, when a compulsory sickness national insurance scheme for low-income workers and their families was introduced. The current organization began in late 1977, following the 1977 reform of the social security system, when the National Insurance Institute (INP) was divided into four different entities, one of which--the National Institute of Health (INSALUD)--became responsible for health care. At that time, the trend toward greater regional autonomy began to develop. Since, seven regions have become responsible for managing their health services. 2/ This transfer process, as well as the integration of the different providers of health-care services (i.e., INSALUD and municipal

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1/ This debate has in fact started in early 1995, with the Summit of Toledo, where political parties and social partners agreed that studies towards reforming the pensions should be initiated. Although, no precise proposal has been produced to date, the most pressing change would be the lengthening of the contribution period. A reassessment of the ceiling of contributions (the "bases") above the current 3 minimum wages could also be considered, but it is somewhat inconvenient. This increase in progressivity would generate more revenues but would either tend to distort the contributive character of the pension system if benefits are not also increased, or significantly increase the future liabilities of the system in the other case.

2/ The regions are Andalucia, Catalonia, Valencia, Basque country, Galicia, Navarra and Canarias. The Basque country and Navarra have special financial arrangements, because, for historical reasons, they raise their own taxes. The Social Security, through INSALUD, finances the health-care services managed by both central and regional authorities.

institutions) into a national health system (SNS) under the aegis of the social security system, was formalized in the 1986 General Health Act (Table 5).

Table 5. Spain: Shares of Public Expenditure on Health Care

(In percent)

	1982	1986	1991	1995 1/
INSALUD				
Central government	84.2	80.8	40.6	38.5
Territorial authorities	7.9	12.4	53.5	58.8
Other	7.9	6.8	6.1	2.7

Sources: Whitaker et al., and 1995 General Budget.

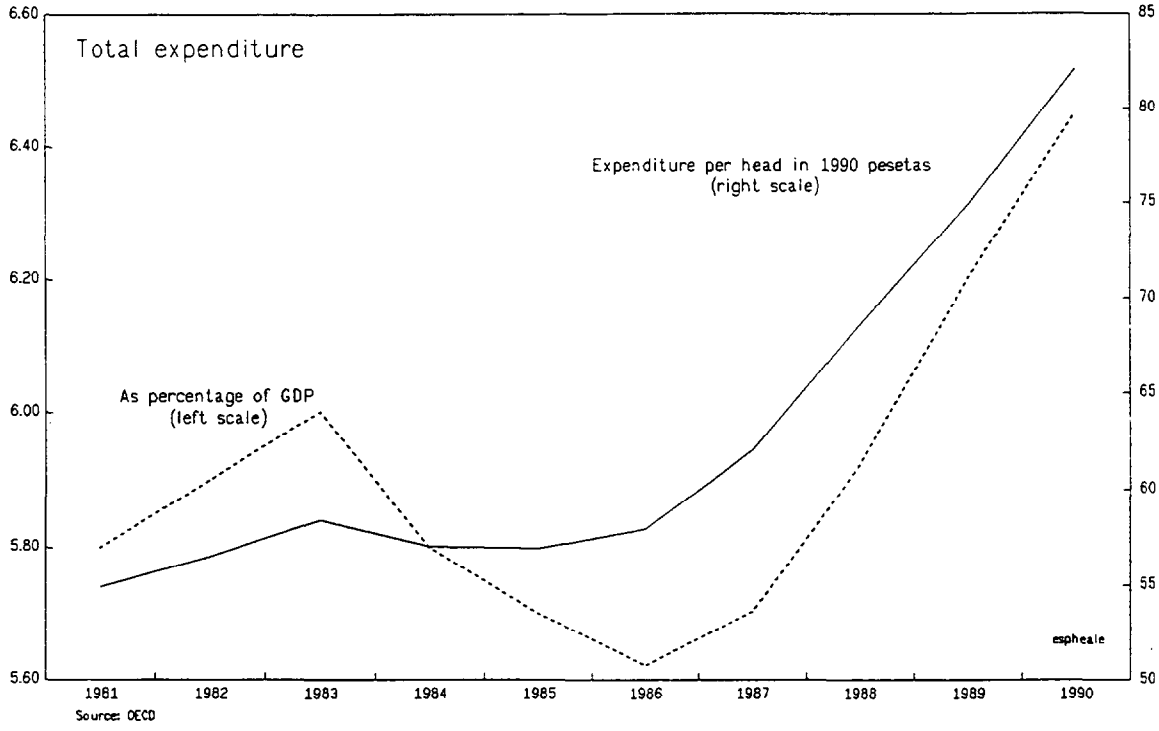
1/ Share of expenditure under the control of social security.

Public health coverage has become almost universal since the late 1970s (increasing from about 80 percent in 1977 to 99 percent in 1992), and population health indicators now compare favorably to those in other industrial countries. Expenditure on health care increased from 3.6 percent of GDP in 1970 to 5.9 percent in 1980, and about 6.5 percent in 1990, most of the latter increase occurring after 1987 (Chart 5, top and Table 6). Despite the increases in expenditure, there is still an excess demand, dealt with mainly through waiting lists for non-urgent interventions.

CHART No 5

SPAIN

Expenditure on Health Care



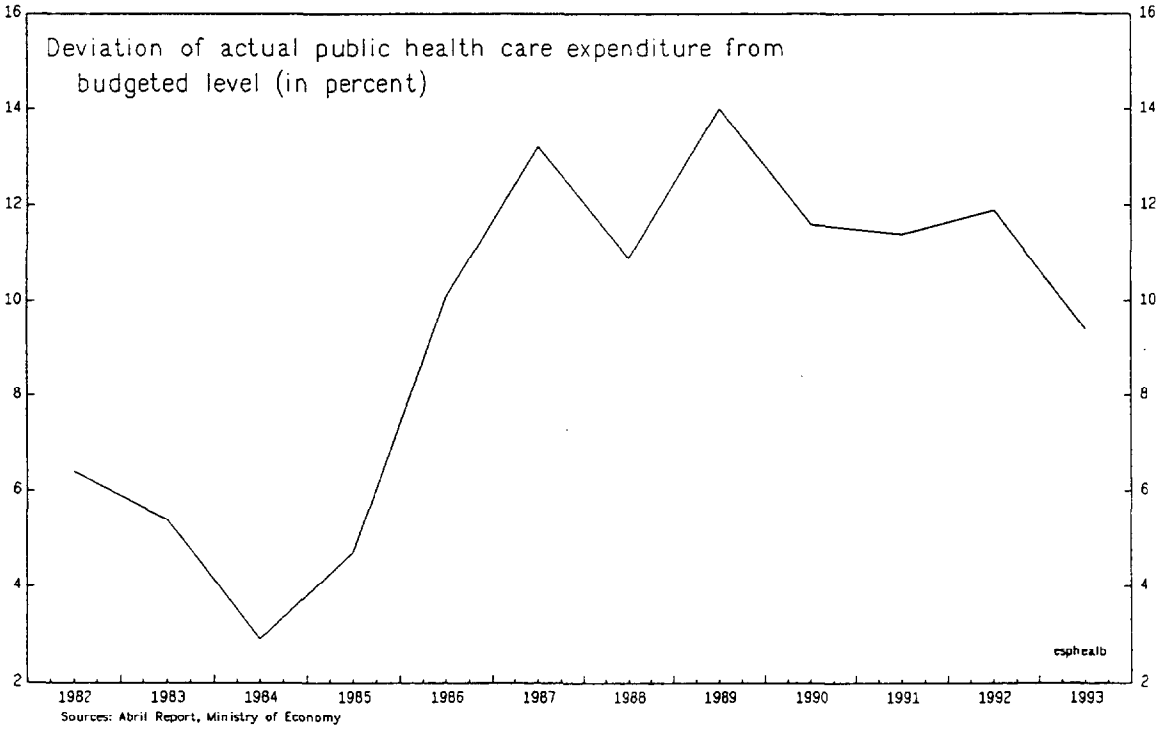


Table 6. Spain: Total and Private Expenditure on Health

(As percentage of GDP)

	1970	1975	1980	1985	1990
Total					
Spain	3.6	5.1	5.9	5.7	6.5
OECD	5.2	6.5	6.8	7.4	7.9
Private					
Spain		1.5	1.5	1.7	
OECD		1.5	1.5	1.7	

Source: OECD.

b. Financing

At present, between one third and one fourth of total expenditure on health is private, because users (except the elderly and chronically ill) pay for 40 percent of the cost of medicines consumed and because dental and some psychological services are not covered. 1/

The public financing of health care has not only increased, but experienced significant changes in the last 10 years. In the early 1980s, most public expenditure on health care was financed by social security contributions (only 5 percent was tax financed in 1979), but, in recent

1/ In addition, patients covered by the public health system often prefer to go to private doctors and clinics to receive non-urgent or non-complex care, in order to avoid the waiting lists required for consultations in public health centers and because they value the amenities provided by private institutions. These services are usually paid by private insurers, who cover about 17 percent of the population. Complex interventions are usually done in public hospitals and are not covered by standard private insurance.

years, more than two thirds have been tax financed (77 percent in 1995), consistently with the principles in the 1986 General Health Act. 1/2/

The financing of services transferred to regions, handled by INSALUD, has been subjected to bargaining every year between central government and regional authorities. 3/ Actual expenditure has systematically been above budgeted transfers (Chart 5, bottom), leading to large debts. 4/ The Government has indicated that the deviations of actual from budgeted expenditure resulted from conscious underestimation of costs aimed at putting pressure on INSALUD to curb expenditure. However, this strategy has increasingly been perceived as ineffective, prompting the recent effort to achieve a medium-term agreement between central and regional authorities.

In 1994, the authorities achieved a multi-year (1994-97) agreement with the regions, establishing that accrued health expenditure should grow at the same rate of GDP, adjusted for the coverage rate in individual regions. 5/

The agreement with regional authorities established goals, but did not provide a strategy to solve the imbalances in the health system (e.g., it does not have provisions to implement expenditure-control mechanisms) and may have little immediate impact on the amount of resources transferred from

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1/ The 1989 Budget Law formalized this principle by establishing a mechanism of transfers from the central government. However, analysis of the funding of contributive and non-contributive expenditures is still complicated by the use of some contributions to finance health care, and of some general budgetary resources to finance some pensions.

2/ Personnel costs correspond to about 75 percent of current expenditure of hospitals and about half of that of the INSALUD. Hospital and primary health-cares costs, including personnel, correspond to about 60 percent and 35 percent of Insalud expenses, respectively.

3/ The conditions for the transfer were also the result of bargaining processes, and because in most cases they reflected the level of expenditure in the regions at the time the transfer took place, they have tended to perpetuate the differences in services between regions. It should also be noted that although regions are responsible for managing their services, most policy and financing decisions are taken at the national level.

4/ These debts have eventually been written off by the central government, despite contention about who should be responsible for accumulated interest charges. Currently, the central government is repaying the Ptas 0.7 trillion (1.1 percent of GDP) debt that had accumulated by 1992 (Table 7).

5/ For the purpose of the plan, an estimate of the expenditure accrued in 1993 was computed and adopted as the base for future expenditure; this implied that the share of (accrued) public health expenditure should stabilize in the coming years at 4.7 percent of GDP. Following the agreement, the 1994 budgeted expenditure was increased by about Ptas 200 billion, the amount yielded by the new methodology as required to break with the old pattern of insufficient transfers. In general, cash expenditure would diverge from this projected path by the additional amount budgeted for debt repayment.

the central government and, hence, on the overall fiscal balance of the government.

Table 7. Spain: Projected Health Expenditure 1/

(In trillions of pesetas)

	1993	1994	1995	1996	1997
Basic accrued expenditure	2.88	3.02	3.22	3.45	3.73
Saving measures 2/		-0.09	-0.10	-0.10	-0.11
Additional items 3/		*0.04*	*0.05*	*0.05*	*0.04*
Total accrued expenditure		2.97	3.17	3.39	3.65
(percentage change)			(6.5)	(7.2)	(7.6)
Of which:					
Central administration		1.18	1.25	1.33	1.43
Territorial administration		1.79	1.91	2.06	2.23
Financial regularization					
1992 arrears					
Central administration		0.07			
Territorial administration		0.08			
1993 Arrears					
Central administration			0.02	0.04	
Territorial administration			0.03	0.05	
Total		0.15	0.06	0.08	
Total projected outlays		3.12	3.22	3.48	3.65
(percentage change)			(3.2)	(7.8)	(5.1)
(in percent of GDP)		4.9	4.7	4.8	4.6
Of which:					
Central administration		1.25	1.28	1.37	1.43
Territorial administration		1.88	1.95	2.11	2.23

Source: Ministry of Finance.

1/ According to the agreement with the Territorial Authorities.
2/ Savings on the purchase of pharmaceutical products.
3/ For expenditure of other institutions in the National Health System.

c. Problems, reform proposals, and outlook

The imbalances of the health-care system have been attributed to the aging of the population, the adoption of more sophisticated treatments, and the reduction in working hours of health professionals (especially after the 1987 labor unrest). However, they also stem from the difficulties associated with the devolution of services to regional authorities and inadequate monitoring and incentives in the system--the latter being reflected in the endemic absenteeism and chronic fraud by users and providers. 1/

In 1991, a parliamentary commission issued a report (the "Abril Report") analyzing several of the problems listed above and suggesting numerous measures to limit costs. Proposals included user fees, copayment on drugs to the elderly, limits on the incorporation of new drugs in the government-approved purchase lists (selective financing), and procedures to increase the awareness of patients about the actual cost of services provided. 2/3/

Most of the proposed measures, however, are difficult to implement and some would take time to produce significant effects. 4/ Given this problem and considering the trend in other OECD countries, the ratio of health-care expenditure to GDP is likely to increase in the near future,

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1/ The transfer of services to regional authorities has not always been followed by proportional reductions in the personnel in the central system, especially management, and there has been duplication of activities. Waste also takes place because the majority of doctors in primary care are not rewarded by performance, nor are they penalized for sending patients to specialists when care could be dispensed at the level of general practice; public hospitals do not face credible budget constraints, and are not managed by professionals; and contracts with private hospitals often establish per-day compensation (instead of per-case), hence encouraging long patient stays. Pharmaceutical producer prices are low in comparison to other developed countries, but drugstore margins are large, patients often abuse the privilege of free medicines granted for the elderly, and, until recently, little control was exerted on doctors who over-prescribed medicines.

2/ Fees currently correspond to only Ptas 40 billion.

3/ In addition, the commission suggested procurement reforms (including the creation of internal markets), more autonomy and budgetary responsibility to hospitals, increases in the number of beds for long-term care (including those offered by the private sector) in order to reduce the use of acute-care beds by chronic patients, and the contracting out of private services for interventions requiring long waiting periods.

4/ Savings on pharmaceuticals have been achieved (Table 7) and cases of fraud and inefficient procurement have been investigated, but most other propositions (e.g., user fees and administrative reforms) have either been discarded, or need further specific preparatory work.

even if significant advances are made in the management of INSALUD. 1/ Therefore, the system will need more resources in the next few years and, barring steep increases in social contribution rates, reliance on taxes will continue. The need for fiscal consolidation at the level of the central government, however, suggests that simple transfers out of general revenues may not be the best alternative. Instead, dedicating some new source of tax revenues entirely to financing the health-care system would both comply with the principle of government responsibility for public health and help reducing the government deficit. This venue is discussed in the following paragraphs.

2. Aspects of tax financing for public health care

The financing of health care raises several issues, including the amount of services that are to be provided (and thus financed); the link between contributions and benefits (including the advantages and disadvantages of earmarked taxes, as well as the tax base chosen); and its consistency with the general income distribution objectives of the Government. Considering most of these public choices as given (and with limited scope for significant short-term impacts of structural reform), only a subset of issues related to the financing of health care is addressed in this section. These are mainly related to the justification for tax financing, the usefulness of earmarking revenues to finance public health expenditure, and the choice of a tax base for this purpose.

a. Reasons for tax financing and the pros and cons of earmarking taxes

If health care is seen as a universal right--as it is in Spain--it may be more suitably financed by taxes, as are other rights offered to the population as a whole (e.g., security as provided by policy and the army), rather than through user fees or social security contributions. 2/ Hence, a broad-based tax may be the most attractive solution for financing health care, with some mechanism--such as earmarking--to ensure that the resulting revenues are used to reduce transfers from the general budget, rather than to increase other expenditure.

Earmarking revenues is often viewed as welfare reducing, because it limits the ability of government to optimally allocate resources. This criticism, however, is based on the assumption of the existence of a

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1/ Rowlatt and Lloyd (1994) estimate the GDP elasticities of health care expenditure for developed countries to be between 1.4 and 2.3. Gerdtham et al. (1994) find that (in OECD countries) GDP per capita, with a coefficient of elasticity significantly larger than one, appears to be the most important factor in (cross country) health care expenditure variations, being stable in the last 20 years.

2/ This principle does not apply to pensions. Instead, it is widely considered preferable to have pensions funded by labor contributions, because this establishes a link between retirement income and the effort of workers in their productive years.

benevolent fisc and has been largely nuanced by the recognition that governments are the result of the interaction of complex political interests. Modern constitutional economics suggests several instances where earmarking can be a welfare enhancing instrument (Buchanan, 1991). Following this approach, earmarking can be justified either as an implicit way of raising fees for specific services (i.e., a sort of exchange), or as a means to ensure that tax revenues are spent in providing benefits that are general in nature. 1/ The first justification suggests that taxpayers may be more willing to pay taxes if the return for them is clearly defined. In this more or less consensual framework, a tax used exclusively for financing health care may face less opposition than a simple increase in general taxes. Earmarking revenues to finance universal health care would also fit the second criterion.

Furthermore, earmarking revenues can help to stabilize the resources available to the public health-care system on a yearly basis and make them more predictable in the medium term. For instance, they may protect INSALUD from cuts in funding resulting from squeezes by other areas in government--which in any case usually result in arrears and a need for higher transfers in following years. They may also signal a sustainable expenditure path provided by the expected growth of the tax base. Management, especially of medium- and long-term issues, may be assisted by such a predictability.

Given the trend in most developed countries (in spite of efforts to curb the growth of expenditure), a broadly based tax should also respond to the requirement to choose a tax that could be adjusted to the likelihood that the public health expenditure to GDP ratio will increase in coming years. Of course, payroll taxes (i.e., social security contributions), when used for funding health care, are a form of earmarked direct taxes and their rates can be adjusted to the financing needs of health expenditure. 2/ However, they have a relatively narrow base, that not only may be seen as nonequitable, but also creates impediments to employment growth because it puts all the fiscal burden on the labor factor. The VAT, being a consumption tax, compares favorably to payroll tax in this aspect, because it is broadly based. In Spain, the VAT has become increasingly important in helping to finance the transfers to the social security system. Further reliance on it may, however, be inconvenient.

1/ Earmarking complementary goods and services (e.g., earmarking a fuel tax to finance roads) can also be understood as a way to protect a minority from a majority. If revenues, once collected, can have only specific uses, the incentives for excessive taxation are decreased. In the exchange model, efficiency is not guaranteed if the level of taxation is not jointly set with the destination of the tax.

2/ Contributions in this case are a tax because the benefits in terms of health care are not actually related to the contribution paid.

b. Consequences of further reliance on the VAT

As noted, relying on the VAT for financing the public health-care system is attractive because it has a broad base. However, increases in its rate are problematic. First, rates are subjected to the EU agreements, and although Spain still has relatively low rates, room for further increases is limited. Second, any increase in rates has a significant impact on the CPI, which conflicts with government priorities. Finally, even when tax evasion is taken into account, the VAT tends to be more regressive than direct taxation, thus conflicting with the income distribution goals of the Government. 1/ In that regard, some economic models suggest that progressive taxes may also dampen wage pressure in a unionized environment (Hersoug, 1984, Malcomson and Sator, 1987, Lockwood and Manning, 1993), hence favoring the Government's goal of lowering inflation.

Regarding the impact of increases in the VAT on prices, Burgos et al., (1993) estimated that between 30 and 40 percent of the VAT increases that took place in 1992 were transmitted to the CPI in the period of a year. 2/ Simulations published by the Ministry of Economy using their model MOISEES (Fernandez et al., 1994) suggest a smaller, but still significant, impact. 3/ Given the tax base of the VAT and the increase in evasion following an increase in rates expected by the Spanish authorities, the impact of an increase in the VAT rate enough to raise 1 percent of GDP in new revenues would be an increase in the CPI of about 1.2 percentage point.

c. The scope for a generalized social security contribution

Considering the arguments above, an earmarked direct tax, akin to a contribution to the social security system but based on both capital and labor income, could be the most advantageous option. 4/ The discussion in section 2 indicated that health-care expenditure amounting to about 1 percent of GDP are funded by labor contributions. Hence, in response to

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1/ Evasion from both direct and indirect taxation is widespread. Studies quoted in Fernandez et al., 1994 (Secretaria de Estado de Economia (1994) and Melis (1992)) suggest that VAT evasion is estimated at about 30 percent.

2/ The increase of 2 percentage points in July 1992 explained about 0.7 percentage points in the CPI increase recorded in the following 3 months. The 1 percentage point increase in the VAT in January 1992 explained about 0.6 percentage points of the subsequent increase in the CPI. However, the increase in VAT in January was accompanied by an increase in the taxes on gas and tobacco and the effects of this contemporary increases were not disentangled. The transmission of an increase in the VAT should be less than 100 percent, since food is not taxed.

3/ MOISEES is a Keynesian model that assumes that prices reflect a mark-up over wages and capital costs; in the simulations, interest and exchange rates are fixed.

4/ Such an approach has been used by the French since 1990, when the Contribution Sociale Généralisée was introduced. This contribution is in fact a flat-rate income tax based on capital (including rents and financial assets' returns) and labor revenues (including pensions).

redirecting contributions to finance only wage-related benefits, this amount in new revenues could be sought out of such a broadly based health tax. To assess how broader would the base of such "generalized contribution" be in relation to a payroll tax, it is useful to compare the share of revenues from work in national income with that from other sources. 1/ The National Accounts suggest that the potential base for a generalized contribution is about 50 percent larger than that of ordinary social contributions: income from capital and transfers (such as pensions and unemployment benefits), constitute about one third of total income (Table 8).

Table 8. Spain: Sources of Household Income (1993)

(In percent)

Wages	Self-Employment	Transfers	Profits	Interest
46	16	18	10	6

Sources: Cuentas Finacieras and staff estimates.

1/ The share of self-employment income is computed using the number of self employed contributing to the social security, assuming that their average income is the same as the wage earners.

Given a broader base and the hypothesis that this "generalized contribution" would be proportional to income, the rate on this tax sufficient to generate revenues equivalent to 1 percent of GDP would amount to 1-2 percent. 2/ This flat rate tax, in contrast to ordinary contributions to the social security which have ceilings, would be progressive if a floor to taxable income is adopted. This floor could be lower than that used for purposes of standard income taxes. To minimize problems of tax evasion, collection of the generalized contribution could replicate the mechanism adopted for collecting ordinary social security contributions and income taxes, as happens with the Contribution Sociale Généralisée.

1/ The income of households (a non-profit institutions) amounted to 103 percent of GDP in 1993.

2/ The required rate is greater than 1 percent because of the several exemptions applied to taxable income. This behavior is not unique. The effective average personal income tax rate in 1993 was about 10 percent of total household income, in spite of marginal income tax rates ranging from 20-53 percent.

V. Conclusions

The social security system in Spain has steadily expanded since the late 1970s. The public health-care system currently provides an almost universal coverage for the population, while the pension system has permitted a significant improvement in the standard of living of persons of age. Contemporary to these major achievements, however, social security expenditure has also increased, reaching more than 15 percent of GDP in 1994 and is now an important factor in the fiscal imbalance of the general government.

The growth of health-care expenditure is broadly due to the aging of the population, more sophisticated medical treatments, increasing labor costs, and inadequate monitoring and incentives in the system. Considering these facts and the trend in other OECD countries, the major measure taken by the Government to curb the growth of expenditure--the multi-year financial program agreed between central and regional authorities--is unlike to significantly reduce the need of transfers from the central government in the near future.

Currently, the central government funds more than two thirds of the budget of the health-care system, the rest being supported by social security contributions. Given the need of fiscal consolidation of the general government to allow Spain to attain the targets set in the Maastricht Treaty, and the difficulties for trimming health-care expenditure, a new source of fiscal revenues appears to be needed. This source should be broadly based, have a minimum impact on price levels, not be regressive, and permit to free social security contributions to fund only wage-related benefits. A flat-rate tax levied on the income from labor and capital, earmarked for funding health care and yielding about 1 percent of GDP would respond to these requirements.

The main challenge of the pension system lies in the future. The demographic changes that will take place in Spain after the first decades of the next century will significantly increase the proportion of the population aged above 65 years. For a pay-as-you-go scheme, such as the public pension system in Spain, such an increase will be reflected in a large increase in contributions from workers. Because of the large impact of these developments in the intergenerational income distribution, an early discussion of this challenge is very important. Current contributors should be informed about the possible alternatives and their consequences.

Future increases in pension contributions can be moderated by changes in some parameters of the system (e.g., the contribution period), partial prefunding of future liabilities and greater flexibility in the labor market (which would lead to an increase the ratio of employed to working age persons). The illustrative projections presented in this study suggest that if these actions are taken soon, the increase in contributions by the time the current "baby-boom" generation will be retired would be halved in relation to a scenario where no action is taken. They also point to the importance of building a surplus in the pension system at an early stage.

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