

**Monographic September 2005:
Population and Pensions**

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1.- U.S.A.

Demographic Situation

The United States is not yet beset by the problem of an ageing population. Many of the country's demographic variables (see Table 1 for a summary of the most important) suggest the population is at an earlier stage of evolution in relation to Japan and many European countries. In this sense, the fertility rate remains on the border of demographic regeneration (2.1 children per woman) and there is also a strong contingent of immigrants, which reached an all-time high over the last four years (954,000 immigrants per year). This allows the US population to grow at a rate of 1% a year, very similar to previous decades.

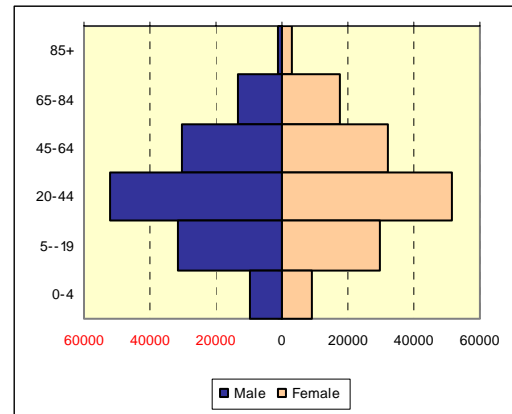
Table 1: Main Demographic Variables (2003)

| | |
|--|------|
| Birth Rate (in 1,000s) | 14.1 |
| Mortality Rate (in 1,000s) | 8.5 |
| Infant Mortality Rate (in 1,000s born alive) | 7.0 |
| Fertility Rate (children per woman) | 2.04 |
| Mother's Average Age (First child) | 25.2 |
| Annual Population Growth Rate (%) | 1.0 |
| Life Expectancy (years) | 77.3 |
| Immigrant Population (% of total; not naturalised) | 7.3 |
| Dependency Rate (% of over-64s/population aged 20-64; year 2000) | 21.1 |

Source: own elaboration with data from the National Center for Health Statistics

The current figure, which approaches 298 million inhabitants¹, will rise by almost 50% to 420 million halfway through this century, according to official projections.

Figure 1: Population Pyramid (2000)



Source: own elaboration with data from the US Census Bureau

The distribution of the population by age group, according to the census carried out in 2000 (Figure1), reveals a clear preponderance of cohorts of a working age (especially between the ages of 20 and 44), while the groups of children and young people are considerably more numerous than the retired. In this context, the dependence rate is still very moderate (there are approximately four times as many people of a working age than there are retired people) and over 84-year-olds only represent 12% of the total retired people. In fact, in the 90s the population over 65 years old grew less

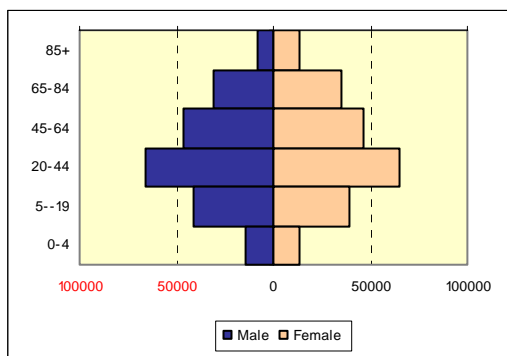
¹ For those who are curious or are fans of statistics, the US Census Bureau provides a population estimate *on a daily basis* of not only the US, but also the planet as a whole, please see:

<http://www.census.gov/main/www/popclock.html>.

than the overall population (12% vs. 13.2%).

However, the projections made for 2050 paint a completely different picture (Figure 2), but much less dramatic than in the best part of developed nations. Cohorts of a working age will remain the majority group, but the number of retired people will rise substantially, approaching the group of children and young people, which will nevertheless maintain its weight in the population as a whole. As a result, the dependence rate will rise to 38.7% (with approximately 2.5 people of a working age for every retired person), but with a tendency to level out. The group corresponding to those over the age of 84 will maintain its weight within the group of retired people as a whole until 2030. However, towards 2050 when those born after World War II reach this age, this group will account for a quarter of the group of over 64-year-olds.

Figure 2: Population Pyramid (2050 projection based on 2000 Census)

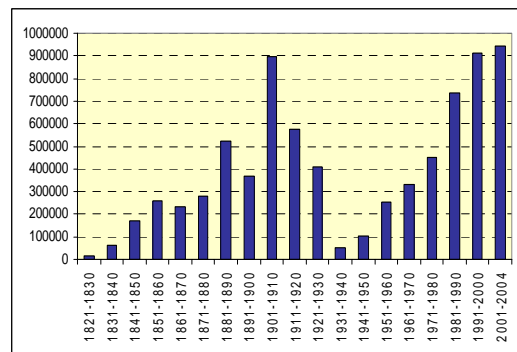


Source: own elaboration with data from the US Census Bureau

The United States is still an appealing destination for immigrants, which is a crucial factor to curb the problem of an ageing population. Despite stricter immigration control following the terrorist attacks on September 11 2001,

an average of almost one million immigrants per year have legally entered the country over the first four years of this decade, breaking the previous records set in the second and last decade of the 20th century (Figure 3).

Figure 3: Average Annual Inflow of Immigrants in the US



Source: own elaboration with data from US Citizenship and Immigration Services

At present, 12% of US inhabitants were born outside the country, although 4.6% have adopted US citizenship. Within the group of immigrants, 53% are from South America, 25% from Asia and 14% from Europe. The pattern in recent years reveals an increase in Asian immigration (led by India) and a slight decrease in South American immigration. This is exemplified by 2004 immigration data, which saw 41%, 35% and 13% shares of total immigration for South America, Asia and Europe respectively.

It is interesting to note that, despite immigrants' level of education being lower than that of US nationals, a large number of them have a University degree or higher, which illustrates how appealing the US remains to scientists and qualified technicians. While naturalised

immigrants (hence fully integrated and having remained in the country for a prolonged period of time) have a level of education, jobs and earnings that are comparable to the overall population, the rest of immigrants are far from these averages, particularly where earnings are concerned (64% of the national average).

We should also add² the refugees who are allowed to enter the country to the above mentioned group of immigrants. The number of refugees has risen to two million since 1981, but this group was, however, clearly affected by the terrorist attacks on September 11: 2001 was the only year in the historical series in which less than half the applications for asylum were approved (compared to the average of almost 80%).

The internal dynamics of the US population, while still subject to a slow ageing process, is marked to a much greater degree by another tendency: the redistribution of the overall population by ethnic groups (see Table 3 at the end of this report). The increase in the weight of Hispanics (nowadays the largest minority group, ahead of Afro-americans) and Asians has serious implications economically speaking, but this is even more the case in social, cultural and political³ ambits, which are not part of the objective of this analysis. These two minority groups (together with other smaller

groups) would approximately double in numbers by halfway through the century, at which point non-Hispanic white people would no longer constitute more than half the overall population, due to their demographic growth rate being much more modest.

The Pension System

Surprises to Start

At least before the disaster caused by Katrina and its political implications, the Bush Administration's proposal to reform the pension system (under the slogan "Strengthening Social Security") has become one of the most controversial socioeconomic issues in the United States⁴. The proposal has received a lot of criticism and very little support over the first few months following its release.

After all, the reform does aim to radically change a social protection scheme that was established in 1935 and which, according to most analysts, is guaranteed to be solvent for at least another half of a century. Moreover, the weight of the system in terms of GDP (4.2% in 2004) is lower than that observed in other developed nations. Even at the end of the long period for which the projections have been carried out (2075), the above percentage of GDP would have only risen by two points. As we will see later in this report, the main threats to budget stability in the medium and long term come from other programmes. So, this debate may be equivocal (in the

² It would of course be much better if we added illegal immigrants, but their number is, by definition, difficult to calculate

³ For the sake of the language, however, it would be appreciated if some politicians addressed the public in Spanish less frequently.

⁴ For the official viewpoint of the reasons and structure of the proposal, which is more flamboyant than detailed, see: www.strengtheningsocialsecurity.gov

context of the United States), but it is certainly highly topical.

Nevertheless, 2008 has been circled on the calendar as the key date (in numerous public addresses made by Alan Greenspan, for example), when the multitude of cohorts born after World War II will begin retiring (minimum legal age of 62 for retirement).

While carrying out research to write this report, I must admit I was surprised by at least a couple of observations. Firstly, those (not many) who are of the opinion that there is no real problem (in developed nations in general) with respect to the current public system of distribution may find a highly unexpected support (due to the source) in a recent contribution made by David Hauner⁵ (member of the IMF Fiscal Affairs Department).

According to the author, GDP growth forecast in the majority of OECD countries will be enough not only to absorb the increase in spending related to age (including health and education costs and household benefits, along with pensions), but to also increase the rest of public spending in real terms *and all this without deteriorating the budget balance*⁶. The author is seemingly so worried about his own conclusions that he ends this section by rejecting possible complacency when it comes to tackling the fiscal impact of an ageing population, due to the problems that some of the suppositions he used entail.

⁵ Hauner, D. (2005); "Aging: some pleasant fiscal arithmetic", IMF WP/05/71

⁶ Less growth in expenditure on other items not related to age would be enough, a possibility that the author believes is very feasible.

Without going into any more detail, in the United States it is easy to find an explanation for such optimistic results: the author assumes a 5.5 percentage point increase in expenditure on age-related items, but in official data, an 8.7 percentage point rise is forecast for the pension and health programme alone (60% more). Unless household benefits and education spending is assumed to be cut brutally, the key supposition is not realistic.

Second surprise: the US Social Security Fund, which as we will see shortly now receives more in contributions than it transfers, has accumulated a surplus of \$1.7bn⁷, which has theoretically been invested in Treasury Bonds. However, the White House itself argues in favour of its reform bill that these funds have already been spent on other items and that the safe is empty. Is the United States prepared to selectively default its own pensioners while, of course, it continues to meet the demands agreed upon with the rest of investors? It would certainly be unheard of.

Current Situation

The US pension system is based on the so-called first pillar, a public distribution scheme created by Roosevelt following the great depression.

Income is received via contributions, which are 10.6% of wages (met in equal shares by both workers and employers) up to a maximum of \$90,000 per annum (2005), apart from a supplement of part of the taxes paid by those with earnings that exceed that threshold. This fraction is transferred to

⁷ In order to gain a better comparative idea, the Spanish fund currently amounts to \$33bn.

the system and is equal to a further 0.3%.

On the flipside of the coin, the people who retire at the normal age (on average around 65) and whose salary is around the median of the income distribution curve receive 40% of the wages earned during their last year of work. The percentage rises to 60% for workers with lower salaries and drops to 30% for workers whose earnings exceed that median. Logically, special adjustments are made for early or late retirement, widows and widowers and other aspects⁸. Benefits are adjusted to remain in line with nominal wage growth in the economy.

In 2004, the cost of these benefits amounted to 9.1% of taxable wages (compared to income which we must remember amounted to 10.9%). Surpluses have been common and will remain so if the current system is maintained until 2018. Surpluses (like the above mentioned \$1.7bn) are normally invested in Treasury Bonds and grow due to the corresponding interest. If this money has been spent in other areas in order to avoid going deeper into debt, it does not imply that it is unavailable, unless we accept the crazy idea of a selective or general default on behalf of the US.

In the current conditions, the programme would have accumulated \$5.5bn in funds by 2018, when expenditure will overtake current income⁹. The system would cover its

⁸ In addition to this, the system includes a programme of benefits and pensions for the handicapped, which is financed by a further 1.8% of taxable salaries.

⁹ The variety of projections referred to in this report come from official data from the Congressional Budget Office and specific

own deficit for approximately a decade merely through the interest earned on the Treasury Bonds it has accumulated. The system could continue to fully meet its obligations through the sale of its Treasury Bonds up to a date that ranges from 2042 to 2052, depending on the source (without any reform whatsoever).

Reform Bill

The Bush Administration's reform bill has two main pillars, although the second is where all the controversy lies:

1.- **Progressive Indexing:** involves partially substituting the method of indexing by wages for one which indexes according to prices (CPI). As the past shows that prices grow less than wages (by more than 1% on average), this move would imply significant relief for Social Security accounts to the detriment of pensioner benefits.

The term "progressive" is used because the current system would be maintained in the case of workers who are among the lowest 30% of the wage scale. As wages rise, the system becomes one of mixed indexing (part price part wage). Finally, the entire change would only be applied to the highest wage earners.

We must recognise the progressive nature of this structure (which is highly uncommon in this government's fiscal policy), which applies a measure to contain social security costs that has been widely recommended and is, moreover, the normal method of

reports from the Center for Economy and Policy Research and the Center on Budget Policy Priorities.

indexation in many countries¹⁰. Consequently, this measure has barely been disputed.

2.- Personal Retirement Funds: a worker may voluntarily transfer up to one third of his/her social security contribution (4% of the current 12.4%, including the contribution to the benefit programme for the handicapped) to a personal pension plan (PPP). These amounts are invested in a private retirement fund of the worker's choice, which would then invest the funds in private and public fixed and variable income. When the worker retires, he/she receives the money from his/her PPP and the amount corresponding to social security which would be, logically, less than the amount paid out by the current system).

The "semi-privatisation" or change to a mixed system (which has also been employed, with noticeable differences, in countries such as Great Britain, Sweden, Australia, Mexico or Chile – the latter being the closest to a fully private capitalisation system), is what has provoked a bitter debate, where ideology takes over – and dominates – economics. Let's enter the debate

Arguments in Favour of Changing to Mixed System

I.- *The current system is simply economically unsustainable:* we have already made some comments casting doubt on this statement. Moreover, the Bush government itself recognises that the first pillar of the programme

¹⁰ The only doubt is why the government insists that lower wage earners will be better off than they are at the moment. It seems obvious that their situation will remain unchanged, unless we consider the fact that higher income earners will be worse off as a bonus.

(progressive indexing) would solve 70% of the problem. An increase in the age of retirement, however modest this may be, would cover the rest without having to make any further changes.

II.- *Increase the profitability of saving for retirement,* on diversifying investment towards other types of Treasury Bonds: the Bush Administration projects a 4.6% annual yield in real terms. A recent and interesting contribution by Feldstein¹¹, which includes his own proposal for transforming the system, calculates this figure at a striking 6.9%, basing his computations on past yields. The profitability of the current system, which invests exclusively in Treasury Bonds, is not estimated to rise above 2%. Even if an increase in administrative costs due to the change is assumed, it would still be a clear improvement... if these projections are accurate.

III.- *Reduce the distortions that social security contributions* (and even more so, the increase necessary in forthcoming decades to sustain the current system) *generate* in both labour demand (on making labour more expensive) and also supply (by encouraging people to work less hours and to retire early)¹²: this is a separate and "long distance" debate which this report cannot go into further due to the space required.

IV.- *Increase individuals' freedom of choice:* here is where arguments become more ideological. Critics' responses will be covered later.

¹¹ Feldstein, M (2005); "Structural reform of social security", NBER WP 11098.

¹² See Feldstein, op.cit, pp. 16 onwards.

V.- *Prevent the government from spending social security funds on other programmes:* this opinion cannot be taken very seriously when it comes from the government itself, unless it is connected to the following.

VI.- *"Starving the beast":* hardcore Republican Party members do not hide their intention to dismantle the system inherited from F.D. Roosevelt, which would require social programmes to be taken apart and the size of the public sector to be reduced (a move that neither Reagan nor George Bush senior made).

Arguments Against a Change to a Mixed System

I.- *The cost of transition to the new system:* current generations, who would lose part of their benefits from the public sector due to contributing less in the future and only being able to partially create their PPPs, would suffer a considerable loss in terms of resources for their retirement. The Center for Budget and Policy Priorities (CBPP) estimates transition costs at almost \$5bn, with the subsequent increase in public sector borrowing, the decrease in national saving (at a time when this variable stands at an all-time low) and the resulting upward pressure on interest rates¹³.

II.- *The increase in administration costs with the new system:* other countries' experience does not bode well. From an essentially critical point of view of the PPPs, CBPP expert Jason Furman states that the system's management costs

¹³ See the previously mentioned article by Feldstein who, despite being clearly in favour of the change, insists on the need to increase private saving outside the social security system to be able to undertake the transition without serious consequences.

would be between 10 and 30 times higher¹⁴! In countries as different as Chile and the United Kingdom, the cost of private funds have absorbed between a quarter and a third of all benefits accumulated up to retirement.

III.- *The risk inherent in financial investment:* diversifying investment in an attempt to obtain higher yields inevitably involves greater risk. According to critics, the programme only seeks to boost the private fund business. Faced with this, those who support the reform consider it feasible to guarantee the security of assets by establishing conditions for the bonds that can be invested in (for example, a base percentage for Treasury Bonds that assures a minimum yield during times of crisis on the stock market).

IV.- *To what point is the individual free to choose?:* An average citizen's knowledge when it comes to entrusting the appropriate fund with their PPP (and later on when changing from fund to fund, if necessary) is well and truly insufficient. This could give rise to problems for more than a few individuals (as occurred in Chile).

If higher profitability is desired, this reasoning continues, allowing the social security administration to diversify its investment is enough.

Those in favour of the reform state that this would imply more State interventions and a distortion in the market. In exchange and in order to help citizens to choose their funds, some of these supporters have suggested that (a wide range) of funds

¹⁴ Furman, J. (2005); "The financial costs of individual accounts"; *Testimony before the Subcommittee on Securities and Investment of the US Senate Committee on Banking, Housing and Urban Affairs.*

to manage PPP be selected, but who and under what criteria will select these funds.

V.- *Distribution system would no longer redistribute:* a capitalisation model benefits the highest income earners and Works to the detriment of the lowest income earners, whose PPPs would be much smaller when they retire.

Supporters of the reform deny redistributive nature of the system (Jeffrey Liebman estimates it to be less than 10% with the same population cohort¹⁵). Reasons: the highest income earners start working at a later age (and therefore contribute less to the system) and in addition to this, their life expectancy is greater (so they receive their pension for more years)¹⁶.

VI.- *This reform is only the first step towards dismantling social protection programmes established in the past by Democrat Governments:* This is the line of criticism that has been most widely accepted by the general population, the best part of whom are opposed to a reform that is not particularly radical.

The Rest of the System

Leaving the passionate debate on the first pillar of the US pension system to one side, it is worth mentioning, albeit briefly, the other two pillars which have their own problems.

¹⁵ Liebman, J. (2002); "Redistribution in the current US Social Security System"; in M. Feldstein and J. Liebman, eds., *Distributional Aspects of Social Security and Social Security Reform*, Chicago, University of Chicago Press, pp.11-48.

¹⁶ This justifies the suspicious statement made by G.W. Bush that Afro-Americans lose out under the current system (as their life expectancy is five years below the average).

Corporate pension plans cover a significant part of the US labour force and boast two alternative structures: *defined-benefit plans* guarantee the worker a certain amount of money at retirement.

These programmes were seriously affected when technology bubble burst on the stock market, forcing businesses to make supplementary contributions to meet their obligations. More than a few businesses struggled to do so¹⁷. These types of plans as a whole display a funding deficit of \$90bn, which has forced the Pension Benefit Guaranty Corporation to intervene. This organism uses public and private contributions to cover the more than 44 million workers who enjoy these plans and has been making up the difference between what had been promised and the funds actually available in the corporate plans committed to this model.

In any case, the obvious risks this model entails have reduced its weight in favour of *defined-contribution plans*, in which the company only provides a certain amount of money on a yearly basis, regardless of the amount accumulated when their employees retire. Defined-contribution plans can at the same time be linked to the company's profits each year (*profit-sharing plans*) or be independent (*money-purchase plans*).

As far as the third pillar is concerned, personal pension schemes are voluntary and the best known are the 401(K) accounts. There is nothing particularly special about these accounts, except for their tax benefits, which make them appealing in

¹⁷ The distribution of the shortfall of funds is highly unequal across sectors and across the companies in each sector.

proportion to the level of earnings: the highest income earners enjoy tax benefits of 35%, average income earners 10%, while low wage earners who are not obliged to pay tax due to not reaching the minimum level established by law, do not obtain any benefit at all.

The Real Problem

The above section illustrates that, despite the controversy over the reform bill, the pension system is not the main threat to the US budget.

In reality, adjustments should be made to the health system and not only in the public sector. The weight of the two largest health programmes for the elderly (Medicare) and the underprivileged (Medicaid) will multiply in terms of GDP over the next few decades (see Table 4). In the private sector, employee health plans are endangering the financial position of some companies, particularly in the aviation and car industries.

While this remains an issue to be analysed in future reports, the fact that the health system is the most expensive in the world and thoroughly

inefficient is behind this situation, which this time is a serious threat. Taking note of the causes is enough for the moment: ageing population and the parallel increase in the price of medicine and hospital treatment, which is common to all developed nations. However, exorbitant administration costs, the size of doctors' salaries and excessive profit margins of pharmaceutical companies, whose lobbying avoids a suitable response from the public sector with undeniable effectiveness are not so common.

Table 3: Main Social Programmes:
Expenditure Patterns (% of GDP)

| Programme | 2004 | 2050 | 2075 |
|-------------|------|------|------|
| Social Sec. | 4.2 | 6.2 | 6.4 |
| Medicare | 2.5 | 8.3 | 10.4 |
| Medicaid | 1.9 | 2.8 | 3.3 |
| Total | 8.6 | 17.3 | 20.1 |

Source: own elaboration with data from the Office of Management and Budget

Vicente J. Pallardó.

Valencia, September 30, 2005.

Table 2: US Population Growth Projections 2000-2050

| | 2000 | 2030 | 2050 | % Change 2000-2050 |
|--------------------------|--------|--------|--------|-----------------------|
| TOTAL (1,000 of persons) | 282125 | 363584 | 419584 | 48.8 |
| Non-Hispanic Carcasians | 69.4 | 57.5 | 50.1 | 32.4 |
| Hispanic (any race) | 12.6 | 20.1 | 24.4 | 187.9 |
| Afro-Americanos | 12.7 | 13.9 | 14.6 | 71.3 |
| Asians | 3.8 | 6.2 | 8.0 | 212.9 |
| Others | 2.5 | 4.1 | 5.3 | 217.1 |

Source: US Census Bureau

Note: percentages are over total population, unless otherwise indicated.

2.- Euro-zone

1: An Ageing Society

The population of the Euro-zone, which in 2004 stood at 306.9 million, is growing at an annual rate of 0.44%, mainly due to net migration (0.36%).

The marked reduction in the fertility rate from 2.6 in 1960 to 1.46 in 2002 is behind the stagnation in population growth. When this rate drops below 2.1, it is impossible for the population to be renewed.

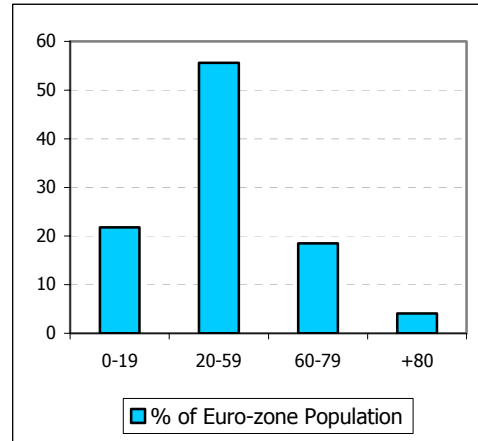
Table 1: Fertility Rate

| | 2003 |
|--------------|-------------|
| BEL | 1,61 |
| GER | 1,34 |
| GRE | 1,27 |
| SPA | 1,29 |
| FRA | 1,89 |
| IRL | 1,98 |
| ITA | 1,29 |
| LUX | 1,63 |
| HOL | 1,75 |
| AUS | 1,39 |
| POR | 1,44 |
| FIN | 1,76 |
| <u>EU12*</u> | <u>1,46</u> |

Source: Eurostat

The decrease is attributed to people being unable to combine their family and professional lives and to the difficulty in finding a job or buying a house, which leads the average women to increasingly postpone the birth of her first child from the age of 26 to 29. The Euro-zone countries with the lowest fertility rates are Spain, Greece and Italy. Another demographic factor that is worth mentioning is the increase in life expectancy for both men and women. Between 1960 and 2001, life expectancy for men has increased by eight years (75.4 years) and nine years for women (81.8 years).

Figure 1: Population Structure by Age Group



Source: Eurostat

Greater longevity together with a low fertility rate and net migration, which could offset these natural changes in the population, is insufficient and consequently, the population is ageing progressively.

The European Commission forecasts the population of the enlarged European Union to age markedly over the next 45 years. The cohort over the age of 80 is expected to rise by 180.5% and the group aged between 65 and 79 by 44.1%, while a decrease of approximate 20% is expected in the age group that includes those aged between 0 and.

Table 2: Foreseeable Percentage Change in the Population by Age Group

| AGE | 2005-50 |
|-------|---------|
| TOTAL | -2.1 |
| 0-14 | -19.4 |
| 14-24 | -25 |
| 25-39 | -25.8 |
| 40-54 | -19.5 |
| 55-64 | 8.7 |
| 65-79 | 44.1 |
| +80 | 180.5 |

Source: European Commission

The dependency rate, which relates the population aged 65 and over to the

population of a working age (15-64) will double over the next 45 years to 45.8%. The countries forecast to reach the highest dependency rates are Spain, Italy and Greece.

On comparing the Euro-zone to other economic regions, we can conclude that the population in Japan and the Euro-zone will age much more than in the United States.

2: Immigration is not enough

Despite immigration having become essential where assuring population growth is concerned, with an influx of more than one million people per year, it is not enough to prevent the population from ageing to that degree. Immigration inflows in some Euro-zone countries (France and Germany) would need to approximately double in order to maintain the current ratio of the labour force over total population in 2050. A solution of this nature would more than likely be impossible politically speaking¹.

Notwithstanding, net migration has doubled in recent years and nothing says it cannot double in the future. In addition to this, we would have to include the impact of illegal immigration, which according to estimates by the European Commission, would double immigration figures.²

¹ "Making the most of global migration". Sandra Lawson and others. Global Economics Papers n°115. Goldman Sachs

² The Social Situation in the European Union 2004. European Commission.

Table 3: Forecast Pattern of Dependency Rate*

| | 2000 | 2050 |
|------|------|------|
| BEL | 25.4 | 43.5 |
| GER | 23.3 | 46.8 |
| GRE | 25.5 | 48 |
| SPA | 24.4 | 56.5 |
| FRA | 24.3 | 46.4 |
| IRL | 17.4 | 43.6 |
| ITA | 26.5 | 55.7 |
| LUX | 21.5 | 37.8 |
| HOL | 20.1 | 40.7 |
| AUS | 22.6 | 44.3 |
| POR | 22.5 | 44 |
| FIN | 21.9 | 42.1 |
| EU12 | 24.4 | 45.8 |

Source: Eurostat

* population aged 65 or over in relation to labour force (15-64)

The countries where the relative impact of immigration is greatest are Italy, Spain, Portugal and Ireland.

Table 4: Net Migration

| | rate per 1000 |
|-----|---------------|
| BEL | 3.9 |
| GER | 2.7 |
| GRE | 2.9 |
| SPA | 5.5 |
| FRA | 1.2 |
| IRL | 7.9 |
| ITA | 6.1 |
| LUX | 5.8 |
| HOL | 1.7 |
| AUS | 3.2 |
| POR | 6.1 |
| FIN | 1 |

Source: Eurostat

As far as the characteristics of the immigrants that arrive to the Euro-zone are concerned, most are very young. Some 86% are under the age of 39, which helps to rejuvenate the population. They have a certain level education and are from average income earning nations near Europe. What incites them to come to Europe is,

generally speaking, family reunification or higher wages.

3: The Effects of an Ageing Economy

An ageing population has the following effects on the economy:

a) Lower growth potential due to there being less labour supply. Annual GDP growth is expected to drop by between 0.2% and 0.3% over the next 50 years.

b) A change in saving:

Following the life cycle theory, workers save during their working life in order to spend during retirement. Therefore, as the age of a population shifts from young to old, it is logical that overall savings will initially be greater, but will tend to drop in older societies.

If we add the fact that life expectancy has increased and future uncertainty over the size of public pensions, it would be reasonable to expect the saving rate to rise due to precaution before getting old.

In fact, overall savings are positively correlated to the proportion of young workers over the total and pension coverage³.

Significant changes also occur in the structure of savings. Before ageing, savings are invested in riskier non-liquid assets in order to increase the expected yield. Later, apart from the gradual slowdown in saving, these assets are converted into safer more liquid assets. The overall

impact of this change in structure will depend on how significant the shift towards risk aversion is on behalf of retired people.

c) Changes in the Structure of Consumption and Investment:

Old populations increase their consumption of health related services and demand less consumer durable goods.

Ageing will also have a negative effect on the demand for housing.

d) Impact on Interest Rates:

In the long run, the real interest rate of equilibrium tends to converge with the economy's growth potential. If, as indicated, the ageing process pushes down potential growth, it will do the same to real interest rates. Société Générale estimates that in 10 years' time, the level of equilibrium of the nominal interest rate will be in the vicinity of 2.8%⁴.

e) Problem of Pension Sustainability:

An ageing population leads to a disproportionate relationship between the labour force (increasingly smaller) and pensioners, making it increasingly difficult to finance pensions, unless benefits are reduced.

f) Increase in Public-sector Deficit:

In the short term, an increase in the deficit due to less consumption on behalf of the young and, therefore, less indirect tax income.

In the long term, apart from the impact of public pensions on the future deficit

³ OCDE WP n° 420 march 2005. "The impact of ageing on demand, factors, markets and growth." J. Oliveira and others.

⁴ Société Générale. Euro Insight april 2005. Véronique Riches-Flores.

due to insufficient reserves being channelled to this end, ageing implies more social spending. In fact, there is empirical evidence of a positive correlation between deficit and ageing (0.46) and changes in the ageing process (0.57).⁵

Standard & Poor's estimates that Germany and France's debt/GDP ratio will be higher than 200% by 2050 (France 235% and Germany 221%).

4: Pension System Heterogeneity in the Euro-zone

In the Euro-zone, each country has its own obligatory pension system, together with other mixed pension systems combined with private systems. One thing that all the systems have in common is that the age of retirement is 65 and was determined in the 1950s.

In all Euro-zone countries except for Ireland and the Netherlands (HOL), obligatory pensions are public, but with different characteristics.

In the majority of countries that have an obligatory public pension system, the amount received is related to pensioners' earnings throughout their working life, that is, a pure defined benefit system. However, within public pension systems, there are mixed systems, including the combination of one minimum part of the pension being the same for all, while another part is associated to previous earned wages (Finland and Greece); the combination of a defined benefit system linked to earnings with one part of defined contribution in France; or the existence of only one public pension system

(defined contribution) as is the case in Italy.

Table 5 : Pension Systems

| | MIN. PUB. | TRAD. PUB. | CAPIT PUB. | PRIV. PENS. |
|-----|--------------|---------------|---------------|----------------|
| AUS | | X | | |
| BEL | | X | | |
| FIN | X | X | | |
| FRA | | X | X | |
| GER | | X | | |
| GRE | X | X | | |
| IRL | X | | | X |
| ITA | | | X | |
| LUX | | X | | |
| HOL | X | | | X |
| POR | | X | | |
| SPA | | X | | |

Source: European Commission

In contrast, the Irish and Dutch pension systems, which run a combination of minimum public pension for all, regardless of a person's previous wages, which covers a small part of the overall pension. Meanwhile, there is also a supplementary pension which is also mandatory through private retirement funds, through defined benefit employment pension schemes. Private benefits represent 40% of income in the Netherlands and between 25% and 35% in the Republic of Ireland.

⁵ CDC-Ixis. Flash nº312-2004. 18-10-04
"One must not overlook governance deficits due to population ageing. Patrick Artus.

Voluntary personal or collective pension schemes are also marketed in Euro-zone countries as a complement and can be accompanied by tax incentives. Insurance companies have a significant share of the schemes that are marketed in France, due to the tax benefits and their extensive marketing network. Insurance companies also have a large share of the market for personal pension schemes in Belgium. Nearly 45% of the population have a personal pension scheme.

Apart from whether the benefit is public, private or mixed, most obligatory pensions are defined benefit systems, as opposed to the situation in the United Kingdom or the United States, where they are defined contribution systems.

In order to calculate pension benefits, wage or consumer price indexation is applied. Most countries have a mixed indexation system. Only in Germany re pensions indexed to wage growth, while in Spain, Italy and Luxembourg, they are indexed to price increases.

Table 6: Pension Coverage Rate (%) (based on average wage)

| | |
|--------|------|
| AUS | 78.3 |
| BEL | 40.7 |
| FIN | 63.3 |
| FRA | 52.9 |
| GER | 45.8 |
| GRE | 84 |
| IRL | 30.6 |
| ITA | 78.8 |
| LUX | 102 |
| HOL | 68.3 |
| POR | 66.7 |
| SPA | 81.2 |
| EUR-12 | 66 |

Source: OECD

How generous pensions are, or their degree of coverage with respect to the

last wage packet, varies across countries. In Luxembourg, pensioners receive retirement benefits above the average wage (102%), while in Ireland coverage is a low 30.6%.

In defined benefit schemes where amounts are determined in accordance with wages, this last term could refer to either the last pay packet, the largest pay packet or the average over the pensioner's working life.

As regards the contributions in order to be eligible for pensions, the minimum duration of the working life also varies across nations. In Luxembourg, a person must have worked for 10 years, while in Austria the level is set at 15. Both employees and employers (and sometimes the state) are contributors, with the part corresponding to the employer normally being larger than the worker's contribution. In the Netherlands, the worker is the sole contributor.

Table 7: Pension Contributions (%)

| | EMPL | BUS. | GOVT | TOTAL |
|--------|------|------|------|-------|
| BEL | 13.1 | 24.9 | | 37.9 |
| GER | 9.6 | 9.6 | | 19.1 |
| GRE | 6.7 | 13.3 | 10.0 | 30.0 |
| SPA | 4.7 | 23.6 | | 28.3 |
| FRA | 6.6 | 9.8 | | 16.4 |
| IRL | 4.0 | 10.0 | | 14.0 |
| ITA | 8.9 | 23.8 | | 32.7 |
| LUX | 8.0 | 8.0 | 8.0 | 24.0 |
| HOL | 19.5 | 0.0 | | 19.5 |
| AUS | 10.3 | 12.6 | | 22.8 |
| POR | 11.0 | 23.8 | | 34.8 |
| FIN | 4.4 | 23.0 | | 27.4 |
| EUR-12 | 8.9 | 15.2 | | 25.6 |

Source: European Commission

5: The Weight of Retirement Funds and their Financial Management

Institutional investors in the Euro-zone hold assets that represent 90% of GDP,

well below the weight in the US Market, where these investors' assets represent 150% of GDP. Among these investors, Retirement Funds generally have a small share in comparison to investment funds and those managed by insurance companies, except in the Netherlands and Ireland, where this industry has been developed. This is particularly the case in the Netherlands, where assets stand at 111% of GDP.

Griffin (1998) and Davis (2002a) empirically show that international portfolio diversification helps to protect yields from inflation.

Table 8: Retirement Fund Assets over GDP (%)

| | % |
|-----|-----|
| BEL | 6 |
| GER | 16 |
| GRE | 4 |
| SPA | 7 |
| FRA | 7 |
| IRL | 51 |
| ITA | 3 |
| LUX | 1 |
| HOL | 111 |
| AUS | 12 |
| POR | 12 |
| FIN | 9 |

Source: The Pensions Institute

However, legal restrictions affect the investment strategies and tactics undertaken by Funds.

Theoretically, Funds with defined benefit schemes are adverse to risk, because they must guarantee a certain benefit at the end of a period of time, by minimizing the risk. In contrast, defined contribution schemes would tend to maximize yields by means of a certain amount of risk, with a tendency to invest in assets denominated in foreign currencies and emerging debt. In Europe, investment in emerging

assets is not strategic, but rather tactical, due to low interest rates and poor returns on the stock market.⁶

As can be appreciated, variable income investment limits which affect only certain countries are so high that in reality they do not restrict investment in practice. However, the limits concerning listed stock investments, assets outside the European Union (Germany 10%), or outside the OECD (Italy 5%) do restrict investment.

Table 9: Variable Income Investment Limits (%)

| | LISTED | UNLISTED |
|-----|--------|----------|
| AUS | 50 | 50 |
| BEL | 100 | 10 |
| FIN | 50 | 10 |
| GER | 100 | 100 |
| POR | 55 | 15 |
| SPA | 100 | 30 |

Source: OECD

Table 10: Retirement Fund Portfolio Structure (%)

| | |
|-----------------|--------|
| DEPOSITS | 4.23 |
| BONDS | 27.93 |
| CORP. BONDS | 13.43 |
| LOANS | 4.19 |
| SHARES | 19.55 |
| REAL ESTATE | 6.06 |
| INV. FUNDS | 11.39 |
| INSURANCE CONTR | 2.88 |
| MISC. | 10.36 |
| | 100.00 |

Source: OECD

On average, Retirement Funds invest 20% of their capital in variable income, which is half the amount invested in fixed income. By country, Dutch Retirement Funds are seen to invest much more strongly in variable income

⁶ FMI WP/04/181. Pension Funds and Emerging Markets. J.A. Chan-Lau

(44.6%) than the rest of countries in Europe, recording rates similar to those observed in the United States (45%). Italians and Fins invest significantly more in real estate assets than the rest. In General, investment in hedge funds and unlisted stocks have worked as alternatives to listed stocks since 2000⁷.

Some countries invest the reserves that governments must create to meet the requirements of the public pension system in shares: France invests 45% of these funds and Ireland 20%.

However, new regulations concerning Dutch Retirement Funds, which should have come into force in January 2006, but have been recently postponed until 2007 (transposing new international accounting standards), will force Funds to reduce the maturity gap between assets and liabilities, which will have the following effects:

- Increase in portfolio maturity and therefore strong demand for very long term bonds maturing in 30 or 50 years' time.
- Decrease in variable income positions.
- Long term and ultra long term sections of the Euro curve to flatten out due to strong demand.

6: Pension Sustainability

The foreseeable ageing of the population discussed earlier, due to a low fertility rate, greater life expectancy and insufficient net migration to offset these two factors, considerable pushes up the dependency ratio, that is, the relationship between those aged over 65 with respect to the labour force (15-64), endangering the current pension system, which is generally based on an

⁷ OECD. "Pension Market in Focus". June 2005

increasingly larger number of pensioners in both relative and absolute terms who would be financed by an increasing lower number of workers.

Table 11: Spending on Pensions over GDP (%)

| | 2000 | 2050 |
|-----|------|------|
| BEL | 10 | 13.3 |
| GER | 11.8 | 16.9 |
| GRE | 12.6 | 24.8 |
| SPA | 9.4 | 17.3 |
| FRA | 12.1 | 17.2 |
| IRL | 4.6 | 9 |
| ITA | 13.8 | 14.1 |
| LUX | 7.4 | 9.3 |
| HOL | 7.9 | 13.6 |
| AUS | 14.5 | 17 |
| POR | 9.8 | 13.2 |
| FIN | 11.3 | 15.9 |
| EUR | 10.4 | 15.1 |

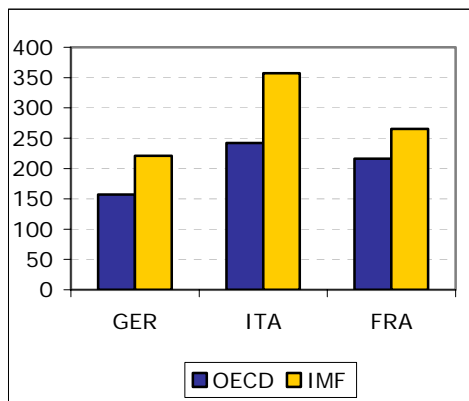
Source: European Commission

Under these circumstances, government expenditure on pensions is projected to rise by an average of five points to 15.1% of GDP in the Euro-zone by 2050. The situation in Greece is particularly serious, as government expenditure rises to 24.8%, while in the case of Spain an eight-point increase is expected over the period of reference.

Reserves designed to cover future pension obligations are almost residual in the main Euro-zone countries (except in the case of Finland). This situation leaves total unprovided-for debt through future pensions (that is, the present value of future pension payments after subtracting reserves and the present value of future contributions) at the equivalent of more than 200% of GDP. And in Italy's case, the debt could reach 242% or 357%, depending on whether the estimate was made by the IMF or the OECD.

As a result of all these factors, these countries' future public debt would exceed 300% of GDP, which would be unsustainable not only for public pension systems but also for public finances.

Figure 2: Estimate of Unprovided-for Debt due to Pensions



Pure logic suggests the following general solutions in order to make the system sustainable:

a) Increase employee contributions:

Contributions would have to rise by 11 points by 2050⁸.

Pension contributions could be raised by means of policies that improve women's participation in the labour market (currently far from that observed in the United States), extend the working life by adjusting the effective average age of retirement to the legal age, discouraging early retirement, as Italy and Finland have done and making incapacity pensions more difficult to obtain. According to the European Commission, if female participation in the labour market were increased and the effective age of

retirement were brought in line with the legal age of retirement, the problem on the horizon could be solved to a great extent. Raising the age of retirement by five years could absorb the financial burden over the next 10 to 20 years.

Furthermore, if we take into account that according to surveys, 40% of pensioners would have liked to continue working, and there is no reason to believe that extending the working life would cause a social conflict at all. Nevertheless, emphasis should be placed on professional training programmes for the elderly in order to improve their connection with the labour market and part-time work should be made more readily available to facilitate a gradual retirement from the labour market.

b) Reduce the benefits of the public pension system:

If the current pension system structure is maintained and wages continue to be indexed to prices as in Italy and Finland; pensions calculated according to the average wage throughout the working life of the pensioner and not according to the last wage received (Finland, France and Spain), downwardly adjusting pensions when longevity rises (Italy and Finland), or extending the number of years of contribution in order to gain access to a pension (France).

Another way of reducing public-sector benefits would be to change the pension system to a mixed system by creating a minimum public pension sufficient for all (solidarity principle) with other supplementary systems managed by private pension funds, whether these be based on defined benefit or defined contribution. In the

⁸ ABN Bond special. "Impact of Pension Reform". June 14, 2002

Netherlands, private pension schemes account for 40% of pension income.

c) Create reserves to meet future pensions or reduce the weight of the debt:

As we saw earlier, net debt due to pensions in the most important countries in the Euro-zone is very high in terms of GDP. Another way of relieving the weight of these future liabilities is to either generate budget surpluses which lead to a sufficient reduction in the level of debt to be able to absorb pension liabilities without significantly altering States' solvency. Belgium, the Netherlands and Finland have gone this way.

Another similar mechanism would consist in channelling the surpluses to a reserve (instead of reducing overall debt) whose yields could satisfactorily meet pension liabilities. This would avoid a future surge in taxes in order to cover these liabilities.

Table 12: Public Pension Reserves / GDP (%)

| | |
|-----|-----|
| BEL | 0.5 |
| GER | 0 |
| GRE | 0 |
| SPA | 1 |
| FRA | 0.8 |
| IRL | 8 |
| ITA | 0 |
| LUX | 22 |
| HOL | 3 |
| AUS | 0 |
| POR | 3 |
| FIN | 55 |

Source: European Commission 2004

Table 13: Sensibility Test of Pension Impact 2000-2050/PIB

| | |
|--|--------|
| Men live 3 years longer, women 2 | 1% |
| 15% increase in fertility | -0.70% |
| 50% increase in immigration | -0.40% |
| 10-point increase in participation of the elderly in the labour market | -0.60% |
| 10-point increase in female participation in the labour market | -0.60% |

Source: OECD

Most countries have small reserves, with the exception of Finland, which can invest its reserves in shares and foreign exchange (Finland holds 35% in shares).

Finally, apart from the sustainability of pensions, the system should adapt perfectly to employment flexibility and guarantee equality and solidarity by raising the minimum pension and by equalling the retirement age of men and women.

Nicolás Jannone

Valencia, September 28, 2005

3.- Germany

Population and Pensions

1. Germany's Retirement Pension System following the 1972 Reform

It is common knowledge that Germany boasts a very generous public retirement pension system, based on distribution. Its main features are the early effective age of retirement and in particular extremely high coverage rates. The cost of the system is very high. In 1998 the spending channelled to pensions amount to 8.4% of GDP, almost trebling the ratio in the United States.

Table 1: Total Spending on Retirement Pensions (% of GDP)

| | Germany | Japan | USA |
|------|---------|-------|-----|
| 1980 | 6.4 | 2.1 | 3.0 |
| 1985 | 6.5 | 2.7 | 3.2 |
| 1990 | 6.6 | 3.0 | 3.1 |
| 1995 | 8.3 | 4.0 | 3.2 |
| 1998 | 8.4 | 5.0 | 3.0 |
| 1999 | | | 2.9 |

Source: OECD

Germany's pension system was designed by Bismarck around 120 years ago. Initially, it was a capitalisation system and the obligatory age of retirement was 70 (later lowered to 65), when life expectancy at birth was below 45. However, the system was transformed into a distribution system when most of the funds were invested in government bonds during the period between the two World Wars. Later, in 1957, the Bundestag legally validated

this transformation, allowing for a short period of transition in order to finish it completely. The 1972 reform converted the system into one of the most generous in the world. The coverage rate is extremely high, giving rise to retirement pensions that easily reach 70% of the previous income of a person who has worked for 45 years and with an average wage⁹. In addition to this, the reform abolished the obligatory age of retirement at 65, allowing people to retire at the age of 60 in certain cases.

Another feature of the system is that it excludes civil servants (who represent around 7% of the labour force), as they have their own pension system, and self-employed workers (who represent around 9% of the labour force)^{10&11}. The system is obligatory for the rest of workers and is mainly financed by means of a "tax" on workers' payslips¹², complemented by indirect tax revenue and direct public contributions from the budget.

The system's benefits are graded according to the worker's average earnings, years of work, adjustment factors depending on the type of pension, the age of retirement and the pension's macroeconomic benchmark.

⁹ In addition, this level has been maintained over time by applying an indexing mechanism based on the pattern of gross wages, which meant that increases in both income tax and social security contributions also increased pensions.

¹⁰ Self-employed workers can join the public pension system or create their own personal pension plans.

¹¹ It is curious that the word used by most analysts to describe Germany's public pension system following the reform in 1972 is "monolith".

¹² Which have displayed an upward trend since the late 1960s.

On the other hand, the pension system for civil servants is substantially more generous than that of workers in the private sector, no matter which aspect is the object of comparison. Moreover, government workers' pensions have to a great extent remained unchanged throughout all the attempts of reform. In fact, civil servant pensions are, *ceteris paribus*, approximately 25% higher than those of workers in the private sector.

2. The Problems of Germany's Retirement Pension System

As is the case in the rest of developed nations, Germany's public pension system is faced with a serious problem of viability. Germany's population has aged considerably as a result of two main aspects: the increase in life expectancy, which was very low in 1970, and a marked drop in the fertility rate, comparable to that of Spain.

Table 2: Life Expectancy at Birth

| | Germany | USA | OECD |
|------|---------|------|------|
| 1960 | 69.6 | 69.9 | 69.0 |
| 1970 | 70.4 | 70.9 | 70.5 |
| 1980 | 72.9 | 73.7 | 72.8 |
| 1990 | 75.2 | 75.3 | 74.9 |
| 1995 | 76.5 | 75.7 | 75.8 |
| 2000 | 78.0 | 76.8 | 77.1 |
| 2003 | 78.4 | 77.2 | |

Source: OECD

Consequently, the ratio of those aged 65 and over in relation to the labour force has begun to rise rapidly. In addition to this, simulations carried out by the OECD forecast this ratio to

continue rising in the future as the population continues to age, although figures do not indicate that the situation in Germany is one of the most serious in Europe. In this sense, it is striking that the labour force participation rate in Germany is below the average for the EU15. Hence, the main problem of the German social security system is its generosity, aggravated by the changes in the population, as is the case in the rest of developed nations.

Table 3: Changes in the Population Aged 65 and over in Relation to Total Population

| | Germany | USA | EU15 | OECD |
|------|---------|------|------|------|
| 1990 | 14.9 | 12.5 | 14.6 | 11.6 |
| 1995 | 15.5 | 12.8 | 15.5 | 12.4 |
| 2000 | 16.4 | 12.6 | 16.3 | 13.1 |
| 2005 | 18.3 | 12.6 | 17.2 | 13.8 |
| 2010 | 19.9 | 13.2 | 18.1 | 14.7 |
| 2015 | 20.4 | 14.7 | 19.4 | 16.2 |
| 2020 | 21.7 | 16.5 | 20.7 | 17.7 |

Source: OECD

Table 4: Changes in the Population Aged 65 and over in Relation to the Labour Force

| | Germany | USA | EU15 | OECD |
|------|---------|------|------|------|
| 1990 | 30.3 | 24.8 | | |
| 1995 | 32.1 | 25.4 | 34.3 | 26.7 |
| 2000 | 33.2 | 24.7 | 35.1 | 27.7 |
| 2005 | 36.7 | 24.7 | 36.4 | 29.0 |
| 2010 | 39.9 | 26.1 | 38.3 | 31.0 |
| 2015 | 41.0 | 29.4 | 41.5 | 34.5 |
| 2020 | 44.5 | 33.8 | 45.1 | 38.3 |

Source: OECD

Some analysts believe the above simulations to be excessively pessimistic, as figures could vary a great deal due to positive migratory balances, particularly in the case of Germany, which has already demonstrated how easily it absorbs labour in the past. Unfortunately, statistics relating to migratory flows are not highly unreliable, although one may attempt to draw conclusions from the changes in the foreign population. The following table shows how migratory flows in Germany have been minimal or even negative since halfway through the 1990s, which is logical considering the fact that the economic environment in the country has not been very appealing, with increasing unemployment figuring prominently. In light of the recent enlargement of the EU incorporating Eastern European nations and the offshore outsourcing trend present in both Germany and Europe, one suspects that the high level of immigration in Germany is a thing of the past (at least in terms of legal or registered immigration, which is what counts in this context)¹³.

Table 5: Foreign Population in Germany (1,000s)

| | Total | Foreign | % | Δ |
|------|-------|---------|------|------|
| 1981 | 61682 | 4721 | 0.08 | |
| 1982 | 61638 | 4672 | 0.08 | -49 |
| 1983 | 61423 | 4574 | 0.07 | -98 |
| 1984 | 61175 | 4405 | 0.07 | -169 |
| 1985 | 61024 | 4482 | 0.07 | 77 |
| 1986 | 61066 | 4662 | 0.08 | 180 |
| 1987 | 61077 | 4286 | 0.07 | -376 |
| 1988 | 61450 | 4623 | 0.08 | 337 |
| 1989 | 62063 | 5007 | 0.08 | 384 |
| 1990 | 63254 | 5582 | 0.09 | 575 |
| 1991 | 79984 | 6067 | 0.08 | 485 |
| 1992 | 80596 | 6670 | 0.08 | 603 |
| 1993 | 81179 | 6977 | 0.09 | 307 |
| 1994 | 81422 | 7118 | 0.09 | 141 |
| 1995 | 81661 | 7343 | 0.09 | 225 |
| 1996 | 81895 | 7492 | 0.09 | 149 |
| 1997 | 82052 | 7419 | 0.09 | -73 |
| 1998 | 82029 | 7308 | 0.09 | -111 |
| 1999 | 82024 | 7336 | 0.09 | 28 |
| 2000 | 82160 | 7268 | 0.09 | -68 |
| 2001 | 82277 | 7318 | 0.09 | 50 |
| 2002 | 82456 | 7348 | 0.09 | 30 |
| 2003 | 82502 | 7342 | 0.09 | -6 |
| 2004 | 82491 | 7288 | 0.09 | -54 |

Source: OECD and DESTATIS

¹³ Although data prior to the 1980s is not available, the significant immigration in that period must have played a crucial role in terms of contributing to the generosity of the system.

Table 6: Unemployment Rate

| | Germany | Japan | USA | OECD |
|------|---------|-------|-----|------|
| 1960 | 0.7 | 1.6 | 5.6 | |
| 1965 | 0.4 | 1.2 | 4.5 | 4.4 |
| 1970 | 0.4 | 1.2 | 5.0 | 3.0 |
| 1975 | 2.3 | 1.9 | 8.5 | 4.8 |
| 1980 | 1.7 | 2.0 | 7.2 | 5.4 |
| 1985 | 6.7 | 2.6 | 7.2 | 7.3 |
| 1990 | 4.5 | 2.1 | 5.6 | 5.2 |
| 1995 | 7.7 | 3.2 | 5.6 | 7.1 |
| 2000 | 7.3 | 4.7 | 4.0 | 5.9 |
| 2005 | 9.6 | 4.4 | 5.1 | 6.7 |

Source: OECD

These problems are best illustrated by the evolution of expenditure on retirement pensions in relation to GDP analysed earlier in this report, together with total public spending on the elderly. Data relating to this aspect is presented below and, together with the above simulations, is the best example of the system's lack of viability.

Table 7: Total Spending on the Elderly
(% of GDP)

| | Germany | Japan | USA |
|------|---------|-------|-----|
| 1980 | 9.1 | 3.0 | 5.0 |
| 1985 | 9.3 | 3.9 | 5.2 |
| 1990 | 9.1 | 4.1 | 5.1 |
| 1995 | 10.8 | 5.3 | 5.3 |
| 1998 | 11.1 | 6.1 | 5.2 |
| 1999 | | | 5.1 |

Source: OECD

3. Previous Reform Attempts and Current Proposals

Problems in the system led to an initial reform in 1992, when the indexation of pensions to gross wages was abolished and pensions were instead indexed to net wages¹⁴. At the same time, the requisites for early retirement were made considerably tougher and workers who did not bring forward their retirement were offered compensation. However, the new conditions suffered marked delays to the point that their first effects were not felt until 1997 and the bill will not be implemented fully until 2017¹⁵.

It was rapidly obvious that this reform bill was insufficient¹⁶, although the change of government in 1998 thwarted an attempt to reform pensions that should have been enacted in 1999. Ironically, the new social-democrat government had to undertake further reform in 2001. The Riester Reform, named after the Minister of Labour responsible, abandoned the distribution system and introduced a mixed pensions system, based on a small, but growing, system of capitalisation. The main aims of the new system were to steadily increase contribution rates (below 20% until 2020 and below 22% until 2030) while maintaining the net coverage rate (above 67%). The system born out of the reform bill will not come fully into play until 2050, but

¹⁴ However, from 1999 onwards, pensions were in practice indexed to the previous year's inflation rate.

¹⁵ In fact, early retirement remains frequent: in 1998 (in West Germany) the average age of retirement stood at 59.7 for men and 60.7 for women.

¹⁶ The system remains highly generous, as demonstrated by the fact that in 1998 the coverage rate for an average wage earner stood at 70%.

its effects will be felt from 2011 onwards.

However, further reform in the future seems unavoidable, particularly in light of the fact that the "normal" legal age of retirement remains at 65, while the median and mode remain at around 60. In August 2003, the Rürup Commission recommended the system be further capitalised and its distributive component reduced, along with raising the normal legal age of retirement. Some additional proposals included gradually raising the normal legal retirement age from 65 to 67 with the horizon of 2035 and introducing pensions indexed to a new factor that constantly takes into account the proportion of contributors and pensioners. All these proposals except the increase in the age of retirement were passed by the German parliament in 2004.

In short, Germany's pension system is characterised by being extremely generous. While the population in surrounding countries is not ageing at an alarming rate, it is enough to evidence the serious problems of viability that the system has. Whether or not the system will survive thanks to the reform in progress, passed in the 1990s, is today a matter up for debate.

Antonio Cutanda

Valencia, September 30, 2005

4.- France

Population and Pensions

1. The French System of Retirement Pensions following the reform in 1983

The general regime of French social security, created at the end of World War II in 1945, covers all income earners in the private sector – that is, around 65% of France’s workers. As is the case in other European economies, the system features an early retirement age and very high coverage rates. These two characteristics led spending on pensions to rise in France to 7.9% of GDP in 1998, with a clearly upward trend and this is the strongest evidence of the pressing need for the system to be reformed.

Table 1: Total Spending on Retirement Pensions (% of GDP)

| | France | Japan | USA |
|------|--------|-------|-----|
| 1980 | 7.6 | 2.1 | 3.0 |
| 1985 | 6.2 | 2.7 | 3.2 |
| 1990 | 6.5 | 3.0 | 3.1 |
| 1995 | 7.7 | 4.0 | 3.2 |
| 1998 | 7.9 | 5.0 | 3.0 |
| 1999 | | | 2.9 |

Source: OECD

The characteristics of the French social security system that analysts normally highlight are that it is not very flexible in terms of choosing when to retire and that it is also highly complex. However, this does not seem to have prevented or discouraged the French from retiring early. In fact, retirement at the age of 60 is relatively widespread in France and the average age of

retirement has dropped clearly since 1974, when contributing to the pension system was made obligatory. As far as the second aspect is concerned, the complexity of the system lies in the numerous regimes that cover the different segments of the population.

This section analyses the general features of France’s social security following the system overhaul in 1983. The most significant changes in the overall scheme since then are also indicated. In the first place, the characteristic that basically defines the system is that the general regime and major supplementary schemes, which are applied to wage earners, are based on the distributive system that is so common in Europe. On the one hand, the general regime provides pensions in accordance with the fraction of a given threshold (called social security limit or ceiling) that a worker’s wage represents. On the other hand, the supplementary regimes are organised by means of a socio-professional base and are almost entirely contributive¹⁷.

However, the complexity of the system is mainly caused by the large number of exceptions. These basically stem from the scheme initially being voluntary, which led to many people choosing not to participate, in some cases due to already having more extensive coverage than that offered by the new system and in others because

¹⁷ There are some 180 different schemes, developed since the end of the 1940s. They are grouped into two main sections: General Association of Retirement Institutions for Executives (AGIRC) and the Association for Employees’Supplementary Schemes (ARRCO). They are applied to executives and other workers and participation is obligatory since 1972. At the end of the 1990s, these bodies provided 40% of all retirement pensions for workers in the private sector.

workers did not want such extensive coverage. So, today there are some 120 alternative pension schemes to the general regime, which are applied to independent workers and have specific rules. One of these rules refers to civil servants, whose pensions are paid directly via the state budget, as a pension system as such does not exist for this group of workers.

The *normal* legal age of retirement in France is at the age of 65, although it is possible to retire earlier (at the age of 60) since the reform in 1983 if certain requisites are met¹⁸. If these requisites are not complied with, the pension is reduced.

In the general regime, the pension is calculated as the product of the proportion of wages over the *social security threshold*, multiplied by the ratio resulting from the number of years the pensioner has contributed over 37.5, which in turn is multiplied by the average wage during the ten best years of the pensioner's career.

As far as funding is concerned, the system works like a tax levied on wages and, in some cases, also on the pensions themselves.

2. The Problems of the French Retirement Pension System

The population changes in developed nations since the 1970s have left distributive pension systems in crisis, as they can only work well while the number of pensioners remains low with respect to contributors. Hence, describing the problems of the system by means of analysing the behaviour of demographic variables is quite

common: increases in life expectancy at birth and decreases in the birth rate and, in some cases, in immigration rates, which results in the ageing of the population, which is the origin of the problem.

The following table illustrates the increase in life expectancy in France, which is similar to the situation in other developed economies over the same period:

Table 2: Life Expectancy at Birth

| | France | USA | OECD |
|------|--------|------|------|
| 1960 | 70.3 | 69.9 | 69.0 |
| 1970 | 72.2 | 70.9 | 70.5 |
| 1980 | 74.3 | 73.7 | 72.8 |
| 1990 | 76.9 | 75.3 | 74.9 |
| 1995 | 77.9 | 75.7 | 75.8 |
| 2000 | 79.0 | 76.8 | 77.1 |
| 2003 | 79.4 | 77.2 | |

Source: OECD

On the other hand, despite the fact that birth rates are not available, the ageing of the French population can be appreciated clearly in the following simulations made by the OECD:

Also note that the ageing process in France is particularly pronounced in relation to other European nations, with the population aged 65+ forecast to exceed 50% of the labour force as early as 2020.

¹⁸ Until the reform in 2003, a worker had to have contributed to the system for at least 37.5 years.

Table 3: Evolution of the Population Aged 65+ in Relation to Total Population

| | France | USA | EU15 | OECD |
|------|--------|------|------|------|
| 1990 | 14.0 | 12.5 | 14.6 | 11.6 |
| 1995 | 15.2 | 12.8 | 15.5 | 12.4 |
| 2000 | 16.1 | 12.6 | 16.3 | 13.1 |
| 2005 | 16.5 | 12.6 | 17.2 | 13.8 |
| 2010 | 16.9 | 13.2 | 18.1 | 14.7 |
| 2015 | 18.7 | 14.7 | 19.4 | 16.2 |
| 2020 | 20.6 | 16.5 | 20.7 | 17.7 |

Source: OECD

Table 4: Evolution of the Population Aged 65+ in Relation to the Labour Force

| | France | USA | EU15 | OECD |
|------|--------|------|------|------|
| 1990 | 32.4 | 24.8 | | |
| 1995 | 35.0 | 25.4 | 34.3 | 26.7 |
| 2000 | 36.6 | 24.7 | 35.1 | 27.7 |
| 2005 | 37.6 | 24.7 | 36.4 | 29.0 |
| 2010 | 39.2 | 26.1 | 38.3 | 31.0 |
| 2015 | 44.5 | 29.4 | 41.5 | 34.5 |
| 2020 | 50.5 | 33.8 | 45.1 | 38.3 |

Source: OECD

Also note that the ageing process in France is particularly pronounced in relation to other European nations, with the population aged 65+ forecast to exceed 50% of the labour force as early as 2020.

As for the rest, an exogenous solution such as increasing immigrant wages is

not easy to believe. Above all else, as is the case in Germany, the socioeconomic situation (crisis and increasing unemployment) and the political scenario (opening up towards the East and offshore outsourcing) seem to be behind the fact that both countries no longer receive masses of immigrants as they used to in the past. In the case of France, this is clearly illustrated by the fact that the percentage of foreigners has dropped uninterruptedly since 1982 despite growth in the overall population slowing down throughout this period. However, despite receiving large migration influxes, France was never in the same league as Germany in this aspect. In fact, the foreign population as a percentage of the total in France was 40% lower than that observed in Germany in 1999.

Table 5: Foreign Population in France (1,000s)

| | Total | Foreign % |
|------|--------|-----------|
| 1971 | 38,798 | 3.9 |
| 1976 | 40,228 | 6.0 |
| 1981 | 41,228 | 6.6 |
| 1986 | 41,183 | 5.3 |
| 1991 | 39,848 | 4.4 |
| 1996 | 42,781 | 4.1 |
| 2001 | 46,459 | 4.7 |
| 2006 | 49,655 | 5.3 |
| 2011 | 52,599 | 6.5 |
| 2016 | 54,296 | 6.8 |
| 2021 | 56,652 | 6.3 |
| 2026 | 58,521 | 5.6 |

Source: INSEE

Table 6: Unemployment Rate

| | France | Germany | Japan | USA | OECD |
|------|--------|---------|-------|-----|------|
| 1960 | 1.4 | 0.7 | 1.6 | 5.6 | |
| 1965 | 1.6 | 0.4 | 1.2 | 4.5 | 4.4 |
| 1970 | 2.6 | 0.4 | 1.2 | 5.0 | 3.0 |
| 1975 | 4.2 | 2.3 | 1.9 | 8.5 | 4.8 |
| 1980 | 6.5 | 1.7 | 2.0 | 7.2 | 5.4 |
| 1985 | 10.3 | 6.7 | 2.6 | 7.2 | 7.3 |
| 1990 | 8.9 | 4.5 | 2.1 | 5.6 | 5.2 |
| 1995 | 11.5 | 7.7 | 3.2 | 5.6 | 7.1 |
| 2000 | 9.4 | 7.3 | 4.7 | 4.0 | 5.9 |
| 2005 | 10.0 | 9.6 | 4.4 | 5.1 | 6.7 |

Source: OECD

As is the case with Germany, the most graphic illustration of the problems these demographic changes generate in the system is total spending on the elderly, which in France rose to 10.7%, more than double the figure recorded by the United States.

Table 7. Total Spending on the Elderly (% of GDP)

| | France | Japan | USA |
|------|--------|-------|-----|
| 1980 | 7.7 | 3.0 | 5.0 |
| 1985 | 8.8 | 3.9 | 5.2 |
| 1990 | 9.2 | 4.1 | 5.1 |
| 1995 | 10.6 | 5.3 | 5.3 |
| 1998 | 10.7 | 6.1 | 5.2 |
| 1999 | | | 5.1 |

Source: OECD

3. Previous Attempts at Reform and Current Proposals

The problems with the system began to become obvious throughout the 1980s resulting in an initial reform carried out in 1992. The main features of the reform included a change in how the pension scheme was indexed (using consumer prices instead of wages¹⁹); the possibility of retiring at the age of 60, but with tougher access conditions²⁰; and the formula used to calculate pensions was also made tougher²¹. All these changes were applied to the general regime, but not to special regimes. An attempt to extend these measures to the special regimes failed in 1995 due to public protest. As far as the supplementary schemes are concerned, changes tending towards reducing future benefits were incorporated throughout the 1990s, while maintaining contributions.

In any case, after some time the 1992 reform was seen to be insufficient, leading to further reform in 2003. From this point onwards, early retirement before the age of 60 is allowed, but in order to do so, the pensioner must have worked (and contributed) for 42 years²². In addition to this, the minimum period of time worked to obtain a pension is progressively

¹⁹ Although the reform made this move official, the use of price indexing was widespread during the previous economic crisis.

²⁰ In order to obtain a full pension, the minimum number of years worked was progressively raised from 37.5 to 40 in 2003.

²¹ At the end of the process, a pension in 2008 will be calculated using the average wage of a pensioner's best 25 years of work instead of the best ten years, as was the case before the reform.

²² In this respect, a worker is also allowed to buy years of contribution.

extended at a rate of a quarter per year up to 41 years of contributions in 2012 and 42 in 2020. In exchange, the pension is guaranteed to be no less than 85% of the minimum wage, providing the pensioner has worked throughout the entire period of contribution that is demanded. In addition to this, the conditions for an early retirement have been made tougher by establishing a penalty to be paid by the business which will go to a fund that will finance social security.

Furthermore, the procedure for calculating the pension will change. At present, it is the result of multiplying a worker's average annual wage by the number of quarters worked and by a coefficient equal to 50% when the worker is 65 at retirement, but which is modified in accordance with the conditions to gain access to the pension²³.

It must be pointed out that creating personal savings plans for retirement is encouraged by means of an income tax deduction. In this sense, the French government has shown other signs of interest in boosting private saving for retirement. The Fabius Law of 2001, for example, which extends employee saving plans to a large number of businesses and professions and the Fillon Law of 2003 created personal savings plans for retirement. Nevertheless, the prior existence of supplementary and alternative retirement schemes together with the fact that a considerable proportion of the working population opted not to participate in the system from the

beginning, has seen the French become much more accustomed to private assurance plans for retirement than for example the Spanish when the social security problem was initially aired, resulting in less insistence in this ambit.

In short, the French social security system faces serious problems to attend to the increase in the number pensioners in relation to workers that has been caused by the ageing of the population. As is the case with the rest of European nations, nobody knows whether the reforms and measures that have been undertaken will allow the problem to be confronted with some guarantee of success or whether the screw will have to be tightened further.

Antonio Cutanda

Valencia, September 30, 2005

²³ In specific terms, the figure is reduced by 5% for every year before the age of 65 when the person retires. Moreover, the maximum number of quarters considered will rise from 150 to 160 from then until 2008.

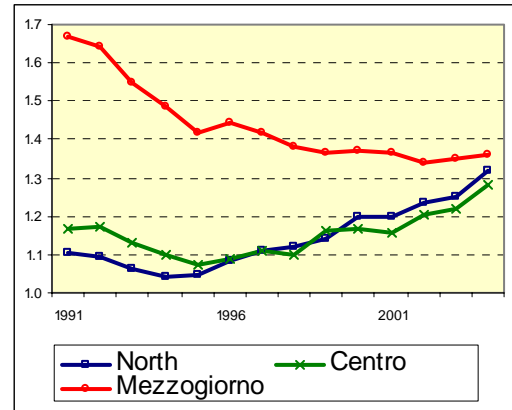
5.- Italy

South No Longer Offsets North

Industrialisation in the north of Italy, in light of the region's sluggish population growth, was made possible by migratory flows of workers from the centre of the country and from the Mezzogiorno. In exchange for the labour, southern regions received the best part of public benefits with capital from the north. The high standard of living in the north attracted workers from the south, who are poorer and come from regions where the birth rate is higher.

This demographic model worked well until the birth rate in the south began to drop markedly. In fact, fertility rates²⁴ by region are converging rapidly (Figure 1). As a result, the traditional population surplus in the south will not be able to meet the labour demand in the north. As can be appreciated in the graph, the fertility rate gap between the north and the south has narrowed from seven tenths to less than one in only 13 years and experts forecast this trend to continue in forthcoming years. While it is true that fertility rates in the centre and north of Italy are growing steadily, experts are of the opinion that it is a "circumstantial accident" and forecast the national fertility rate to decrease in the long run.

Figure 1: Fertility Rate by Region (1991-2004)



Source: ISTAT

In addition to this, increasingly high life expectancy and low birth and mortality rates²⁵ in Italy will result in the population of Italy diminishing quickly²⁶, in the absence of immigration. Apparently, this process may intensify in the next few years. However, the real problem in terms of demography does not lie in the decrease in the population, but in the ageing of the population²⁷ and the sustainability of the social protection system.

Suppose Italy conserves its average fertility rate of 1.3 children per woman in 2004. This would lead the population to drop from 60 to 40 million in 50 years and would also mean the oldest country in Europe would grow even older: in 2040, more than 30% of the population would be over the age of 65, with the subsequent problems this creates when it comes to financing pensions. Figures 2a and 2b present

²⁴ The fertility rate measures the number of births per woman.

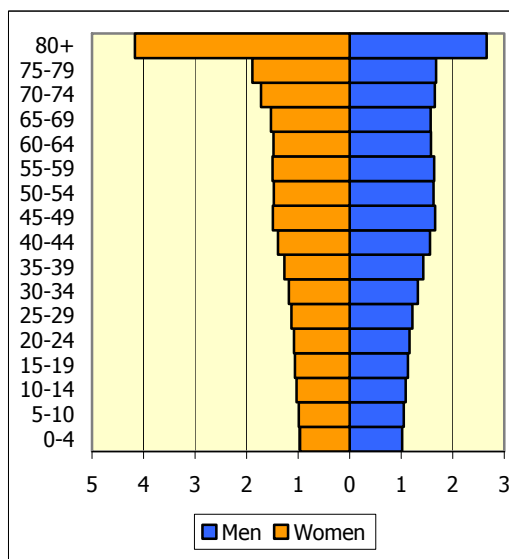
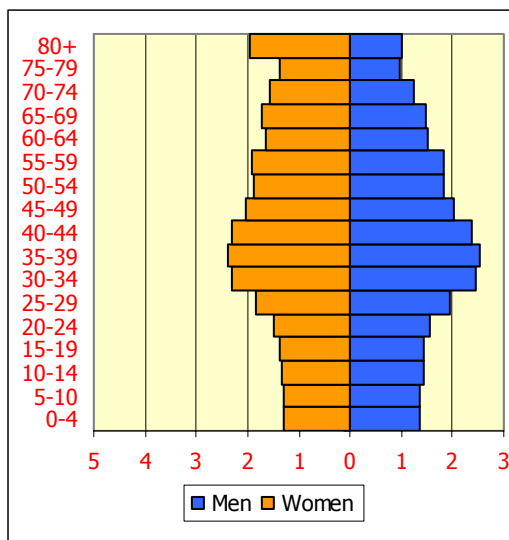
²⁵ Although the mortality rate in 2004 stood at 9.6/1000, it is forecast to drop considerable over the next few years. The birth rate stands at 9.7/1000 (ISTAT).

²⁶ The natural growth rate of the population was only 0.27/1000 in 2004 (ISTAT).

²⁷ Life expectancy in Italy was 80.1 years in 2003 (United Nations).

Italy's population pyramids in 2005 and 2050, according to forecasts from the US Census Bureau. We can see how the bulk of the population will climb from the 25-50 year age group in 2005 to the oldest age bracket in 2050 (over 70-year-olds).

Figures 2a & 2b: Italian Population Pyramids (in millions) in 2005 and 2050



Source: US Census Bureau, International Database

Immigration and Encouraging an Increased Birth Rate

The unemployment rate in the most developed regions in the north of Italy is below 5%. However, the unemployment rate in southern regions is at least three times higher. While some decades ago, the system itself led workers to migrate from the south to the north, today their lack of mobility can be clearly seen, as a result of the huge influx of foreign immigrants²⁸ and their legalisation and economic integration, which is good news for a country that lacks a policy that adapts to mass immigration (Italy has always been a country of emigrants). Notwithstanding, effort towards integrating immigrants socially remains desirable.

The shortfall of births is a significant threat in the long term. For reasons that we will not go into in this report, relying on immigration being enough to solve the problem is in our opinion too optimistic. Some of these reasons include xenophobia and/or Italianness, a long term inclination to move to Italy instead of other destinations, a possible lack of work, which would dampen immigrant aspirations when it comes to choosing a destination and changes in immigration laws. And this is despite the fact that the ratio between the birth rate and external migration rate stood at 1.5 in 2005. The overall population grew by less than 1% between 2003 and 2004 and 97% of that increase was due to the arrival of more than half a million immigrants. On December 31, 2004, Italy had 58,462,375 inhabitants. But how long can the country fall back on immigration for?

²⁸ The internal migration rate is only 0.4/1000, while the external rate now stands at 6.5/1000 (ISTAT).

Financial incentives that are beginning to be applied are necessary but insufficient. A policy to encourage an increasing birth rate is implanted by means of a cultural revolution, completely transforming the situation of women in society, which in the south is very traditional. Two factors must be made compatible in order to achieve this. On the one hand, women's massive incorporation into the labour market and their partial disassociation from educational and household chores and, on the other hand, this process must be carried out in such a way that it does not cause a decrease in the birth rate. In order to achieve this, financial incentives must be implemented and kindergartens, colonies and structures in general must be created so as to enable women to work at the same time as being mothers.

On the family front, countries should avoid what appears to be necessary in some societies such as Spain or Italy's: the prior step of marriage before having children, as is already the case in the rest of Europe. In addition to this, children should leave home much earlier, which means providing cheap housing and financial aid for people with a low level of purchasing power.

Sustainability of the Pension System: Reform and Recommendations

The Italian economy is faced with pension costs that are among the highest of all countries that belong to the Organisation for Economic Co-operation and Development (OECD). These costs currently represent around 14% of Italy's GDP. Moreover, the panorama is made gloomier due to population trends that are not precisely encouraging: a weak birth rate

(9.7/1000), greater life expectancy, low activity rate... According to the OECD, economic growth would have to exceed 2% in order to stabilise current pension expenses. However, achieving such a growth figure seems a utopia today.

Despite the reform carried out at the beginning of the 90s, the pension system remains unsustainable in the medium term. Italy's pension system is an obligatory scheme managed by the State through the National Institute of Social Benefits (INPS) and the National Institute of Pension Funds for Civil Servants (INPDAP), for both the private and public sectors respectively. There are also supplementary schemes, but they cover little more than 8% of wage earners, which are mainly located in banking, insurance and the media. In order to preserve the viability of the pensions system, various reforms were undertaken throughout the 90s:

- The Amato Reform (1992)

The main objective of this reform is to stabilize the ratio of government spending on pensions over GDP. The minimum age of retirement is set at 65 for men and 60 for women in order to extend people's working life. The number of years contributing required to qualify for early retirement was also raised from 15 to 20. Furthermore, pension calculations are based on prices (instead of wages) and depend on wages throughout the pensioner's entire working life (prior to the reform, only the last ten years of work were taken into account). The problem is that the reform only affects the generations that began working in 1992, so its effects will not be felt until another 40 years have passed.

- *The Ciampi Reform (1993)*

The main steps taken were to eliminate the worst years of wages from the calculation of pensions and the creation of INPDAP.

- *The Berlusconi Reform (1994)*

Special redundancy payments are created for government workers and old age pensions are temporarily blocked.

- *The Dini Reform (1995)*

The aim of this reform was to stabilize the rate of contributors in light of the decrease in the birth rate and the increase in life expectancy. Pensions are calculated on a contribution basis. The minimum age of retirement rises from 57 to 60 and 65 for women and men respectively. Furthermore, retirement legislation is standardized and homogenized for private and public sector employees: the INPS takes over the management of public sector employee pensions (this measure would later be annulled) and early retirement is sanctioned. This reform bill also attempted to extend supplementary schemes, but with little success. As occurred with the Amato reform, the only workers affected are those who began working in 1996 or later. As a result, the application of this reform will not really take effect before 2035.

- *The Prodi Reform (1997)*

The increase in pensions is temporarily frozen, criteria for separating prevision and aid is reviewed and the contribution of self employed workers is raised. Despite the widespread support of the Prodi Government, some of these measures were removed in 2001.

However, the steps taken since 1992 are half insufficient and the other half inefficient, due to some governments' eagerness to win elections. In light of this panorama, a thorough transformation of the current pension system appears inevitable. In order to achieve this, Berlusconi proposes to save 12 billion euros a year from 2012 onwards. The number of years a worker has to contribute to the pension system would increase from 35 to 40 years and wage earners over the age of 65 who delay their retirement for at least two years would see their wages rise by 32.7% (tax benefits aside).

In view of the fact that the reform carried out by the Berlusconi government will not obtain results until 2008 and that the reform itself has since been toned down (initially, early retirement was to be sanctioned), the stiff opposition of trade unions is a real threat to a reform bill - and it does not have to be the reform proposed by Berlusconi - which does nevertheless appear to be inevitable and necessary.

According to the OECD, steps must be taken to help develop labour activity among the elderly (Table 1), such as eliminating the obstacles on the demand side of the labour market, improving older workers' employability and mobilize older jobseekers by means of more effective job search mechanisms.

Italy is faced with a serious problem, aggravated by the fact that the country was already one of the oldest in terms of population in the OECD with population and cultural trends that do not exactly inspire optimism. It is a difficult situation in which economic stagnation, the ageing of the population and the difficulties faced by immigrants to enter the country join

existing cultural obstacles. The social protection system must, it seems, undergo profound reform and measures aimed at female employment, old age workers and the social-labour market integration of immigrants must be applied.

Andreu Iranzo

Valencia, September 29 2005

Table 1: OECD Recommendations to Boost the Number of Old-Age Workers, 2005

| | |
|---|--|
| Eliminate obstacles in labour demand | <ul style="list-style-type: none"> ◦ Put into practice the European directive concerning the prohibition of discriminating workers because of their age. ◦ Improve working conditions, by taking into account the needs of older workers. ◦ Promote activities that develop older workers' possibilities. ◦ Revise wage practices based on age and length of service. ◦ Revise labour protection legislation (for example by speeding up the process of voluntary cancelling contracts) ◦ Reduce labour precariousness as much as possible ◦ Develop progressive retirement options ◦ Make things easier for the semi retired who continue carrying out a registered job |
| Improve old-age workers' "employability" | <ul style="list-style-type: none"> ◦ Promote professional and vocational training throughout a person's working life. ◦ Create a system that guarantees the experience obtained will be recognised. ◦ Strengthen the training options of elderly workers. |
| Mobilise older jobseekers by means of more effective job finding services | <ul style="list-style-type: none"> ◦ Reform the unemployment benefit system and guarantee sufficient and sustainable financing. ◦ Revise the role of the Public Employment Service, which is currently highly inefficient. ◦ Implant benefits for the unemployed or inactive where the amount granted depends on doing a job. ◦ Control the working of the system and make sure the steps taken are actually applied. |

Source:OECD

6.- United Kingdom

The first section of this monographic article analyses the main demographic features of the United Kingdom in order to discern whether there is an ageing problem that could endanger the viability of the pension system. The second part of this section discusses the nature and problems of the pension system in the United Kingdom. In the first place, we examine the basics of the British system and the existing combination of its three main pillars: the public system, the corporate system and private pension plans. Finally, we present proposals for reform/debate concerning the sustainability of the British pension system.

Demography

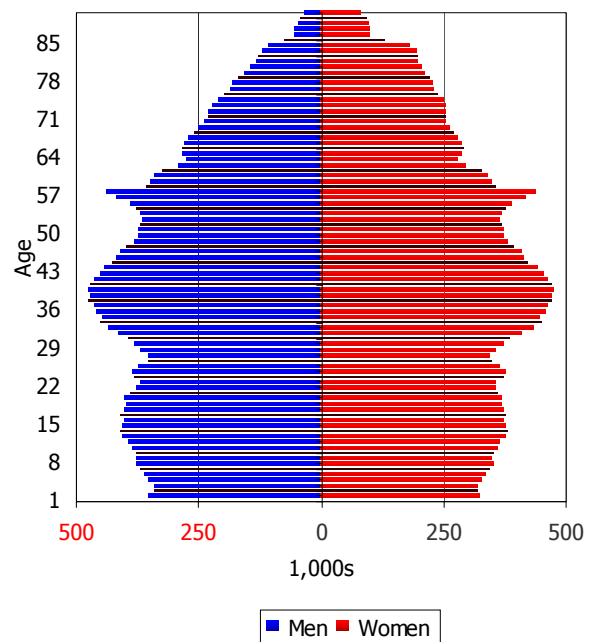
The British population increased by 7% between 1971 and 2004, rising from 55.9 million inhabitants to almost 60 million in 2005: 83.7% lives in England, 4.9% in Wales, 8.5% in Scotland and 2.9% in Northern Ireland. Population growth has picked up since 1991, to a great extent due to immigration.

As the population has grown in size it has also aged progressively. The average age was 38.6 in 2004 compared to 34.1 in 1971. The proportion of the population 65 or over has increased over the past 30 years, while the proportion of inhabitants 16 or younger has diminished. A steady fall in the birth rate together with a decrease in the mortality rate (particularly among the elderly) are responsible for the ageing of the population. The percentage of the population that is 16 years old or younger dropped from 25% in 1971 to 19% in 2004. The percentage of the population 65 or over rose from 13% to 16% over the same period. At the same

time, there has been an increase in adult life expectancy. Among the 65+ age group, the proportion of persons aged 85 or over has risen from 7% in 1971 to 12% in 2004.

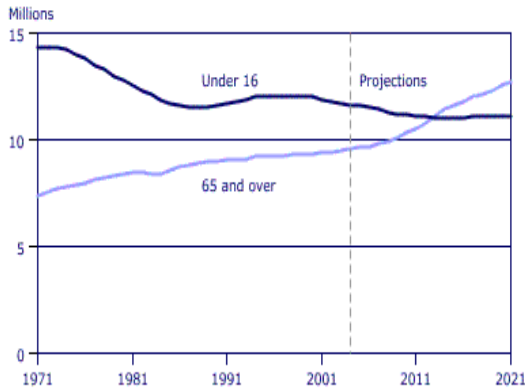
The population will continue to age in the first half of the 21st century, as the number of people aged 65 and over will continue to increase as those born after World War II and in the decade of the "baby boom" reach the age of retirement. At the same time, the proportion of the population of a working age will shrink, due to the fact that less babies have been born in relative terms since halfway through the 1970s.

Figure 1: Age Structure of the British Population Halfway through 2004



Source: ONS

Figure 2: Age Structure Patter by Age from 1971 to 2021

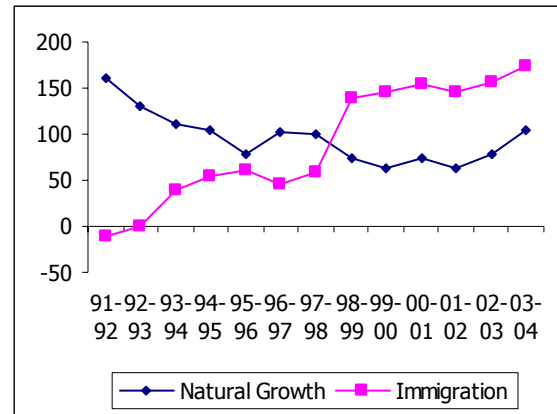


Source: ONS

The birth rate in the United Kingdom in 2004 stood at 1.77 babies per woman, slightly above the all-time low in 2001 (1.63) and far from the record figure in 1964 (2.95). Apart from the low birth rate over the past 30 years, the average of a woman who has her first child has risen to 27.1, compared to 23.7 in 1971. In addition to this, the proportion of women who do not have children has also increased: in 2004 one out of every five women did not have children, compared to one out of 10 women in 1940.

There have been more births than deaths in the United Kingdom every year since 1901, with the exception of 1963, hence the population has grown naturally. Natural causes were the main driving force behind growth in the overall population up to halfway through the 1990s. However, since the second half of the 1990s, although natural growth has remained unchanged, migration flows to the UK have become more important in relative terms as a determinant of Britain's population growth. Immigration accounted for more than 65% of the growth in the British population between July 2003 and July 2004.

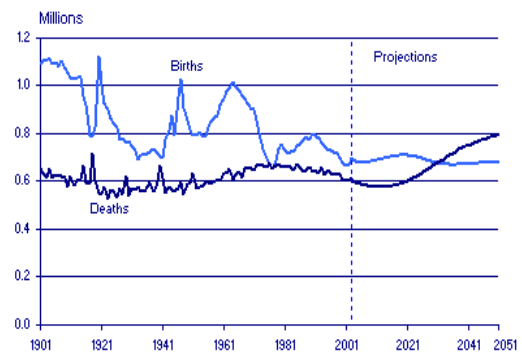
Figure 3: UK Population Change Components (1,000s of inhabitants)



Source: ONS

There have been more births than deaths throughout the 20th century and the situation is expected to continue until 2031. However, a decrease in the population is not expected until after the second half of the 21st century, due to the increase in immigration.

Figure 4: Births and Deaths in the United Kingdom between 1901 and 2051



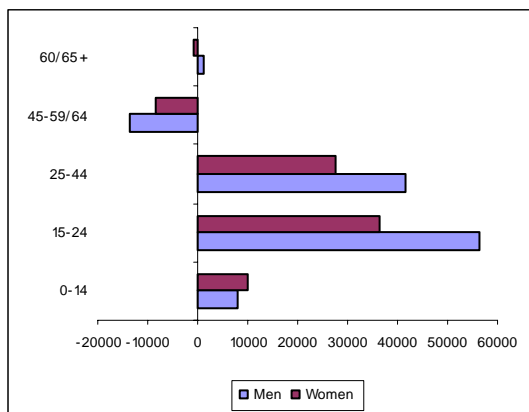
Source: ONS

In 2002, 125,000 people emigrated from the United Kingdom to the European Union, compared to 89,000 who moved in the opposite direction, leaving a net balance of 36,000 people

who have moved to the EU. In contrast, there is a net influx of 69,000 people from Commonwealth countries and a net influx of 120,000 people from other countries that are not members of the EU or the Commonwealth.

Almost half of the migrating population is aged between 25 and 44. It is worth emphasizing the fact that the net inflow of immigrants of a working age rose to 69,000 in 2002. The net outflow of emigrants in the 65+ age group increased to 22,000 people. Finally, there is a greater proportion of immigrants than migrants in the 15-24 year age group, which amounts to 93,000. By gender, men account for more than 55% of total migratory flows to and from the United Kingdom.

Figure 5: Net Migratory Flows to the United Kingdom by Age and Gender in 2002 (persons)



Source: ONS

The current pension system

The World Bank identifies three basic pillars in a pension system: 1) a public system. 2) a corporate system. 3) Private personal pension plans. The United Kingdom fits this classification reasonably well.

Britain's public pension system has two main components: a basic fixed pension and an additional pension that depends on earnings, which is financed through the State Earnings-Related Pension Scheme (SERPS). However, there is another element that is also important: the non-contributory social security systems of retirement aid. The Minimum Income Guarantee (pensioner income support) is the most important of this type of non-contributory benefits.

The cost of non-contributory benefits is financed by taxes, while the contributory system is financed by businesses and their employees. Self-employed workers pay a fixed contribution plus a percentage of their income when a certain level is exceeded.

The private-sector pension system completes Britain's public pension system. In 1999, self-managed retirement funds handled assets to the value of the equivalent of 85% of GDP, while assets managed by insurance companies through their life insurance and pension plans amounted to more than 100% of GDP.

No matter what form a private pension plan takes, it is eligible for a certain amount of tax exemption, which has bolstered the sustained growth of retirement funds. Private pensions contribute to the second pillar of the pension benefit system by means of the contracting-out system.

The National Insurance Fund pays a full basic pension when men have completed 44 years of work and women 39 years. If a person has worked less years, he or she receives only part of the full pension, but a minimum of 11 years of work is

required. The basic pension is determined by parliament every year and its current pattern is in line with the outlook for inflation. In 2003/2004 it amounted to £72.30 per week. Reform of the basic pension will affect women if the legal minimum age is raised from 60 to 65 years.

The SERPS was created in 1978 to provide the pension system with a complementary service based on employees' earnings. The amount received through SERPS depends entirely on a person's wage earnings throughout his/her working life and the final pension is calculated as 20% of the average wage over that period of time. The SERPS has undergone and is currently undergoing reform in order to make it less generous. The system was initially much more generous (25% of the average wages received during the best 20 years of a person's working life) but this clause was eliminated in the reform which began in 2002. The SERPS pension received by widows or widowers (as an inheritance) will also be halved over the next few years. To date, one year's work is enough to be eligible for a SERPS pension. The possibility of establishing a set number of minimum years of work is being discussed.

Many businesses have had the SERPS contracted out through private pension plans. More than 60% of employer contributions were made this way in 2002. There are two ways of contracting out. Firstly, one may participate in a "contracted-out occupational pension scheme". Businesses benefit by paying a lower rate of social contribution per worker. This type of participation accounts for 70% of all contracted-out pension schemes. The second way of

contracting out is for the employee to take out a personal pension plan. In this case, both the business and the worker pay the full contribution to social security, but the Government passes on a part of that contribution to the employee's personal pension scheme.

In April 2002, the SERPS was replaced by the State Second Pension Scheme (S2P), in order to improve pensions for average and low income earners, as well as for those who, due family responsibilities, illness or accident, had not been able to work.

Table 1: British Pension Scheme

| First Pillar | Second Pillar | Third Pillar |
|---|---|---|
| Public Pension System | Private Pension System through businesses | Personal Pension Plan |
| (Compulsory fixed pension) | (Compulsory pension linked to earnings) | (Voluntary contributions) |
| Basic pension Minimum Income Guarantee (MIG) | Public pension system linked to earnings (SERPS and S2S) Private corporate pension schemes (Contracted-out pension schemes) [amount determined by defined contributions] | Voluntary contributions to a pension scheme. Voluntary saving for pensions is tax-free. |

Source: own elaboration

The Minimum Income Guarantee (MIG) came into force in 1999 and was designed to help the poorest pensioners. A minimum level of income is guaranteed, which depends on an elderly person's earnings and wealth.

The MIG is a larger pension than the basic pension. In 2003/4 a single able-bodied person aged 80 received £91 per week, while a couple aged 80 received £141.

Apart from the MIG, pensioners may also receive non-contributory aid taking the form of house payments or extra financing for heating in winter, television licence or council tax.

The third pillar of Britain's pension system is made up of voluntary contributions to personal pension schemes. Although personal contributions have increased in recent years, most private pension plans in the United Kingdom are linked to the person's job. In 2003 some 10.3 million employees (almost 50% of the total) exercised their right to a pension through this type of corporate plan. Most of these corporate plans are linked to employee earnings (defined contributions), although there has been a sharp increase in the number of schemes that involve a lump sum at the end of a person's working life (defined benefits).

Problems with the British Pension System according to the Pensions Commission (September 2004)

The First Report of the Pensions Commission was released in September 2004. The information therein was divided into two sections. The first analysed the characteristics of the British Pension System in order to identify its strong and weak points. The second part of the report listed the reforms that should be undertaken in order to guarantee the long term sustainability of the pension system.

The key aspects of the Report on pensions can be summarised in five points:

1. Ageing populations makes pension system reform necessary

- Life expectancy of a person aged 65 has risen from 12 to 19 years since 1950. This figure is forecast to reach 21.7 in 2050.
- The birth rate stands at 1.7 children per woman today and is expected to reach 1.75 in 2023.
- The age dependency ratio (the number of people aged 65 and over divided by the number of people aged between 20 and 64) is estimated to rise from 27% today to 48% in 2050.
- The total dependency ratio (population under the age of 20 or over the age of 64 divided by the population aged between 20 and 64) has dropped steadily to its lowest level in 40 years.
- Government spending on pensions in 2002 amounted to 6.1% of GDP, of which 4.8% was channelled to spending on retirement pensions, 0.6% to disability benefits for pensioners and a further 0.6% to housing, heating or council tax benefits.

2. One of the keys is to raise the age of retirement

- The average age of retirement for a man dropped from 67.2 in 1950 to 63.1 in 1995. The age at which an active person aged 50 stops working is 63.8 for men and 61.6 for women.
- The employment rate for men aged between 50 and 64 rose from 65% in 1993 to 72% in 2004. The employment rate for women aged between 50 and

59 increased from 59% in 1993 to 67% in 2004.

- Only 53% of women aged 59 are in employment and only 42% of men are employed at the age of 64. Some 21% of men aged 66 still work.
- Life expectancy of a man aged 65 who is a high income earner is 17 years, whereas this figure drops to 13 years if the person is a lower income earner.

3. Concern over inequalities between groups in Britain's pension system.

- In 2002-03, 11.3 million workers did not have a private pension plan of which 1.7 million were self-employed.
- In 2003 only 29% of people employed by businesses with staff totalling between 1 and 49 members participated in a pension scheme promoted by the company.
- In the manufacturing sector, some 59% of employees participated in a pension scheme of one type or another in 2003, compared to 41% of workers in distribution and sales.
- 72% of workers who earned between £25,000 and £39,999 in 2003 had a pension plan promoted by their company, compared to only 43% of those who earned between £9,500 and £17,499.

- In 1995, some 5.2 million people were actively involved in company pension schemes based on defined benefits. In 2000 the number had dropped to 4.6 million.

4. Pessimistic outlook for the future should this trend continues

- The percentage of GDP transferred to pensioners has increased significantly since 1970. In 1979 it was 8.1% and in 2003 it stood at 9.5%.
- If the age for beginning to save is 35, the Pensions Commission estimates that close to 9.6 million people are not saving enough for their retirement: 54% are not contributing to any private pension scheme and the remaining 46% contribute, but not enough.
- If the age for beginning to save is 25, the Pensions Commission estimates that close to 12.1 million people are not saving enough for their retirement: 60% are not contributing to any pension scheme.
- 66% (0.6 million) of male workers aged between 36 and 45 with earnings ranking from £17,500 to £24,999 are not saving enough to guarantee an equivalent replacement rate (a pension that is equivalent to the person's average wage before retirement).

5. Real estate wealth as insurance when faced with an insufficient pension is not a sustainable argument.

- Most of those whose pensions are insufficient also lack significant real estate wealth.

The future of the British Pension System

The social security system based on contributions according to wage earnings was established in 1970 in the United Kingdom to complement the private pension system. The United Kingdom's public pension system is one of the least generous in the world. The basic pension of a retired worker amounts to only 27% of the person's average earnings throughout his/her working life, compared to 40% in the United States. Spending on social security and other related programmes is expected to increase from 6.1% of GDP in 2000 to 6.9% in 2050. This figure is well below that forecast for the EU15 as a whole, where the figure is estimated to increase from 10.4% to 13.3%. Therefore, the United Kingdom has a much smaller financial burden for future pensions in comparison to continental Europe. However, the main problem in the UK is the increase in the future number of pensioners who are low income earners.

In the United Kingdom, the lack of generosity on behalf of the public system has been historically offset by a generous private system, which acted as a complement. A British worker current receives, on average, 60% of his/her pension from the public system and 40% from the private system. Changes made in recent years are designed to invert these percentages so that the government covers 40% of the

pension and private financing the remaining 60%. The problem is that while the public pension system has already started being less generous, private sources of financing are finding it impossible to cover the gap left by social security. In fact, private savings for pensions have not stopped declining. The reason for this is a widespread tendency on behalf of businesses to end the defined contribution plans. The contribution plans, which covered between 60% and 70% of staff have not been available to newcomers in the last 10 years, who have been offered defined benefit plans instead. The change in policy with respect to how a pension is accessed is the main cause for the fall in private savings channelled to pensions.

The British pension system has two strong points: on the one hand, the system works particularly well in terms of economic sustainability and stability, with tax transfers projected to remain low and sustainable until after 2050, thereby avoiding significant distortions in the economy that could stem from sharp increases in taxes or private savings in order to finance pensions. On the other hand, the British system has managed to reduce poverty among pensioners by guaranteeing a decent pension for all its citizens.

However, the system also has two weak points, as indicated by the Pensions Commission in its first report. In the first place, the UK has one of the most complex pension systems in the world, due to its contracted-out system and means-tested benefits. Generally speaking, a large number of people are not aware of how the pension system works. Secondly, although the British pension system has always aimed to involve the general public in the design

of their on retirement plan, this effort has not been enough. On the one hand, financial education has been unable to provide citizens with adequate knowledge to be able to design their own pension scheme. On the other hand, the saving mentality of certain groups of income earners, particularly lower income earners, has not helped saving through pension schemes.

The second report of the Pensions Commission will be released in November 2005. Meanwhile, using the recommendations for the future of the pension system in the first report as a basis, experts have mainly debated how to undertake the reform deemed necessary to guarantee the sustainability of the British pension system in the 21st century:

- Should a drop in pensioner income to below the national average be accepted?
- Should taxes and social security contributions be increased?
- Should people (be obliged to) increase private savings to pensions?
- Should the age for retirement be increased?
- Should the system be simplified to make it easier for citizens to understand?

Francisco Requena Silvente
Valencia, September 27, 2005

7.- Japan

Population

Japan has 127 million inhabitants and the population grew at a rate of 0.14% over the period from 2000 to 2005. Life expectancy in Japan is the highest in the world and the speed at which the population is ageing also makes Japan number one in this aspect. The latter is caused by the low birth rate and prolonged life expectancy, which are causing no end of problems for the government. A quarter of the overall population is forecast to be over the age of 65 by 2020.

Table 1: Population Distribution by Age Group (2005)

| | Total | Men | Women |
|---------|-------|-------|-------|
| 0-14 | 13.9% | 14.6% | 13.2% |
| 15-64 | 66.1% | 68.1% | 64.2% |
| Over 65 | 20% | 17.3% | 22.6% |
| Over 75 | 9% | 6.8% | 11.1% |

Source: Statistics Bureau

The demographic decline can be appreciated in the decrease in the fertility index in 2004 to 1.28 children per woman, the lowest ever recorded. Government projections forecast the population of Japan to reach a maximum of 127.8 million in 2006.

Most of the Japanese population is of Asian origin and there is also foreign minority due to the immigration phenomenon. Japanese is the first language of 99% of the population, while the remaining 1% have other first languages.

Table 3: Features of Japan's Population

| | 1970 | 2000 |
|-----------------------------------|------------|------------|
| Population over the age of 65 | 7% | 17.3% |
| Average life expectancy for men | 69.3 years | 74.7 years |
| Average life expectancy for women | 77.7 years | 84.6 years |
| Fertility Rate | 2.13 | 1.36 |

Source: World Data Research Center

The two main religions in Japan (Buddhism and Shintoism) are followed by 84% of the population.

Adulthood is reached at the age of 20. Japan is also characterised by having a relatively high level of education, as figures indicate that 100% of the population have completed the six years of primary schooling and 95.8% have completed three years of secondary school. Active educational policy has achieved a high percentage of degree-holders and ongoing professional training within companies.

Pension System

The first non-contribution pension system for Japanese civil servants emerged during industrialisation in 1868. A second contribution system was introduced in 1920 for government workers who were not covered by the previous system. But it wasn't until 1961 when the foundations of a system of universal coverage were laid, and with very modest benefits. Following 1973, the public pension system known in Japan as the first in the Welfare Era, due to improvements in the various pensions, health system and social services.

The main features of the current contribution pension system in Japan are as follows:

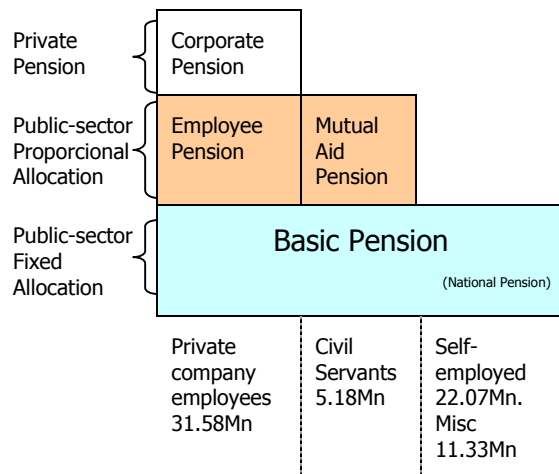
1. System split between the public and private sector, depending on whether it is managed by the Government or Companies.
2. Pensions are divided into three categories. In the first, all future pensioners pay a flat rate; in the second and third categories, the quota is in proportion with monthly wages.
3. All pensions are contribution-based.
4. Three requisites must be met in order to receive a pension:
 - The worker must contribute to the system for a minimum of 240 months.
 - The work must be aged 60 or over.
 - The worker's monthly wage must be lower than the threshold established by the Government.

In 2000 the Japanese Government raised the age that workers could begin to receive a pension from 60 to 65 and cut employee and mutual pensions. The government was forced to take this decision in light of the alarming ageing process of the Japanese population. While people over the age of 65 represented 7% of the overall population in 1970, this figure had risen to 17.3% by the year 2000.

The Japanese pension system is not entirely capitalised, despite current contributions being channelled to form a part of the assets which are used to pay future benefits. The system is not,

in actuarial terms, consistent, so government transfers are required.

Pension System Structure



Source: White Book on Economics and Public Finances

The institutions that manage pension funds are obliged to diversify their investment in such a way that 50% is channelled to instruments with a guaranteed yield (fixed term deposits or government bonds). The rest is distributed among shares, foreign assets or real estate assets.

The non-contribution system in Japan is parallel to the contribution-based system. In this system, the State maintains two welfare benefits:

1. Programmes for improving the income of poor households.
2. Network of social services for groups with social problems.

The State's requisites in order to receive this aid are so demanding that only a small percentage of households (less than 0.72% of the population) managed to take advantage of these

programmes. Thus, it is practically impossible to receive the official "charity" in Japan.

M^a Luisa Martí

Rosa Puertas

Valencia, September 30, 2005

8.-China

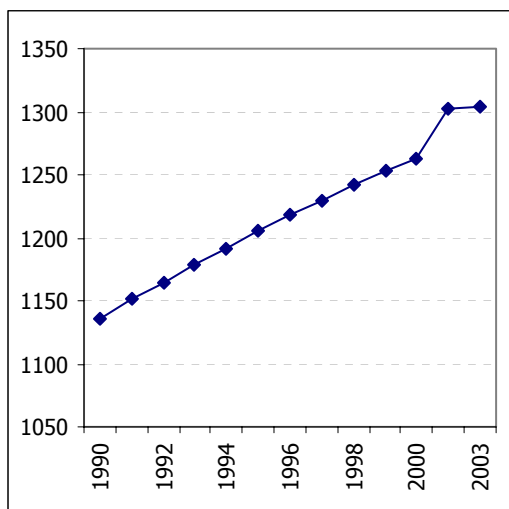
Population

China is the most populated country in the world. It current has a population of more than 1.3 billion inhabitants, which represents approximately 22% of the entire world population. National population density stands at 130 inhabitants per square kilometre, while population distribution is unequal. Population density on the coast reaches 400 inhabitants per square kilometre while it only reaches 200 in central regions and less than 10 inhabitants in the northeast of the country. The rural population represents 64% of the total population, while 36% live in cities.

The three largest cities in China in terms of population are:

- Chongging: 30 million
- Shanghai: 16.7 million
- Beijing: 13 million

Figure 1: Change in Population (millions)



Source: ADB Key Indicators 2000

The distribution of the Chinese population by age group is as follows:

- 0-14: 23%
- 15-64: 70%
- 64+: 7%

The demographic situation of the Asian giant is not very encouraging and is a key issue that slows down sustainable development and the modernisation of the country. The population growth rate stands at 0.6%. In 2002, the birth rate was 1.5% and the death rate 0.67%. The policy currently being used to limit the population consists in allowing urban households to have only one child, while rural households may have a second child if the first born is female, as boys are considered more economically useful in rural areas. This strategy results in an imbalance between sexes, as 119 boys are born for every 100 girls. This situation has caused the government to oppose selective abortions in accordance with sex and to seriously penalise those who employ this tactic. Moreover, a series of generous incentives for families that have two girls has recently been passed with the aim of correcting this imbalance.

On the other hand, 91% of inhabitants belong to the "han" ethnic group, while the rest belong to minority racial groups, which amount to a total of 56 recognised groups.

Religion plays an important role in the life of many Chinese people:

- 100 million are buddhists
- 18 million are muslim
- 4 million are catholic (1.5 million belong to the Roman church and 2.5 million to the China Patriotic Church)

- 10 million are protestants

In spite of the fact that the level of poverty in China is dropping, the difference between the rich and the poor are significant and, moreover, the gap is widening. In the first quarter of 2005, the poorest 10% of the population earned only 1.4% of national income, while the richest 10% earned 11.8 times as much. This inequality has created different social classes:

- a well-off class
- a growing middle class
- a floating population that represents the poor who are migrating to the cities

The middle class is forecast to represent 40% of the labour force within 20 years, if the current growth rate is maintained. At present, this class only represents 20%, whereas agriculture accounts for 42.9% of the entire labour force.

The national language is Mandarin, also called Putonghua, which is one of the five working languages in the United Nations. Two of the 56 minority ethnic groups speak the national language (hui and manchú), but the remaining 54 have their own languages and 23 have their own written language. Cantonese is one of the local dialects in southern China.

Pension System

According to an article published in the *Asian Wall Street Journal*, the reform of the pension system in China is top priority. The ageing of the population will increase the number of retired workers that must be financed by each active worker over forthcoming decades. In addition to this, it is

important to highlight the fact that China has a limited social security system which only covers State-run companies.

The current number of Chinese over the age of 60 is growing by more than 3.5% a year. By 2030, it is estimated that some 400 million Chinese people will be over this age. This means that the China Social Security Fund, created five years ago, will require around one trillion yuan.

The Social Security Fund is mainly financed by shares, funds transferred from the central government budget, lottery income and returns on investment. Social Security Fund assets amounted to 181.8 billion yuan at the end of July (\$22.4bn) and generate an annual return of 4 billion yuan, which is not enough to meet the country's necessities.

World Bank economists already warned last year that unless the system was changed, taxes would increase continuously. They calculated how much taxes would have to be raised in order to balance the pension system, with the following results: a 24% increase in 2004, a 27% increase in 2005, a 45% increase in 2030 and an increase of close to 60% in 2050.

The debt implicit in pensions is yet another illustration of how unsustainable the Chinese pension system is. This represents the present value of all future benefits promised to current pensioners and those who are still part of the labour force, under the hypothesis that the current distribution system ended today.

Pension reform must be based on a change in the structure of property both in companies and large banks. The definition of property in terms of

pension rights, corporate assets and bank capital is not clear, which makes the system work incorrectly.

M^a Luisa Martí Selva.

Rosa Puertas Medina.

Valencia, September 30 2005.

9.- Argentina

Population: will an ageing process begin?

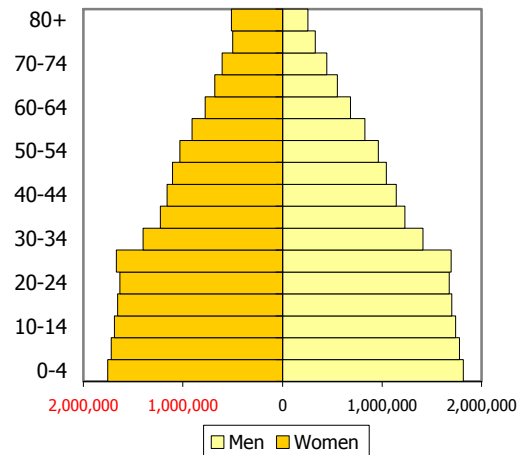
The monographic section this month is dedicated to the analysis of the pension system. In order to tackle this issues, the section begins with a study of the population.

The combination of an increase in longevity and a decrease in the birth rate has caused the overall population to age, which is a serious problem for the social security system. Although the population is ageing more slowly than in other countries and with some peculiarities, this demographic phenomenon has also been confirmed in Argentina.

Argentina is currently a young country. Figure 1 shows how the structure of the population by age group and gender is still pyramid shaped. However, a transition is observed on analysing projections made by INDEC. The clearest example is the assumption that life expectancy at birth will rise from 74.1 years in 2000-2005 to 80.4 years in 2045-2050. At the same time, the fertility rate displays a downward trend, although births have not yet become scarce. In 2005, the number of births remains above the replacement rate of 2.1 children per woman (current rate stands at 2.5).

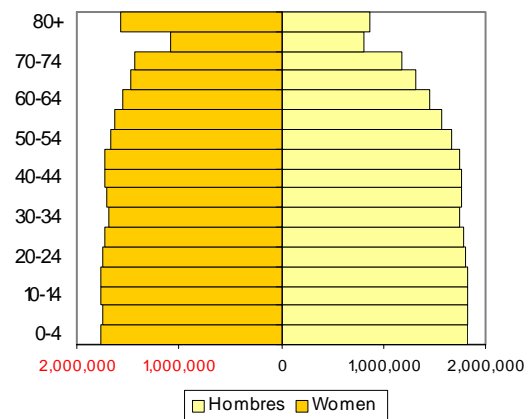
In spite of the increase forecast in the population (an annual 0.7%), the economic dependency rate (men aged 65 and over and women aged 60 and over with respect to the labour force) will practically double between 2001 and 2050, rising from 16% to 29.3%.

Figure 1: Population Pyramid 2005



Source: Indec

Figure 2: Population Pyramid 2050



Source: Indec

The pyramid projected for 2050 (Figure 2) is rectangular, but despite being a mature population, it is far from the typical aged population in European countries, where it is difficult to sustain the high proportion of retired people and the elderly and immigrants are needed to cover the necessary contributions with their jobs. Argentina's population model is one where generations are replaced with relative equilibrium, although the weight of the elderly in regard to the labour force is growing.

In short, Argentina's population is also ageing, but not enough to jeopardize the equilibrium of the system. As we will see from here onwards, the main threat lies in the illegal employment that is stalking the economy.

Structure of the system

The deterioration of Argentina's pensions system over time, which has been based on a distribution model since 1993, provided the scenario for a far reaching reform in 1994 which resulted in the current Integrated System of Retirements and Pensions (ISRP).

The system is structured into two main pillars of mandatory participation.

- The first pillar is a public distribution scheme administered by the State, which grants one universal single pension that amounts to a third of the average wage of those people who satisfy the retirement requisites¹.
- The second pillar allows the worker to choose between two schemes:
 - A distribution scheme, which is characterised by being a support system of defined benefits administered by the State.
 - The alternative is an individual capitalisation scheme of defined contribution managed by companies called Retirement and Pension Fund Managers (RPFM).

There is one final capitalisation pillar (voluntary participation) administered by the private sector, which manages the savings of those who want to compliment the other two obligatory pillars.

Funding sources

As far as the funding of the social security system is concerned, the first pillar is financed by management contributions (the average rate of private sector employers is 10.8% of wages).

Retirement funding for those who opt for the capitalisation scheme is based on personal obligatory contributions made by workers which are saved in personal accounts. The legal rate of contribution to the capitalisation system is 11%, but has been temporarily lowered to 7%. On the other hand, the contributions made by workers in the distribution scheme (11% of wages) finance the benefits of the second pillar administered by the State.

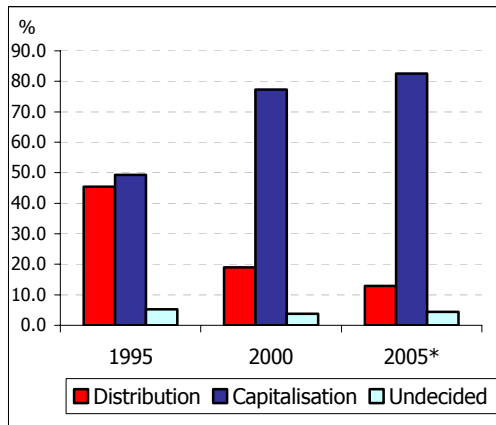
Taxes cover any extra funding required for public pensions: one part from corporate gains tax, tax on fuels and other specific taxes; and with other resources established in the Budget.

Capitalisation sub-system is predominant

In March 2005, 5,442,525 people were contributing to the ISRP: 699,409 (12.9%) to the distribution scheme, 4,495,962 (82.61%) to the capitalisation scheme and the remaining 247,154 (4.4%) were "undecided".

¹ 30 years contributing and the minimum age of retirement (65 for men and 60 for women)

Figure 3: Pension Contributors by scheme



Source: Secretariat of Social Security, National Administration of Social Security and own elaboration

* Data from March 2005

ISRP coverage insufficient

The analysis of the system in Argentina reveals that not only is the current model failing in its role to replace income and protect the elderly from poverty, but also its capacity to provide for these problems is deteriorating progressively. One of the main causes of this crisis is the constant deterioration in legal employment and labour market indicators, which have only displayed some signs of recovery since last year.

Table 1 shows how the crisis affected the protection of the oldest sector of the population. If old age pensioners are considered in relation to the inactive population, coverage dropped drastically from almost 71% in 1997 to 62% in 2004.

Table 1: Total Coverage

| Period | Retirements/Inactive Population* (%) |
|--------|--------------------------------------|
| 1997 | 73.3 |
| 1998 | 70.5 |
| 1999 | 68.6 |
| 2000 | 67.0 |
| 2001 | 65.7 |
| 2002 | 64.3 |
| 2003 | 63.4 |
| 2004 | 62.3 |

* People benefit from retirement and non-contribution pensions due to old age and disability

Source: Fiel, National Association of Social Security, Secretariat of Social Security and INDEC

The outlook for the future is even gloomier. According to the prospective of social forecasts ("Prospectiva de previsión social"²) published by the Secretariat of Social Security, the rate stood at 69% in 2005 and will drop to 44% by 2050. This negative prediction is reinforced by the analysis of active worker coverage detailed below, which also displays a negative trend.

One way of initially estimating active worker coverage is the ratio of the number of workers with respect to the labour force. As can be appreciated in the table below, the ratio has risen strongly since the ISRP was implanted, particularly in the capitalisation scheme.

² Report may be consulted at: <http://www.seguridadsocial.gov.ar/prospectiva.pdf>

However, this ratio is not at all accurate. The definition provided by social security for the category of affiliated workers is for all individuals that have contributed at some time to the system, but may have stopped contributing at a later date for a variety of reasons; the loss of their job, begun work in the black market or emigration, etc.

Table 2: Affiliated Members of the ISRP

| | Affiliated workers (1,000s) | Distribution (%) | | |
|------|-----------------------------|------------------|----------------|-----------|
| | | Distribution | Capitalisation | Undecided |
| 1994 | 6,184 | 39.8 | 51.6 | 8.6 |
| 1995 | 7,070 | 40.0 | 56.8 | 3.2 |
| 1996 | 8,067 | 32.4 | 65.2 | 2.4 |
| 1997 | 8,432 | 28.5 | 69.7 | 1.7 |
| 1998 | 9,165 | 24.9 | 73.5 | 1.6 |
| 1999 | 9,888 | 22.6 | 76.1 | 1.3 |
| 2000 | 10,616 | 20.9 | 77.4 | 1.8 |
| 2001 | 11,116 | 19.8 | 78.5 | 1.7 |
| 2002 | 11,446 | 19.2 | 79.2 | 1.6 |
| 2003 | 11,833 | 18.6 | 79.3 | 2.1 |
| 2004 | 12,366 | 18.0 | 79.2 | 2.8 |

Source: National Association of Social Security

It would be much more accurate to estimate the proportion of contributors in relation to the labour force. The percentage displays a downward trend (except in 2000), which was only curbed in 2002 having reached 52%. The ratio recovered only minimally in 2004 and 2005 (Table 3).

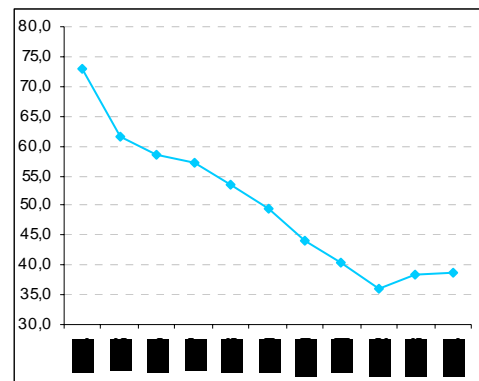
The high degree of evasion on behalf of those in employment, as well as the growing divergence between contributors and affiliated workers is closely related to the high degree of black market employment that is stalking the Argentinian labour market.

Table 4: Percentage of the labour force contributing to retirement schemes

| | |
|------|------|
| 1995 | 58.3 |
| 1996 | 59.9 |
| 1997 | 56.7 |
| 1998 | 55.3 |
| 1999 | 55.4 |
| 2000 | 57.0 |
| 2001 | 55.4 |
| 2002 | 52.0 |
| 2003 | 53.3 |
| 2004 | 53.7 |

Source: FIEL

Figure 5: Ratio of Affiliated Members/contributors (%)



Source: National Association of Social Security

At this point, and due to the fact that the irregularities present in the labour market are important when it comes to explaining the lack of protection of the elderly and active worker coverage, it is worth stopping to discern just how far reaching the problem is.

We will measure black market employment by means of the Household Surveys elaborated by INDEC, as they contain historical information concerning the number of wage earners who contribute, with the limitation that the sample group only covers Greater Buenos Aires. The degree of black market employment in relation to dependency rose from 28.9% to 38% between 1990 and 2000. The ratio of workers on the black market rose by a further 10 points between 2001 and 2003 due to the macroeconomic crisis and the application of employment programmes, with the "Plan Jefes y Jefas del Hogar (household bosses plan) figuring prominently. In short, in the second quarter of 2004, 48.2% of workers had not formalised their labour situation.

The conclusion we draw from this analysis of ISRP coverage is that the panorama is disheartening. The main cause lies in the combination of a decrease in formalised employment and the increase in unemployment recorded by the country in the 1990s and the beginning of this decade. This labour history is important in that it affects the level of savings, but it also could mainly affect the thirty years of contributions that the country demands in order to qualify for a pension. Therefore, the system requires an urgent and in-depth review in order to deal with the coverage problem.

Political opportunism and capitalisation funds

The accumulation of funds in the capitalisation system has been remarkable: in 2004, the figure exceeded 12% of GDP. RPFM Portfolios have also recorded high annual yields (14.3% from the beginning until July 2004). However, the composition of the average portfolio, which is hardly diversified, makes it extremely risky, as evidenced by the public debt default which severely punished RPFM investment portfolios. Moreover, during the crisis in 2001 and 2002, the country needed funding. This led the opportunist government at that time to change the legal framework in which RPFM worked, by further concentrating portfolios and raising national public debt from 52% to 65.2% of total retirement and pension funds.

The debt swap was largely accepted (76.1%). Despite RPFMs representing 20% of creditors of the debt in default, the debt write-offs being applied to their funds is expected to disappear gradually in the long term.

Julia Torrecabota Cordero
Valencia, October 3 2005

10.- Brazil

The pension system crisis is a worldwide problem. In a report entitled "Old-Age Income Support in the 21st Century: An International Perspective on Pensions and Reform" the World Bank itself warns countries about this problem and urges all to carry out reform. However, while in developed nations the problem is mainly due to an ageing population and social changes (divorces, the incorporation of the woman into the labour market...), the situation in developing nations such as Brazil is different, but its pension system is still unsustainable.

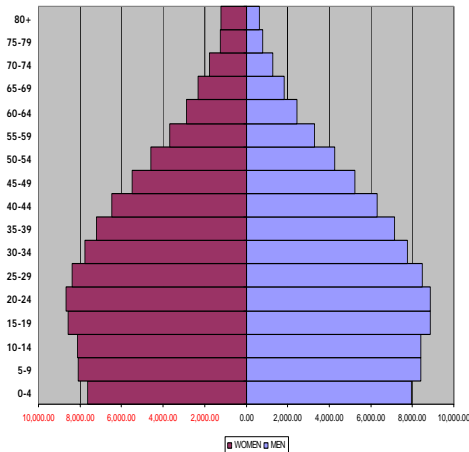
This section portrays the features of Brazil's population structure and the pattern it is likely to follow in the future. Following this, the current pension system will be analysed together with present and future challenges that must be faced. Finally, we will discuss the improvements planned by the government in the 2003 reform bill and the difficulties there have been to apply it.

Population

The population trend in Brazil has changed over the past five decades: the decrease in mortality and fertility rates have characterised this process. The fertility index has dropped from 6.15 in the 1960s to 2.34 in recent years.

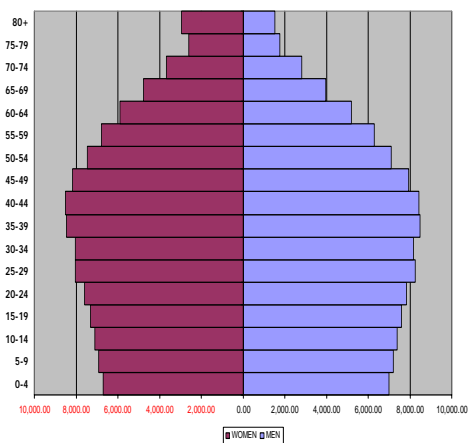
As can be appreciated in the graphs, Brazil has a relatively young population with a very different structure to that observed in European countries. For this reason, as mentioned earlier, Brazil's pension woes are also different.

Figure 1: Population Pyramid for Brazil in 2005



Source: U.S. Census Bureau

Figure 2: Population Pyramid for Brazil in 2025 (projection)



Source: U.S. Census Bureau

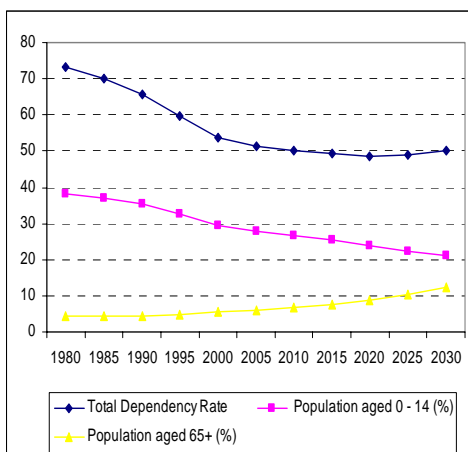
But what is really important when it comes to evaluating the future sustainability of a pension scheme is the population's dependency rate, that is, the inactive population with respect to the labour force.

Dependency rate

While the population in Brazil cannot be considered as aged as in developed countries, the truth is that the percentage of people over the age of 60 is increasing, due to the high fertility

rate in the past and to older people living longer. However, the increase in the dependency ratio (people aged 60 and over/people aged between 15 and 59) is offset by a decrease in the birth rate, which means total dependency (people aged 0-14 plus those aged 65 and over/people aged 15-64) decreases until 2020. The decrease in the dependency ratio, also known as the "Demographic Dividend", means the inactive population burden borne by the country is reduced.

Figure 3: Dependency Rate



So

Source: CEPAL. Population Bulletin N°73

However, there is a limit to the "Demographic Dividend":

- Whether or not the labour market (in a little developed economy) can absorb the rapid growth in the labour force on the one hand and the fact that it is older labour and therefore less qualified and less prepared for technological innovations on the other, remains to be seen.

- It is also uncertain whether or not the savings in education and care for the young will be enough to cover the costs of the needs of an older adult population, in which the proportion of over-75-year-olds, who need more care, is increasing.

Only by applying suitable economic and social policies that adapt to the changes in the population will make an effective system possible, particularly where health systems and social security are concerned.

Pensions

The structure of Brazil's Social Security system is based on three main pillars:

1. A general obligatory social security programme managed by the National Institute of Social Security (NISS) which covers workers in the private sector. This system is based on a simple distribution method and the principle of defined benefit and is financed by wage contributions plus a supplementary share from the Federal Treasury. The programme is also valid for new workers in State-run companies who have not been able to benefit from special pension schemes due to the restriction of the administrative reform in 1998.

2. Special systems for civil servants and the military. These systems can be divided into two subgroups: on the one hand, the military pension scheme, which works under specific legislation with little financial transparency and, on the other hand, civil servants linked to the Civil Service Law (Single Legal System).

3. Private pension funds. These funds are voluntary and complement the benefits provided by the NISS. They are financed by capitalisation mechanisms and funds can be defined contribution or defined benefit.

Table 1: Brazil's Contribution Social Security System Structure in 2001

| | | |
|---|--|---|
| <p>NISS</p> <p>General System</p> <p>General Obligatory Social Security</p> | <p>Civil Servants / military</p> <p>Obligatory schemes</p> | <p>Supplementary, voluntary schemes</p> |
| <p>Private Sector</p> <p>Employers, employees, household, self-employed, rural workers</p> | <p>Govt. workers</p> | <p>Corporate employment or personal protection plans</p> |
| <p>Public Sector</p> <p>Distribution, DB</p> <p>Contribution + Treasury supplement</p> | <p>Public sector</p> <p>Distribution, DB</p> <p>Treasury worker contribution</p> | <p>Private sector</p> <p>Capitalisation, DB or DC</p> |
| <p>Old age pension: 65/60 (M/F)</p> <p>Rural old age: 60/55 (M/F)</p> <p>Pension contribution period: 35/30 years (M/F)</p> | <p>Old age pension: 65/60 (M/F)</p> <p>Pension contribution period: 35/30 years (M/F)</p> <p>Privileges compared to the NISS</p> | <p>Separate Accounts</p> <p>State company funds usually with privileges</p> |

Source: International Labour Organisation

Deficit and social injustice: main features of the Brazilian pension system

Apart from the reform necessary to see to future needs due to the change in the population, the fact of the matter is that the Brazilian pension system already has serious problems:

- Brazil has a relatively young population, as indicated in the previous section. For this reason, the social security deficit is paradoxical. The pension system in Brazil generates deficit equal to approximately 5% of GDP on an annual basis. In 2004 in particular, the deficit stood at 5.31%.

- It is an unfair system where there are great economic differences between the pensions received by public-sector workers and those in the private sector. One of the differences is that the former have no limit on the amount of their pension. For example, in 2000, less than four million retired public-sector employees received 52 billion reais in pensions, while more than 16 million workers who retired from the private sector received 65.8 billion reais for the same concept.

- This unfairness is aggravated by the high degree of unregistered work, which prevents certain family and rural sectors from being included in conventional pension systems, that is, the contribution systems.

Reform of Brazil's Pension Scheme

Following Lula's first year in office, a pension scheme reform bill is passed in December 2003.

The objective of the reform was two-fold: on the one hand, to reduce the deficit and on the other hand to create a combined pension system for both public and private-sector workers. In order to achieve this, the government promised to gradually apply measures that were mainly aimed at decreasing the excesses generated by the public system.

The main reforms are:

- Eliminate the practice whereby government workers retire with a complete wage and more, as they were normally promoted just before retiring. Pensions are now calculated as an average of wages earned throughout a person's working life.

- Levy an 11% tax on the earnings of all pensioners who receive more than 1,440 reais a

month. This tax will allow the State to collect an additional 18.5 billion reais over the next 16 years.

This type of reform, which is welcomed enthusiastically by investors and the IMF, has been protested by trade unions, political parties and, of course, by some government workers. In May last year, the association of members of the Ministry of the Government and Republic Lawyers lodged a claim that the reform was unconstitutional at the Federal Supreme Court of Brazil.

It is worth bearing in mind that ex-president Fernando Enrique Cardoso promoted a similar reform at the end of the 1990s, but it was blocked by TFS. This time, in August 2004, the court sentence favoured Lula and gave Brazil's economic progress a breather.

María García Alcober

Valencia, October 3 2005

11.- Mexico

Population Growth

Population is one of the factors that makes up the State and, as is the case with the other two (land and the government) it changes over space and time.

Demography has to do with the natural growth of the population, which at the same time depends on births and deaths, together with social growth stemming from both internal and external migratory flows. Population changes have a marked impact on the economy of a country, and in terms of social security, a strong impact on pensions.

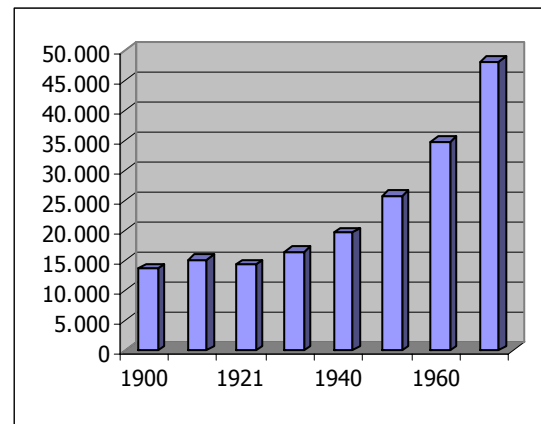
Some 105 million people of the 6.5 billion who inhabit the planet, live in Mexico, making the country the eleventh largest in the world in terms of population. The population records net growth of 1.5 million every year, which is derived from an annual growth rate of 1.38%, after discounting international migration.

Mexico has undergone a demographic transition understood as going from one period characterised by high and uncontrolled fertility and death rates towards another period of low and controlled rates, for which the State has been at least partly responsible for. Changes in size and age structure have caused different effects over time.

In Mexico, developments in the population can be divided into two long periods. In the first, marked increases were observed (among the highest in the world) while in the second population growth dropped sharply.

The first period dates from 1900 to 1970, during which time the country is populated and the process is characterised by urban development and the emergence of large cities. The second began in 1970 and takes us up to the present day.

Figure 1: Population in Mexico in 1,000s (1900-1970)



Source: INEGI

First Period

In 1900, the population of Mexico stood at 13,600,000, whereas in 1970 it had risen to 48,225,000 inhabitants.

However, demographic growth rose sharply between 1940 and 1970 and the population more than doubled from nearly 20 million inhabitants to 48 million. The highest population growth rates were recorded in this period, with the 1950s and 1960s figuring prominently with average annual growth rates of 3% and 3.4% respectively. The natural growth of the population is estimated to have reached its all-time high in 1964 at 3.48%.

Over the period dating from 1940 to 1970, annual population growth averaged 3.1%.

It is worth indicating that these rates, which moved above the 3% mark, are the highest on both a national and international scale.

The period between 1940 and 1970 also witness marked industrialisation and economic growth with annual growth rates of between 6% and 7% which the country needs today. The aim was to grow first and distribute that growth later; however, this never occurred, although it must be acknowledged that the population enjoyed greater wellbeing, but income distribution remained markedly biased.

Industrialisation led the population to settle in geographical areas where industry was located, which was mainly in the centre of the country. As a result, "Distrito Federal" and "Estado de México" recorded strong migratory flows.

The population of Estado de México, which is currently about to reach 15 million inhabitants, grew on average by 7.5% on an annual basis during the 1960s. As a result, the population of Distrito Federal, plus the conurbation of Estado de México (around 70%) has today become a huge metropolis with close to 20 million inhabitants.

Similarly, the serious pension problem the country has today (and probably will have in forthcoming years due to the birth rate remaining high and the death rate falling significantly), was also generated during the period dating from 1940 to 1970.

Health programmes and technological progress in the field of medicine with new discoveries and cheaper products have seen mortality decrease markedly.

Table 1: Gross Birth Rate, Mortality Rate and Life Expectancy (1930-1970)

| Year | Birth Rate | Mortality Rate | Life Expectancy |
|------|------------|----------------|-----------------|
| 1930 | 49.5 | 26.7 | 36.9 |
| 1940 | 44.3 | 22.8 | 41.5 |
| 1950 | 45.6 | 16.1 | 49.7 |
| 1960 | 46.1 | 11.5 | 58.9 |
| 1970 | 44.2 | 10.1 | 61.9 |

Source: Historical Statistics of Mexico (INEGI)

Note how the gross birth rate remained high over the period dating from 1940 to 1970, registering only one minimal decrease from 44.3 to 44.2, whereas mortality dropped substantially from 22.8 to 10.1.

The average number of children per woman in 1970 was 5.87. Parallel to this, life expectancy rose from 41.5 years in 1940 to 61.9 years in 1970.

The lack of noticeable changes in the high birth rate and the decreasing mortality resulted in the country becoming a region for young people in very few years. However, when the birth rate drops, the country will be full of elderly people, such as the country we will have in a few years' time.

On the other hand, the increase in life expectancy at birth rendered the calculation of the population to be attended by means of pensions in the future out of date.

It is also interesting to note the way in which the population has developed in terms of age structure. In order to analyse the pension problem, it is worth

studying the following age groups: 0-14, 15-64 and 65+.

In 1970, people aged between 0 and 14 accounted for 46% of the population, those aged between 15 and 64 represented 50% and 4% were aged over 64. This age structure was very different to that observed in 1940 when the percentages were 41%, 56% y 3% respectively.

Table 2: Population by Age Group in 1,000s (1930-1970)

| Year | Total | 0-14 | 15-64 | 65 + |
|------|--------|--------|--------|-------|
| 1930 | 16,552 | 6,489 | 9,571 | 492 |
| 1940 | 19,653 | 8,096 | 10,966 | 591 |
| 1950 | 25,791 | 10,754 | 14,124 | 913 |
| 1960 | 34,923 | 15,452 | 18,162 | 1,309 |
| 1970 | 48,225 | 22,287 | 24,147 | 1,791 |

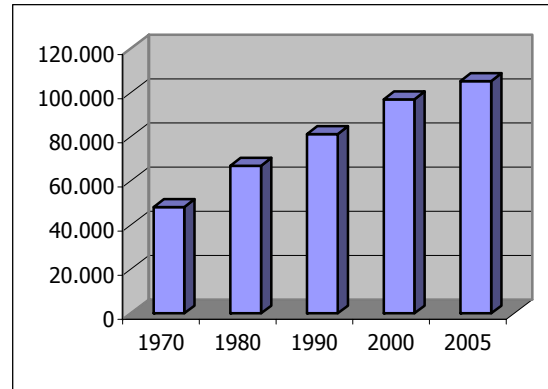
Source: Historical Statistics of Mexico (INEGI)

Second Period

The second period dates from 1970 to the present day. The beginning of the 1970s saw the creation of family planning programmes under the auspices of the government, which sought to curb the high population growth, which was close to an annual 3.5%.

The annual growth rate of 3.5% had already dropped to close to 2% by 1990. This also led to significant changes in the age structure of the population, as the group aged between 0 and 14 represented 38%, those aged between 15 and 64 accounted for 57%, while those aged over 64 amounted to 5% of the population.

Figure 2: Population of Mexico in 1,000s (1970-2005)



* 2005 data corresponds to the first half of the year according to the National Survey of Employment, while the remaining figures are from censuses.

Source: INEGI

This second period saw the birth rate and the mortality rate drop considerable. While the birth rate fell from 44.2 in 190 to 19.3 in 2003, the mortality rate also decreased substantially from 10.1 to 4.5 over the same period. On the other hand, life expectancy rose markedly from 61.9 to 74.9.

Table 3: Gross Birth Rate and Mortality Rate and Life Expectancy (1970-2000)

| Year | Birth Rate | Mortality Rate | Life Expectancy |
|------|------------|----------------|-----------------|
| 1970 | 44.2 | 10.1 | 61.9 |
| 1980 | 34.9 | 6.5 | 66.2 |
| 1990 | 27.8 | 5.0 | 70.8 |
| 2000 | 21.1 | 4.4 | 74.0 |
| 2003 | 19.3 | 4.5 | 74.9 |

Source: Statistical Yearbooks (INEGI)

The decrease in the birth and mortality rates saw the average annual growth rate of the population drop considerably. According to census data, the 3.4% growth rate observed in the 1960s fell to 1.8% in the second half of the 1990s.

Table 4: Average Annual Population Growth Rate (1950-2000)

| Period | Rate |
|-----------|------|
| 1950-1960 | 3.0 |
| 1960-1970 | 3.4 |
| 1970-1980 | 2.6 |
| 1980-1990 | 2.0 |
| 1990-1995 | 1.6 |
| 1995-2000 | 1.8 |

Source: INEGI

Despite population growth dropping considerable, the population of a working age grew by more than 3%, as a result of the marked growth recorded in the 1970s, which put the labour market under a great deal of pressure.

While the population distribution by age group in 1970 saw 46% aged between 0 and 14, 50% between 15 and 64 and the remaining 4% aged over 64, in 2000, the figures were 34%, 61% and 5% respectively.

As can be observed, the middle age group (15-64) grew markedly to 61%, while growth in the over 64 group was not significant. However, the National Council of Population (Conapo in Spanish) estimates the population over the age of 60 will represent 28% of the overall population by 2050.

The number of children per woman has more than halved from 5.87 in 1970 to 2.1 today.

Likewise, projections from Conapo indicate that life expectancy will increase from 74.9 years in 2003 to 79.8 years in 2030 and 81.3 years in 2050.

The average age in 1950 was 19.1 years and today it is around 25 years, but will increase to 43 years by 2050.

Table 5: Population by Age Group in 1,000s (1970-2000)

| Year | Total | 0-14 | 15-64 | 65+ |
|------|--------|--------|--------|-------|
| 1970 | 48,225 | 22,287 | 24,147 | 1,791 |
| 1980 | 66,846 | 28,726 | 35,366 | 2,754 |
| 1990 | 81,249 | 31,146 | 46,234 | 3,376 |
| 2000 | 97,014 | 33,050 | 58,828 | 4,845 |

Note: in 1990 and 2000, the sum of the age groups does not agree with the total, due to the exclusion of the item entitled "not specified".

Source: Censuses and Population and Housing (INEGI)

Over the last year alone (from halfway through 2004 to halfway through 2005) the number of children and young people under the age of 15 has decreased by almost 400,000. In contrast, the population aged between 15 and 64 has risen by 1.3 million and the number of over 64-year-olds has risen by 202,000.

In spite of the fact that a complete transition from a young to an old population is still not observed, the pension system already has serious problems. The ageing of Mexico's population could convert the pension

system into a bomb over the next 50 years. Unless it is deactivated rapidly, the bomb could explode with undesirable economic and social consequences.

The demographic trend will decrease the base of the population pyramid and broaden the top, which is in fact already beginning to occur.

International Migration

The evolution of Mexico's population is affected by people emigrating to the United States of America. Migration must be included in the study of the country's population growth. Without this variable, the analysis would be incomplete.

Mexico borders the world's largest super power. The lack of job creation in Mexico, the wage gap between the two nations and even family tradition has seen a large number of Mexicans migrate to the United States.

The net loss through international migratory flows can be more clearly appreciated over the last half century. Conapo estimated that Mexican migratory flows to the country's northern neighbour detract 0.4 points from the current natural growth rate of the population. Similarly, the number of people who migrate to the United States is estimated to be close to 400,000 on an annual basis.

This migratory situation has led to a great deal of Mexicans living and working in the United States. Conapo estimates the current figure at around 10 million people. This total does not include Mexican descendants who were born in the United States.

Table 6: Mexican Migrants to the United States (1996-2010)

| Year | Migrants |
|------|----------|
| 1996 | 346,066 |
| 1997 | 352,386 |
| 1998 | 358,386 |
| 1999 | 364,000 |
| 2000 | 369,190 |
| 2001 | 373,959 |
| 2002 | 378,302 |
| 2003 | 382,234 |
| 2004 | 385,813 |
| 2005 | 389,093 |

Source: Conapo estimates

Table 7: People Born in Mexico, but Residing in the United States

| Year | 1,000s |
|------|---------|
| 1996 | 7,033.3 |
| 1997 | 7,312.7 |
| 1998 | 7,596.2 |
| 1999 | 7,883.3 |
| 2000 | 8,173.6 |
| 2001 | 8,466.6 |
| 2002 | 8,761.6 |
| 2003 | 9,058.2 |
| 2004 | 9,356.0 |
| 2005 | 9,654.5 |

Source: Conapo estimates

The ageing process that has begun, due to high population growth in the past and a marked decrease in mortality that has raised life expectancy is taking its toll on the present and the

situation will further deteriorate in the future.

Mexico's main challenge in terms of demography in the first half of this century is undoubtedly the ageing of the population, which will require more resources in order to confront the increase in medical care for attending degenerative diseases that come with age and also more resources to be channelled to pensions, which must be sustained by financially viable schemes. The future is just around the corner, so from this point on the adult population must be appropriately attended to in order to prevent people from "dying" socially before they do so physically.

Pension System

The ageing process, appreciated at the top of the population pyramid, where the age group comprising those aged over 65 has grown the most in recent years (a trend that will become more pronounced over forthcoming decades), the increase in life expectancy, the average retirement age, the low contributions paid and the lack of financial forecasts, will result in a growing need for economic resources and strong pressure related to social security, one of the most significant being the pension system.

In order to better understand the current situation on the pension front, we believe it is necessary to review part of the history of pensions, albeit briefly.

A Bit of History

The two main pillars of Mexico's pensions system are the Mexican Institute of Social Security (MISS) and the Institute of Social Services and Security for Government Employees (ISSSGE)

The legal base of Mexico's social security system can be found in Article 123 of the Political Constitution of the United Mexican States, which regulates all labour-related issues and more specifically, in point XXIX, where the Social Security Law is deemed of public use and which covers insurance for disability, involuntary redundancy, illness and accidents, nursery and any other type of service aimed at protecting workers, non-wage earners and other sectors and their families.

In 1925 the Law of Civil and Retirement Pensions was elaborated and in 1943 the Social Security Law was enacted, as stipulated in the Constitution. The MISS was created on January 31, 1943.

In 1959, the law bill that resulted in the creation of the ISSSGE in 1960 was presented in order to protect workers who served the Federal Government, the Federal Legislature and the Federal Justice System, as well as those integrated in the State sector, providing they are employed under a legal contract or agreement with the President of the Republic.

In 1973 a new social security law was passed, which contemplated the inclusion of nurseries, voluntary schemes and social benefits, remaining in force until 1997.

In 1976 the Institute of Social Security for Mexican Armed Forces was created following the approval of the Law of the Institute of Social Security for the Armed Forces. This institute is a decentralised federal public body of individual judicial nature; it is self-funded and regulates pensions, among other things.

In 1992 the Retirement Saving Scheme (RSS) was created, which resulted in

profound changes in the pension system for those affiliated to the MISS.

In December 1995, the New Social Security Law was decreed and has been in force since 1997. Based on this law, the main branches of the current pension system relate to permanent, total or partial incapacity, disability, widows/widowers, orphans and ancestry. The law was also the first step towards the privatisation of the social security system in Mexico.

Current Pension System

The structure of the pension system in Mexico includes both public and private institutions that receive contributions from workers while they are active, to later return the contributions once they have retired.

In terms of numbers, public organisms are the most important, within which the MISS is the largest, followed by the ISSSGE.

This system also includes the institutions that attend to State government workers, some state-run companies such as Petróleos Mexicanos, the Federal Commission of Electricity, Compañía de Luz y Fuerza del Centro, the Institute of Social Security for the Armed Forces, the Development Bank and some centres of higher education.

In the past, private-sector employees made contributions to the MISS, which were complemented by the employer and the government. In the case of government workers, the contribution was and is still made to the ISSSGE and is complemented by the government.

The scheme was closed when these resources were invested in financial instruments which provided interest and liquidity. However, these resources

were used on occasions for other purposes and pension payments were upheld by the contributions made by young active workers.

The previous pension scheme changed markedly from 1997 onwards. Following the Reform of the Social Security Law in 1997 and the New RSS Law in 1992, the new system allowed workers that were affiliated to the MISS to have their own account, which was managed by a Retirement Fund Manager (RFM).

The new MISS system includes a plan of defined contributions coupled with a guarantee of a minimum pension, with resource capitalisation and obligatory for all workers affiliated to the Institute.

Workers can freely choose the RFM they wish to save in. The so-called distribution system is replaced by defined contributions and with personal accounts that are managed by RFM.

A RFM is a financial institution authorised by the Secretariat of the Treasury and Public Credit and supervised by the National Commission of Saving for Retirement (NCSR), which specialises exclusively in handling the contributions workers make towards their retirement.

The funds saved by workers are invested by the Specialised Retirement Fund Investment Societies (SRFIS). These public limited companies invest the funds in debt instruments, such as Cetes (Treasury bills) or in Bondes (Development bonds), which are issued by the Federal Government.

At present, if a worker is affiliated to the MISS, he/she is obliged to have one sole individual, personal account, which must be administered by a RFM. Contributions made by the worker, the

employer and the government are accumulated in this account.

The worker's individual account integrates four sub-accounts at the same time: the voluntary contributions account, the home account, the supplementary contribution account and the retirement, old age unemployment and old-age account.

Both the employer and the employee may make the deposits in the voluntary contribution account, while only the employer may deposit funds into the home account (5% of the worker's basic wage), which must be managed by the Workers' National Housing Fund Institute (WNHFI).

All three parties deposit funds into the sub-account for retirement, old age unemployment and old age. The employer contributes 2% of the worker's basic wage towards retirement and 3.15% towards old age unemployment and old age and both contributions are made on a two-monthly basis. The government contributes 0.225% of the basic wage towards old age unemployment and old age and the equivalent of 5.5% of the minimum wage in the Distrito Federal, per day worked, as a social quota. The worker contributes 1.125% of his/her basic wage.

If the worker satisfies the retirement requisites, he/she may opt for a life-long income, take out survival insurance with an insurance company, or maintain the amount accumulated in the Retirement Fund in his/her individual account, with the possibility of programmed retirement.

The amount received by the worker on retirement will depend on the contributions he/she manages to accumulate throughout his/her working

life, from wages received, the contribution period, voluntary contributions and the interest obtained on investments made.

According to the Social Security Law, old age unemployment occurs when the insuree can no longer carry out paid jobs at the age of 60 and over. In order to qualify for the benefits of the old age insurance, the insures must be 65 years old. At least 1,250 weekly contributions must be recognised by the Institute in both cases.

Rightful Population

The labour force in Mexico amounts to nearly 43 million people, of which approximately 26 million are not covered by any pension plan (60%).

It is estimated that of the remaining 40%, around 80% of those with pension plans in the country contribute to the MISS and the ISSSGE. For this reason, we will focus our analysis on these two institutions, which are the backbone of the pension system in Mexico.

Their importance lies in the fact that both institutions provide social security services to more than half of the overall population of the country. In terms of coverage, the MISS is the most important of the two.

The total rightful population of the MISS has risen by 30% over the past ten years, from 34.3 million to 44.5 million.

Table 8: Rightful Population of the MISS in 1,000s (1995-2005)

| Year | Total | Permanent and temporary insurees | Insuree relatives |
|------|--------|----------------------------------|-------------------|
| 1995 | 34,324 | 10,932 | 20,533 |
| 2000 | 46,534 | 15,240 | 27,822 |
| 2005 | 44,548 | 16,884 | 23,291 |

Note: due to figures being rounded up or down, the sum the two last columns in the table may not coincide with the total. 2005 figures are estimated to December.

Source: Statistical Appendix of Government Report V

Similarly, the number of active workers per pensioner has dropped from 6.1 in 1995 to 5.6 in 2005. On the other hand, as regards the number of pensioners per 1,000 workers, the figure has risen from 139 to 181 over the same period, which is a 30% increase.

Table 9: MISS Pension Indicator (1995-2005)

| Year | Nº of active workers per pensioner | Pensioners/1,000 active workers |
|------|------------------------------------|---------------------------------|
| 1995 | 6.1 | 139 |
| 2000 | 6.8 | 122 |
| 2005 | 5.6 | 181 |

Note: 2005 figures are estimated to December

Source: Statistical Appendix of Government Report V

As far as the ISSSGE is concerned, the rightful population has risen from 9.2 million in 1995 to 10.6 million in 2005, an increase of 15%, while the number of insuree relatives has risen by 9.6%.

Table 10: Rightful Population of the ISSSGE in 1,000s (1995-2005)

| Year | Total | Permanent and Temporary Insurees | Insuree Relatives |
|------|--------|----------------------------------|-------------------|
| 1995 | 9,246 | 2,180 | 6,541 |
| 2000 | 10,066 | 2,338 | 7,010 |
| 2005 | 10,601 | 2,393 | 7,174 |

Note: due to figures being rounded up or down, the sum of the last two columns in the table may not coincide with the total. 2005 figures are estimated to December.

Source: Statistical Appendix of Government Report V

The indicator of the number of active workers per pensioner displays a marked decrease in recent years, dropping from 6.8 to 3.7.

Table 11: ISSSGE Pension Indicator (1995-2005)

| Year | Nº of Active Workers per Pensioner | Pensioners/1,000 active workers |
|------|------------------------------------|---------------------------------|
| 1995 | 6.8 | 146 |
| 2000 | 5.3 | 187 |
| 2005 | 3.7 | 269 |

Note: 2005 figures are estimated to December

Source: Statistical Appendix of Government Report V

The number of pensioners per 1,000 active workers rose from 146 to 269 over the same period.

The downward trend in the ratio of the number of active workers per pensioner in both institutions seriously affects their financial situation.

In fact, the number of pensioners claiming benefits from both the MISS and the ISSSGE has risen from 1.8 million in 1995 to 2.9 million in 2005. This means that the number of pensioners in the two institutions has grown by more than one million, that is, an average of 100,000 per year. The highest growth rate is observed in the MISS, which contributes 75% of the overall growth rate.

Table 12: MISS and ISSSGE Pensioners in 1,000s (1995-2005)

| Year | Total | MISS | ISSSGE |
|------|-------|-------|--------|
| 1995 | 1,804 | 1,522 | 282 |
| 2000 | 2,249 | 1,863 | 386 |
| 2005 | 2,909 | 2,354 | 555 |

Note: 2005 figures are estimated to December

Source: Statistical Appendix of Government Report V

The surge in the number of pensioners is the result of the demographic transition mentioned earlier in this report.

Pension System Resources

The new system is estimated to have raised approximately 15% more funds than the previous system.

The Treasury Secretariat forecasts pension outlays to increase from 2.2% of GDP at present to 2.8% of GDP in

2009. Unless the system undergoes reform, pension outlays will represent 3.6% of GDP.

Table 13: Pension System Resources in millions of pesos (1998-2005)

| Year | Total Savings for Retirement | RFMs | RSS-92 |
|------|------------------------------|-----------|-----------|
| 1998 | 191,384.2 | 112,504.7 | 78,879.5 |
| 1999 | 281,036.9 | 197,229.5 | 83,807.4 |
| 2000 | 384,226.9 | 286,322.8 | 97,904.1 |
| 2001 | 505,655.3 | 392,046.8 | 113,608.6 |
| 2002 | 603,316.2 | 496,031.2 | 107,285.0 |
| 2003 | 727,227.5 | 605,174.7 | 122,052.8 |
| 2004 | 851,252.6 | 717,513.8 | 133,738.8 |
| 2005 | 933,582.0 | 790,001.6 | 143,580.4 |

Note: due to figures being rounded up or down, the last two columns of the table may not coincide with the total. 2005 figures go up to June.

Source: Statistical Appendix of Government Report V

Figures at the end of the second quarter display 933.5 billion pesos. The spending set aside for pension payments by most public institutions is not enough to cover outlays in forthcoming years.

Table 14: Institution Pension Payments as a percentage of Programmable Spending (2000-2005)

| Año | ISSSTE | IMSS |
|------|--------|------|
| 2000 | 43.6 | 39.1 |
| 2001 | 44.4 | 41.1 |
| 2002 | 51.9 | 40.4 |
| 2003 | 54.5 | 37.3 |
| 2004 | 54.1 | 40.6 |
| 2005 | 52.8 | 39.8 |

Note: 2005 figure is estimated according to the budget

Source: Statistical Appendix of Government Report V

We can observe how pension payments are very high in relation to programmable spending both in the case of the MISS and the ISSSGE and, moreover, that as time goes by, they are rising. In the ISSSGE for example, pension payments have risen from 43.6% of programmable spending to 52.8%, while the percentage in the MISS has remained high, in the vicinity of 40%. For example, the percentage for 2005, based on the approved budget, in the case of PEMEX, the Federal Commission of Electricity and the Compañía de Luz y Fuerza del Centro (all of which are public companies) would be 12.8%, 4.4% and 28% respectively.

Conclusions

Actuarial retirement calculations were based on a life expectancy of around 60 years. In the present day, as mentioned earlier in this report, life expectancy

has risen by 15 years, making these estimates obsolete.

The modifications carried out in the MISS in 1997 did not affect the ISSSGE, which provides for part of the workers in the public sector. As a result, a distribution system is still employed in the pension fund, where active worker contributions pay for pensions.

The reform of the ISSSGE needs to be at least as far reaching as that undergone by the MISS, including individual accounts and the guarantee of a minimum pension, as the current system, which works as a distribution scheme, is funded by active worker contributions and Federal Government resources.

Within the three-party provision, the MISS receives the amount devoted to attending active workers, but not the amount for pensioners.

Insufficient funding also stems from the lack of job creation in the country. Register employment has remained practically unchanged over the past five years (around 3%), while the population continues to grow. On the other hand, the number of pensioners has risen, together with the ratio of pensioners per active worker.

The current system is very biased towards city workers, as most of the population are wage earners and for this reason, they work in the cities.

The benefits of the current pension system must spread further. If a worker during his/her working life, works in the private sector, the public sector and in the underground economy, in this last period, he/she is probably not providing any amount in order to finance his/her retirement due to a lack of information.

In the budget for expenditure for next year, which is currently being debated by Senate, some 2.2 billion pesos are programmed to be channelled to the retirement of workers aged over 70, which is outside the traditional spending programmes.

The size of the problem could be reduced if the law allowed pensions to be transferred from one system to another. That is, the savings in one scheme could be transferred to another, allowing greater labour mobility and generating more resources. It is necessary to have a single national pension system.

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