Unclassified **ECO/WKP(2002)26**

Organisation de Coopération et de Développement Economiques
Organisation for Economic Co-operation and Development

23-Aug-2002

English text only

ECONOMICS DEPARTMENT

ECO/WKP(2002)26
Unclassified

THE BRAZILIAN PENSION SYSTEM: RECENT REFORMS AND CHALLENGES AHEAD

ECONOMICS DEPARTMENT WORKING PAPERS No. 340

by Marcos Bonturi

JT00130533

Document complet disponible sur OLIS dans son format d'origine
Complete document available on OLIS in its original format

English text only

ABSTRACT/ RÉSUMÉ

THE BRAZILIAN PENSION SYSTEM: RECENT REFORMS AND CHALLENGES AHEAD

Brazil’s public pension expenditure is about 9 per cent of GDP, above the OECD average. Given that OECD countries are generally not only wealthier, but also significantly older, Brazil’s pension expenditures are clearly excessive, draining resources away from other areas, such as much needed social investment in health and education. Beyond its fiscal impact, the Brazilian pension system is also unjust. About half of total pension expenditure is paid to former civil servants, which account for only 5 per cent of total retirees. Given the demographic challenges Brazil is likely to face in the next decades, authorities have started to implement a series of reforms. The general regime available to private sector workers underwent major changes in 1999, which will help ensure its long-term actuarial and financial balance. However, problems remain concerning the growth of the informal economy, the weight of non-pension benefits financially imputed to the regime and the mechanisms for the indexation of pension benefits. Reforms of the special schemes for civil servants have been more timid, even though they are significantly more generous than the general regime. Recently, some degree of pre-funding has been introduced at state level, as a few states have reformed the pension schemes for their public employees. But these incipient schemes, often financed with proceeds from privatisation, provide at best short-term fiscal relief to state governments.

JEL Code: G23, H55, H72, J11, J26, N36.

Keywords: Brazil, pension system, pension reform, ageing, fiscal adjustment, civil servants, fiscal federalism, replacement ratios, social security.

*****

LE SYSTÈME DE PENSIONS BRÉSILIEN: RÉFORMES RÉCENTES ET DÉFIS À VENIR

Les dépenses publiques au titre des pensions au Brésil représentent environ 9 pour cent du PIB, pourcentage qui dépasse la moyenne de l’OCDE. Si l’on tient compte de la jeunesse de la population brésilienne et de son moindre niveau de revenu par rapport à la moyenne des pays de l'OCDE, ces dépenses sont clairement excessives et c’est autant de ressources qui ne vont pas à d’autres affectations, comme l’investissement dans la santé et l’éducation, pourtant fort nécessaire. Au-delà de son impact fiscal, le système de pensions brésilien est aussi injuste. Environ la moitié des dépenses publiques au titre des pensions est versée aux anciens fonctionnaires, qui ne constituent pourtant qu’environ 5 pour cent de l’ensemble des retraités. Tenant compte des pressions démographiques que le Brésil aura vraisemblablement à effronter dans les décennies à venir, les autorités ont commencé à introduire une série des réformes. Le régime général, applicable aux travailleurs du secteur privé, a subi une réforme majeure en 1999, visant à assurer son équilibre actuariel et financier à long terme. La progression de l’emploi dans le secteur informel, le poids des prestations autres que la retraite sur le régime de pensions et l’inadéquation des mécanismes d’indexation des pensions sont autant des menaces qui pèsent sur l’équilibre à venir du régime. En revanche, la réforme des régimes spéciaux pour les fonctionnaires a été plus timide, alors qu’ils soient nettement plus généreux que le régime général. Plus récemment, quelques états ont introduit une composante préfinancée dans le système de pension de leurs fonctionnaires. Mais ces nouveaux régimes, souvent capitalisés grâce aux produits de la privatisation, fournissent au mieux un allégement budgétaire à court terme aux administrations des États.

Classification JEL : G23, H55, H72, J11, J26, N36.

Mots-clés: Brésil, système de pensions, reforme des pensions, vieillissement, ajustement fiscal, fonctionnaires, fédéralisme fiscal, taux de remplacement, sécurité sociale.

TABLE OF CONTENTS

Boxes

Tables

Figures

THE BRAZILIAN PENSION SYSTEM: RECENT REFORMS AND CHALLENGES AHEAD[1]

Marcos Bonturi

Introduction

1. The Brazilian pension system is divided into several segments: a general regime for private sector workers, multiple special regimes for civil servants at different levels of government, and a voluntary complementary regime available to all workers (Table 1).

Table 1. **A summary of Brazilian pension systems**

	General system	Special systems	New state-level schemes	Complementary system
Coverage	Private sector	Civil servants	Civil servants	All workers
Nature	Mandatory	Mandatory	Mandatory	Optional
Scope	National	Federal, state or local	State	Open[1]
Management	Public	Public	Mixed	Private/Independent
Funding	Pay-as-you-go	Pay-as-you-go	Pre-funding	Fully-funded

1. With the exception of some industrial sectors which have closed funds.
Source: Ministério da Previdência e Assistência Social.

- The general scheme, available to private sector workers, consists of a mandatory publicly managed PAYG-type scheme. The general regime underwent a major reform in 1999, which has gone a long way in ensuring its long-term actuarial and financial balance. However, problems remain concerning the growth of the informal economy, the weight of non-pension benefits financially imputed to the regime and the mechanisms for the indexation of pension benefits.

- Special schemes for civil servants exist at different levels of government. Reforms of these schemes have been extremely timid, even though they are significantly more generous than the general regime. Recently, some degree of pre-funding has been introduced at state level, as a few states (notably *Paraná* and *Bahia*) have reformed the pension schemes for their public employees. These incipient schemes, often financed with proceeds from privatisation, provide at best short-term fiscal relief to state governments. To the extent that they are not, in their present form, actuarially balanced, they do

1. A shorter version of this paper was originally written for the OECD *Economic Survey of Brazil*, published in 2001. The author is a senior economist in the Economics Department of the OECD. The paper benefited from helpful discussions with Brazilian officials at different levels of government and experts in the private sector, national research organisations and academic institutions. The author feels especially indebted to Vinícius Carvalho Pinheiro and his colleagues at the Brazilian Ministry of Social Security for their help. The author is also grateful for helpful comments and suggestions made by Val Koromzay, Silvana Malle, Joaquim Oliveira Martins, Juan Yermo and other OECD colleagues. Special thanks go to Anne Legendre for her skilled research assistance and to Alexandra Woidtke-Athanasiadou and Susan Gascard for the technical preparation of the document.

not constitute a long-term solution to the fiscal challenge arising from the large and growing contingent liabilities of civil servants' pension systems.

- Finally, a third scheme is available to all workers as an optional, privately managed fully funded complementary regime. This scheme consists of either occupational or personal plans and has grown rapidly in the past few years, although questions related to the regulatory framework, as well as supervision matters, need to be resolved. The complementary regime impinges only indirectly on fiscal accounts, through the tax system (i.e. the treatment of retirement savings) or to the extent that several state-owned enterprises have defined benefit schemes that may not be actuarially balanced.

2. The combined deficit of the publicly managed schemes was more than 5 per cent of GDP in 2001 (Table 2). The bulk of this deficit (4 per cent of GDP)[2] originates from the special regimes for civil servants. This large deficit is rather striking, as only about 5 per cent of total retirees are former civil servants. Of the total expenditures on civil servants' pension schemes, half was incurred by sub-national governments. Including both the public sector and the general pay-as-you-go (PAYG) regime, Brazil's public pension expenditure is about 9 per cent of GDP, above the OECD average (Figure 1). Given that OECD countries are generally not only wealthier, but also significantly older, Brazil's pension expenditures are clearly excessive, draining resources away from other areas, such as much needed social investment in health and education. Further, in the absence of reform, this expenditure is unlikely to fall over the next 10-15 years, making fiscal adjustment more difficult.

Table 2. **Financial results of the social security system, 2001**

Per cent of GDP

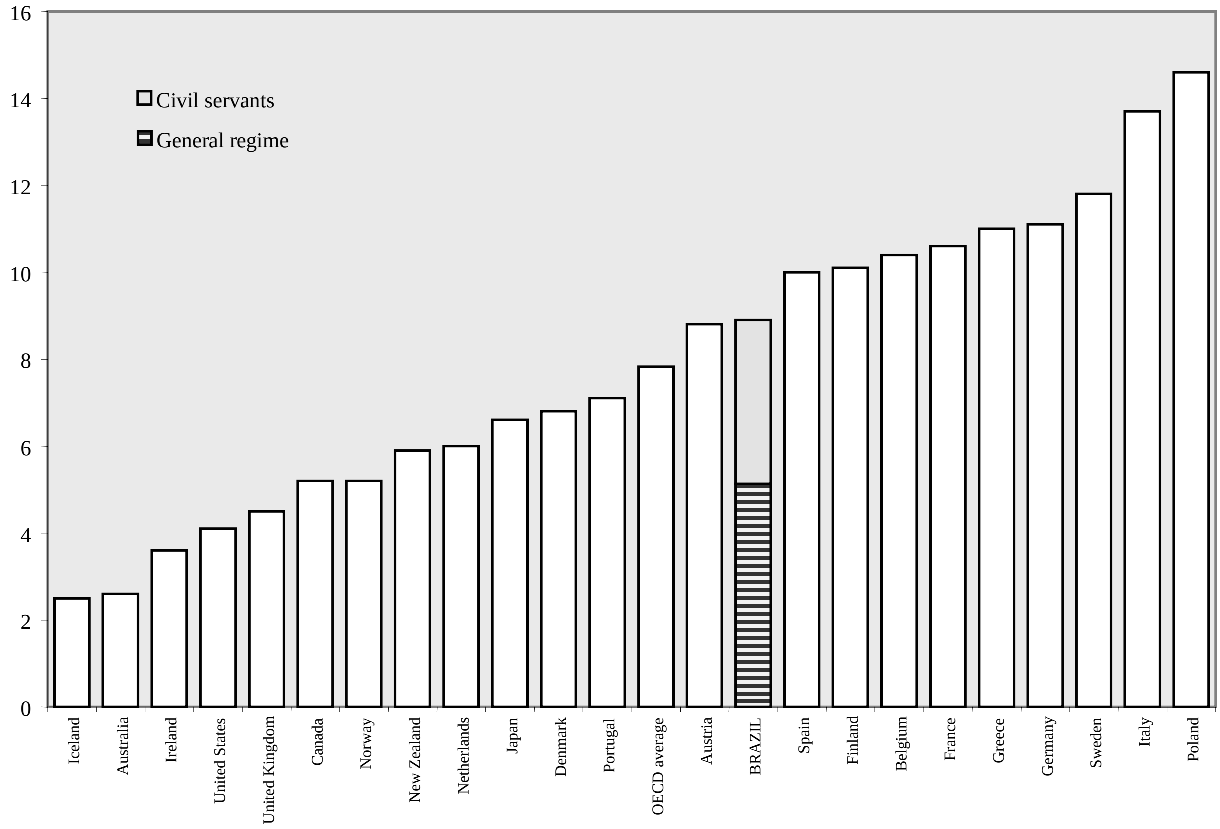
	Contributions	Expenditures	Balance
General regime	5.3	6.3	-1.1
Public sector special regimes	0.7[1]	4.7	-4.1
of which:			
Federal	0.3	2.4	-2.1
State	0.3	2.1	-1.8
Local	0.0	0.3	-0.3
Total	**5.9**	**11.1**	**-5.2**

1. Includes employee contributions only.
Source: Ministério da Previdência e Assistência Social and Ministério da Fazenda.

3. This paper is divided into three parts. The first section describes the general regime for private sector workers. The second discusses the different civil servant schemes, where reforms have been more timid and where most challenges remain. This section includes a discussion of the main public sector scheme, as well as of the recent moves towards pre-funding at the state level. Finally, the third section briefly examines the voluntary complementary regime, concentrating on its implication for the sustainability of fiscal policy.

2. This refers to the system's financing requirements and not to its actuarially based accounts, which would need to include the notional employer contribution. If this notional contribution is incorporated at a 2 to 1 ratio (i.e. if governments contributed at a rate twice that of civil servants'), the deficit would have amounted to less than 3 per cent of GDP in 1999.

Figure 1. **Public pension expenditure[1] : an international comparison**
Per cent of



1. 1995 for OECD countries, 1999 for Brazil. Figures generally exclude the military

2. The ratio for Poland excludes pensions paid directly from the budget.

Source: Brazilian Ministério da Previdência Social; Roseveare et al. (1996); Polish Ministry of finance; Italian Ministero del Tesoro, Ragioneria Generale dello Stato, February 1997; Greek Social Security budget.

The general pension regime: an assessment of recent reforms

4. The national social security system (RGPS) has its origins in the unification during the 1960s of multiple independent regimes for professionals. Since then, its coverage has been gradually extended to include, *inter alia*, domestic employees and rural workers (see Box 1). In 2000, about 27 million workers contributed to the system, equivalent to less than half the private sector labour force. The great majority of self-employed workers (for whom contributions are optional), as well as most of the informal sector, fall outside this system.

Box 1. **Rural pensions**

Social security benefits equivalent to the minimum wage are paid out to rural workers from the age of 60 (men) and 55 (women), on condition they can prove at least 10 years of rural activities (whether or not they have previously contributed to the system). In March 2001, 6.5 million rural benefits were granted (33.2% of the total), which represents an annual expenditure of about 1% of GDP. The only revenue counterpart to this benefit is a "rural contribution", based on the commercialisation of agricultural products, which covers only about 8% of the programme's expenditure.

The social impact of this programme is significant. Authorities estimate that rural transfers have a significant social impact, as well as a role in stimulating the local economy and generating jobs. In 61% of Brazilian municipalities, social security payments are the main source of income. According to IPEA, a public economic research institute, the effect is largest in the rural Northeast, one of the poorest parts of the country. There, rural pensions represent on average 71% of recipients' household income.

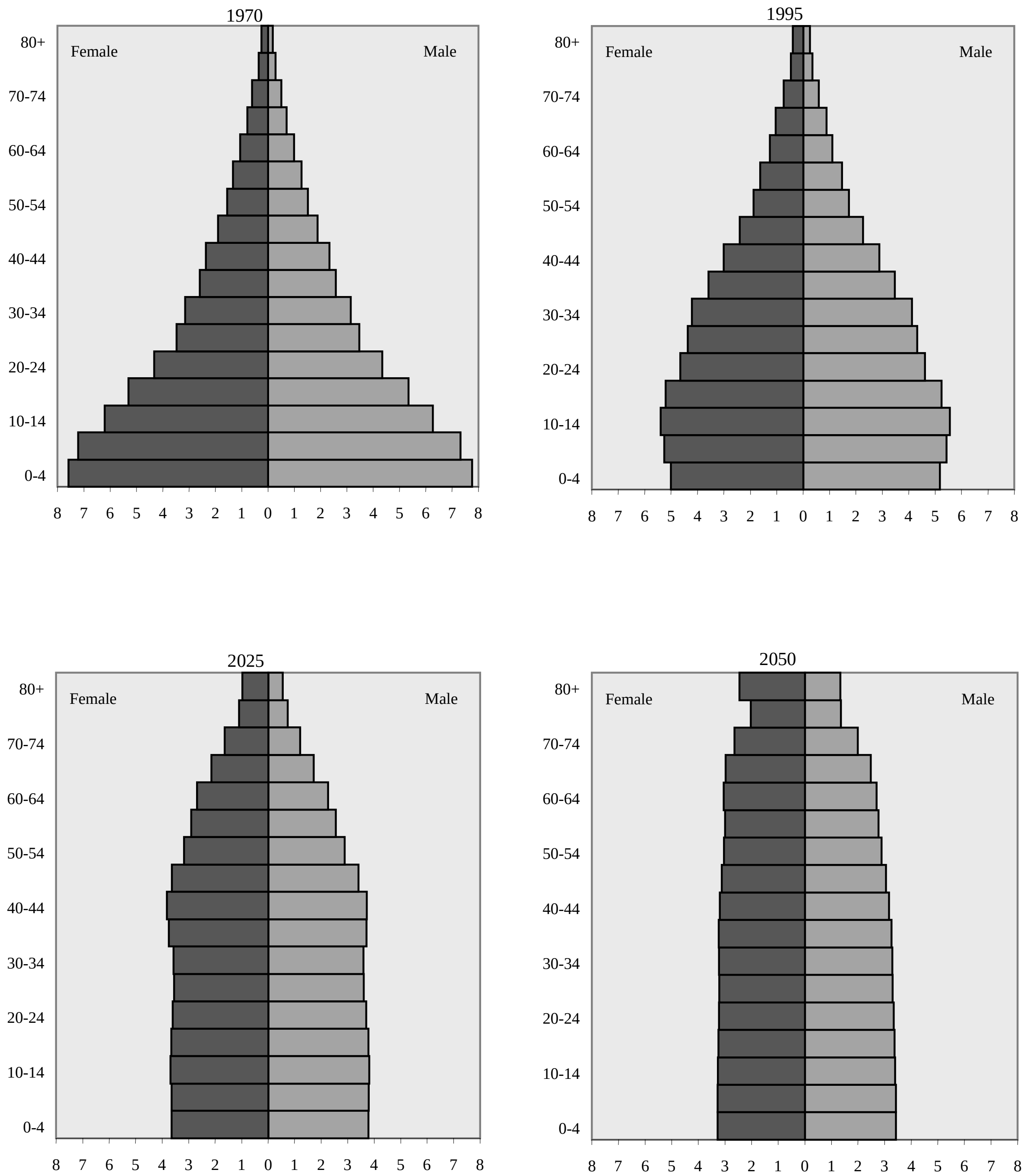
5. The extension of coverage has been one of the main factors behind the sharp jump in the number of pensioners, which rose from 9.7 million in 1988 to an estimated 16 million in 1999.[3] Partly as a result, expenditure jumped from a low of 2.5 per cent of GDP in 1988 to close to 6 per cent in 1998/99. This has not, however, been accompanied by measures to increase funding. Pension benefits were extended to new entrants, regardless of whether they had previously contributed to the system. In practice, workers close (or at) retirement age joined the system, while younger workers in the recently franchised categories tended to remain in the informal sector. As a result, the ratio between contributors and beneficiaries fell from about 4.5:1 in 1970, to 1.7:1 in 1997. With social security revenues remaining roughly constant at about 5 per cent of GDP, the system's financial balance deteriorated steadily.

6. This deterioration in social security accounts is also partly related to demographics, even though population ageing is still at its early stages. The share of the population over 65 years of age has increased from 3 to 5 per cent of the total since the 1970s. This compares with an average of almost 15 per cent in the OECD at present. Life expectancy at birth has also increased sharply, by 10 years in less than two decades. Nonetheless, at 64 for men and 72 for women, it still trails most OECD countries, by about 8 to 10 years. In fact, Brazil is still undergoing the effects of a classic demographic transition, including a recent sharp drop in fertility rates (Figure 2). The number of children per woman of child-bearing age has fallen sharply, from 5.8 in 1970 to an estimated 2.2 in 2000. As a result, the young age dependency ratio has fallen steadily. This downward trend is expected to persist for approximately another 20 years, more than offsetting the gradual increase in the old age dependency ratio. Accordingly, the share of the working age population (20 to 64) in total will continue to move up until 2015/2020 (Figure 3). After 2020, however, the relative size of the working age population is expected to decline, with total dependency ratio converging gradually towards the OECD average (Figure 4).

3. Including other social security benefits, such as maternity and sick leave benefits, accident insurance and old age assistance, there were close to 18 million recipients of social security transfers in 1999.

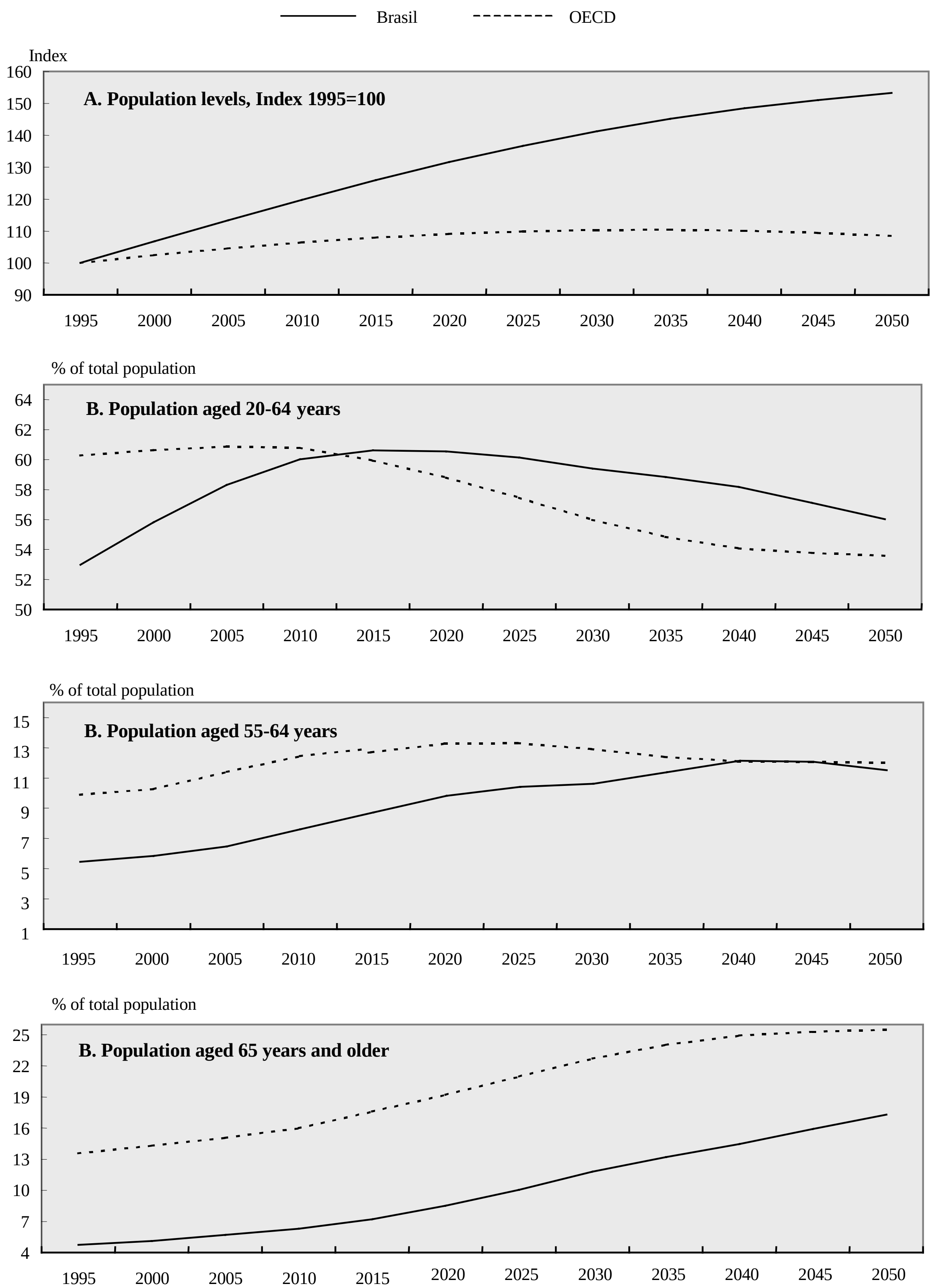
Figure 2. **Demographic structure**

Per cent of total population



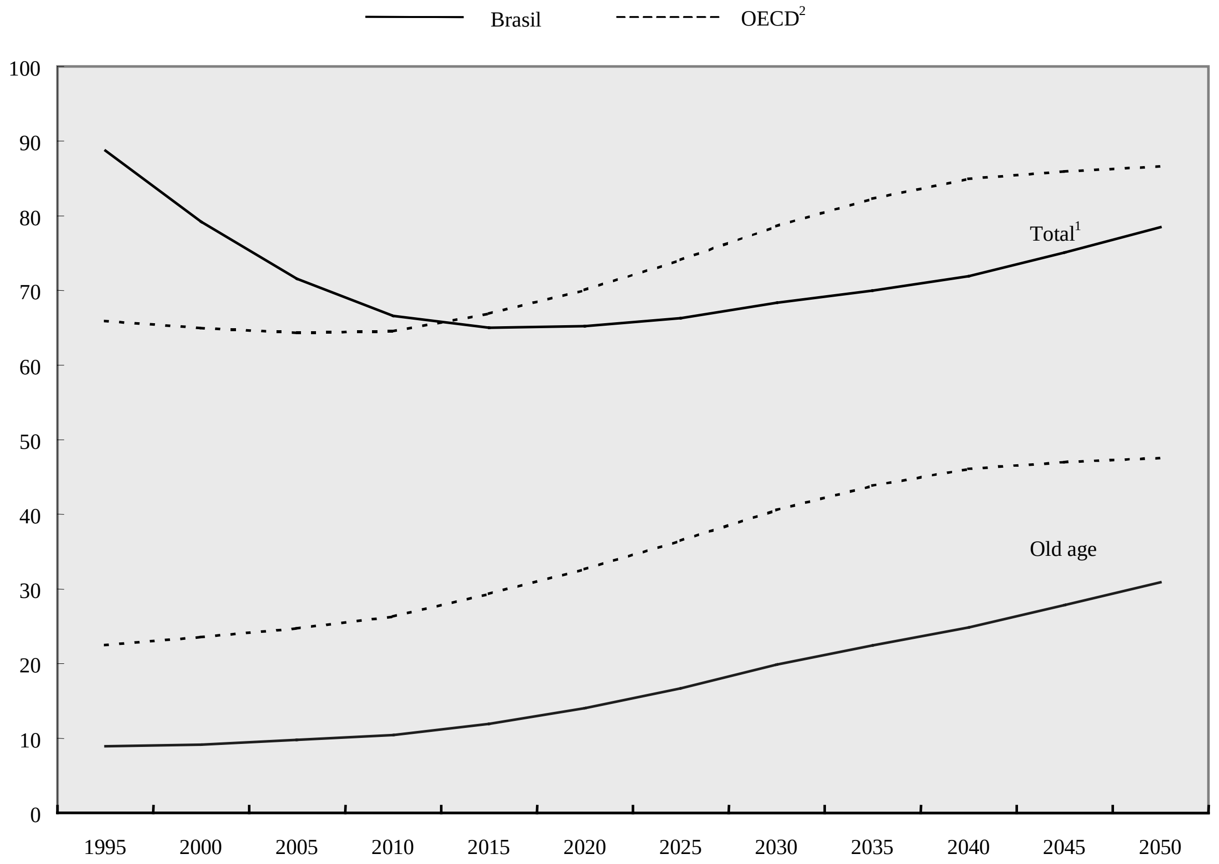
Source: United Nations' "World Population Prospects 1950-2050 (The 1998 revision)"

Figure 3. **Population trends: 1995-2050**



Source: Eurostat for EU countries and United Nations for others.

Figure 4. **Total and old-age dependency ratio**
Group relative to population aged 20 to 64 years in per



1. The total dependency group refers to young population (0-19 years) and old-age population (65 years and over).
2. Data are calculated as the average of the rates of individual countries (excluding Turkey and Mexico).
Source: Eurostat for EU contries and United Nations for others.

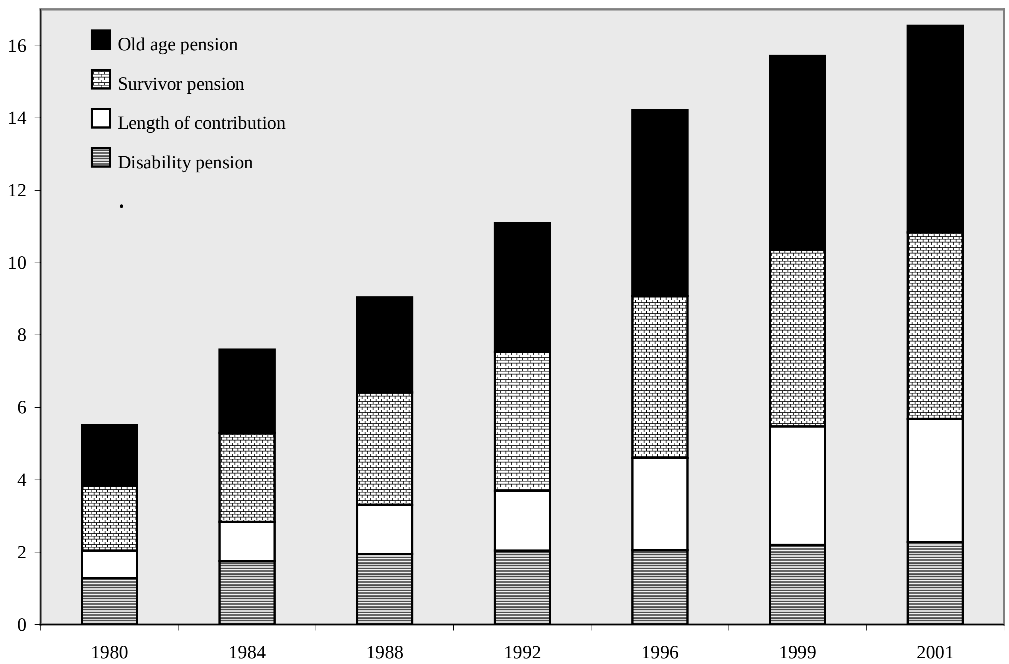
The pension system since the 1998 reforms: towards sustainability

7. By the mid-1990s it was clear that a combination of the non-funded extension of benefits, growing pressure from an ageing population, and perverse incentives in the system's original design was leading to an explosive widening of the social security deficit (Figure 5). This threatened macroeconomic stability. After several years of discussion, a major reform was approved in 1998. A decision was made to retain the PAYG system, since the cost of transition to a fully funded capitalisation scheme was considered too high.[4] The main plank of reforms consisted of a new methodology for calculating pension benefits (see Box 2). By introducing an adjustable formula (*fator previdenciário*) based on actuarial rules, this new methodology has gone a long way to correcting distortions in the system and ensuring its long-term financial viability. Other reforms have included the abolition of contribution scales and the extension of the contribution period over which benefits are calculated.

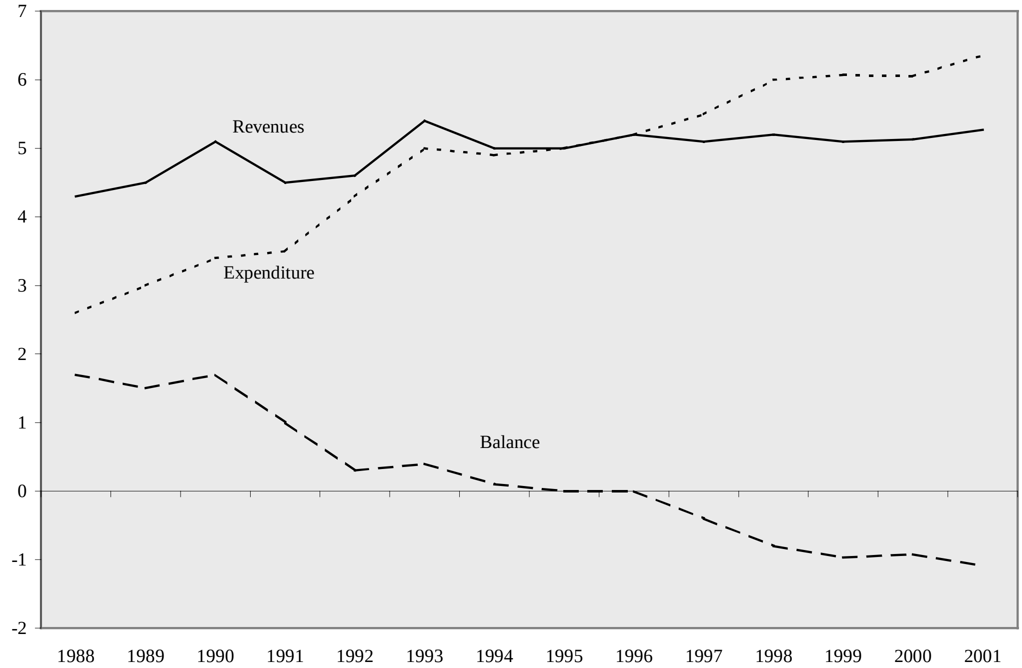
4. See Uthoff (1999).

Figure 5. **General pension regime**

A. Number of pensions paid (Quantity in million, end of year)



B. Financial balance as per cent of GDP



Source: Suplemento Histórico do AEPS-1996; Anuário Estatistico de Previdência Social 1998; Boletim Estatistico de Previdência Social / MPAS; SPS/MPAS

Box 2. **The new methodology for calculating pension benefits in the general regime**

The new benefit formula was inspired on the Swedish notional accounts model. The pension is calculated based on the past contributions of each worker, life expectancy and a coefficient that provides incentives for postponing retirement, as follows:

$$Pension = \frac{W \times c \times P}{R} \times bonus$$

Where:

W = average of 80 per cent of highest wages
c = contribution rate
P = contribution period
R = residual life expectancy at retirement, updated annually by IBGE

$$bonus = 1 + \left(\frac{retirement\ age + (c \times P)}{100} \right)$$

The first part of the formula (*W x c x P*) represents the amount of contributions accumulated in the workers notional individual account. The annual updating of life expectancy works as an endogenous mechanism, adjusting automatically the pay-as-you-go system to the ageing population process. Finally, the *bonus* represents an implicit rate of return that increases as workers decide to retire later.

Life expectancy is officially estimated by the annual household survey of the Brazilian Institute of Geography and Statistics (IBGE). A single life expectancy table is used, regardless of gender or other personal characteristic. Women and teachers (primary and secondary school) get a bonus 5 years added to the contribution period. Woman teachers get the bonus twice, adding ten years to the actual contribution period. A five-year transition mechanism was introduced before the full implementation of the *fator previdenciário*.

Eligibility

8. Recent reform of the social security system has introduced tighter eligibility requirement for full pension entitlement. This is now conditional on a minimum length of contribution to the social security system (35 years for men and 30 for women). In practice this means that it is no longer possible to count years of undeclared work towards retirement (see Box 3). A reduced entitlement continues to be available to those who reach the pensionable age of 65/60 (60/55 for rural workers), so long as they have contributed for at least ten years (this figure will increase gradually to 15 years by 2005).[5] A reduced entitlement may also be granted to men/women who joined the general social security regime before the reforms and who have contributed for at least 30/25 years.

5. This often overlaps with social assistance programmes, especially the means-tested old-age assistance, available to all residents older than 65.

Box 3. **The general social security regime before reforms**

Until the 1998 reforms, full pension rights were granted to those that had either contributed for ten years, or reached statutory retirement age (65 for men and 60 for women) or could prove they had worked (without necessarily contributing to the social security system) for a certain number of years (35 for men and 30 for women). Through early retirement schemes, proportional pensions were also available to men/women who had worked for at least 30/25 years. Given that the average worker entered the labour force at the age of 18, it was not uncommon for people to retire in the mid-forties. Benefits were calculated based on the last 36 months of activity, subject to a cap. This encouraged workers (either those for whom the system was optional or those in the informal sector) either to enter the system close to retirement age, or sharply to increase their declared income in the last few years of activity. To prevent the worst abuses, a complicated system of contribution scales was put in place so that workers could not immediately declare higher incomes when close to retirement age. Moreover, a minimum period of contribution was introduced for eligibility to pension benefits. This was gradually increased, from five years in 1991 to nine years immediately before the approval of reforms in December 1998.

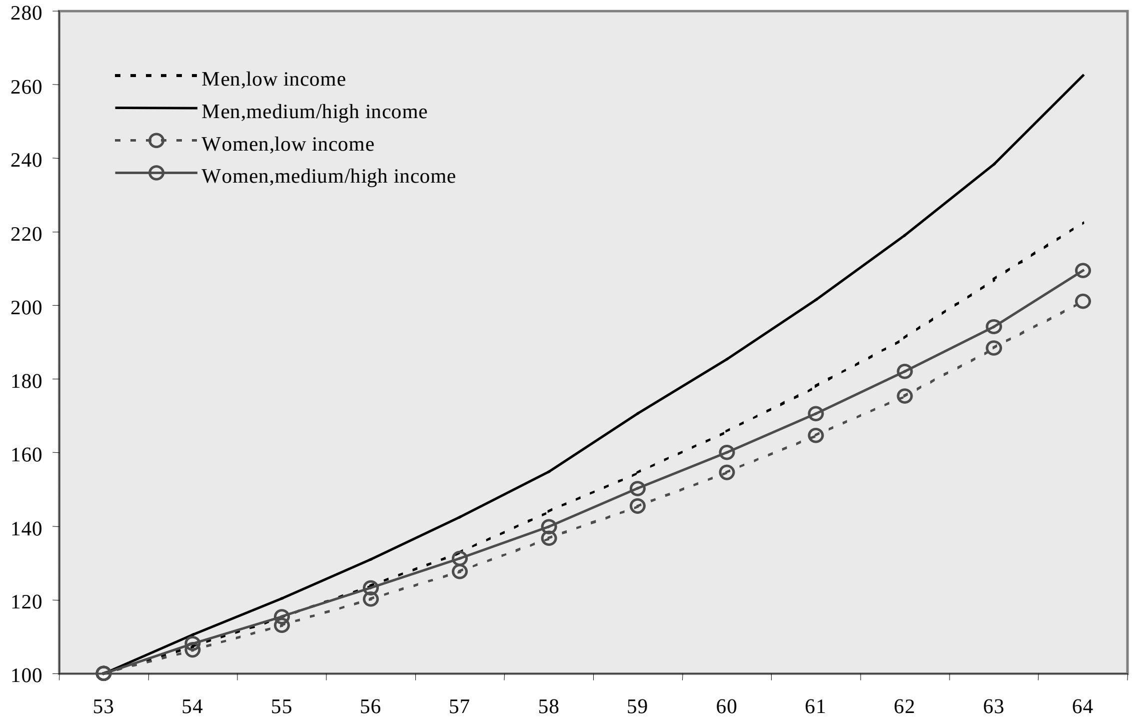
9. Proposals to introduce a minimum retirement age have been defeated in Congress. Tighter eligibility requirements are anyway likely to lead to an increase in the average age of transition to inactivity, which averaged 49 years in 1998, as middle-aged workers delay retirement in order to acquire right to a full pension. In fact, by 2000 the average age of transition to inactivity had already increased to more than 54 years. More importantly, the design of the system itself should lead to a general increase in retirement age. One of the main features of the reformed Brazilian system is that it provides workers with enhanced flexibility in choosing when to retire, as well as with large incentives to remain active for longer. Based on cross-section data for different categories of workers, the OECD Secretariat estimates a marginal increase in pension benefits of between 5 and 8 per cent for every additional year of activity (see Box 4, Figures 6 and Figure 7).

Contribution rates

10. Employees' marginal contribution rates to the general social security system were edged up from 8 to 11 per cent, subject to a cap.[6] In effect, for salaries above the cap (BRL 1 328 per month) the marginal employee contribution rate falls to zero. Employers contribute a flat 20 per cent rate regardless of the cap. Benefits are capped at the same level, with the effect that higher income workers are encouraged to join complementary insurance schemes. However, in a country with a very unequal distribution of income, the number of workers with salaries above the social security cap is relatively small: less than 20 per cent of total. Finally, the absence of a cap for employer contributions enhances the system's internal redistributive role.

6. Certain contributors are subject to a special regime. This includes agricultural producers, football clubs, small and medium enterprises adhering to the "SIMPLES" tax system, domestic employees and philanthropic (charity) institutions.

Figure 6. **The marginal increase in pension benefits**



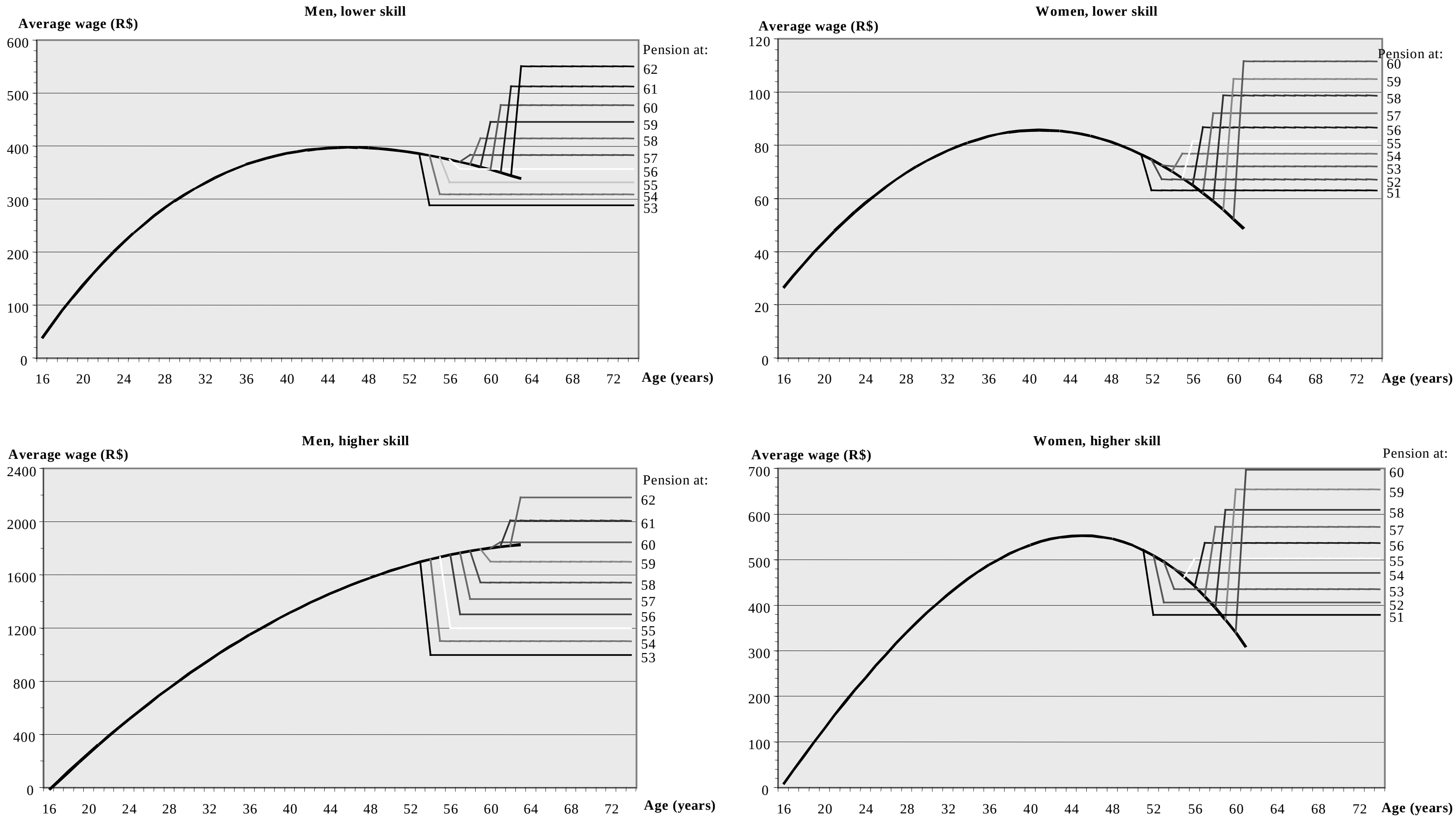
Source: OECD, based on IPEA survey data

Box 4. **Calculating the marginal pension benefit of delaying retirement**

Based on the 1997 household survey data published by the National Statistics Institute (IBGE, *Instituto Brasileiro de Estatísticas)*, IPEA (*Instituto de Pesquisa Econômica Aplicada*) has calculated wage income curves for different categories of workers. Private sector workers between the ages of 16 and 70 have been divided by gender, age and skill level (defined as years of schooling). General system (RGPS) pensioners who remained in the labour force were excluded from the sample. In the absence of a complete time-series set, this cross-section data can be used as proxy for a life-cycle income curve.

The shape of these earning curves help determine the marginal increase in pension benefits for every additional yeat of activity and thus the effect of the *fator previdenciário* (FP) on retirement decisions. In fact, pensions are determined by multiplying the FP bythe average of the highest 80 per cent contribution wages over the entireworking life of a worker. Workers who arrive in their early 50s with a (still) upward sloping earnings to which the FP is applied. Conversely, workers with a downward sloping earnings curve will find that a higher FP is partly offset by a declining average earning. For instance, IBGE/IPEA data show that on average, higher-skill (more than 8 years of schooling) men reach their peak earnings much later than lower-skill workers and/or women, explaining why the introduction of the FP is expected to have a stronger effect on the former.

Figure 7. **The increase in pension benefits for an additional year of activity**



Source: OECD. based on IBGE/IPEA data

Entitlements

11. Pension benefits are based on the average of the highest 80 per cent of monthly wages over the whole contribution period, subject to a floor and a cap.[7] Entitlements are then calculated by multiplying this average by the *fator previdenciário* (FP, social security factor), which depends, *inter alia*, on the length of contribution to the system and life expectancy at the time of transition to inactivity. Based on life expectancy in 1999, an average male worker would have an FP equal to one at age 56½; female workers, who receive a bonus, reach this level two years earlier. The formula is adjusted annually for changes in life expectancy, so the system is designed to cope with expected ageing of the Brazilian population. A linear increase of five years in life expectancy would entail extending the working life (and length of contribution) of the average worker by three years. Alternatively, pensions would be reduced by approximately 20 per cent.[8]

12. The calculation of pension entitlement through the use of the FP formula described above is designed to mirror an individual system of capitalisation. In fact, the first part of the formula is an individual-specific actuarial indicator, whereas the second part can be thought of as a bonus for delaying the transition to inactivity. Contrary to a traditional capitalised system, however, there is a strong element of internal redistribution of income incorporated in the system. This redistribution is achieved through a number of instruments:

- Women and primary and secondary school teachers benefit from bonus years in the calculation of the length of contribution.
- A single life expectancy table is used; hence gender differences are ignored, benefiting women, who have on average lower incomes and higher life expectancies than men.
- A single contribution rate of 31 per cent is used (11 per cent for employees and 20 per cent for employers). Workers with lower wages – who contribute at the lower marginal rates of 8 or 9 per cent – get an indirect subsidy.
- Even though pension benefits are capped, employers contribute at 20 per cent without any cap. Implicitly, higher wages are subsidising the system.

The challenges ahead

13. The reform of the general regime for private sector workers has represented an important step towards the long-term actuarial and financial balance of social security for two main reasons. First, it curbs the worse inequities of the old scheme by creating a fair, simple, transparent and actuarially based system of incentives/disincentives to influence retirement decisions. The OECD Secretariat calculates the internal equilibrium rate of the pension system (defined as the internal rate of return to contributions) at between 2.5 and 4 per cent per year, depending on the category of worker. This is prudent even under conservative assumptions about rates of return. Second, it introduces a large degree of in-built flexibility, which is crucial to face the likely demographic challenges in the future.

---

7. Pension benefits are subject to a ceiling and a floor. The ceiling is equivalent to the social security cap, the same that applies to contribution rates (BRL 1 328.25). The floor is equal to the minimum wage (BRL 151). In late 1999, the average pension paid by the general system was less than BRL 300. Benefits are indexed to the minimum wage. Survivor's pensions are calculated at 100 per cent of the original pension benefit, payable to a spouse or companion, regardless of his/her age or the duration of their union.

8. The average worker is defined as joining the system at the age of 18.

14. The new design of the general system should lead to an increase in retirement age. One of the main features of the reformed Brazilian system is that it provides workers with enhanced flexibility in choosing when to retire, as well as with large incentives for remaining in activity for longer periods. In spite of reforms, the Brazilian system remains quite generous. Although the systems are not entirely comparable, in most OECD countries the standard statutory retirement age is of at least 65 for both sexes, with a few exceptions.[9] It should be borne in mind that a multitude of non-employment benefit systems provides incentives for early retirement in most OECD countries, to the effect that the average age of transition to inactivity is often lower than the statutory age. Still, the average age of transition to inactivity among older workers in Brazil has been and is likely to remain below the OECD average (see Table 3).[10] This is only partly justified by the fact that life expectancy at 60 is lower in Brazil (17.3 years of retirement) than in the OECD (an average of about 21 years), especially given that these are likely to converge.

Table 3. **An international comparison of average retirement age, 1995**

	Males	Females
Brazil[1]	**56.0**	**52.0**
Belgium	57.6	54.1
Luxembourg	58.4	55.4
Austria	58.6	56.5
Netherlands	58.8	55.3
Finland	59.0	58.9
France	59.2	58.3
Germany	60.5	58.4
Italy	60.6	57.2
Spain	61.4	58.9
Australia	61.8	57.2
New Zealand	62.0	58.6
Canada	62.3	58.8
Greece	62.3	60.3
Denmark	62.7	59.4
United Kingdom	62.7	59.7
Sweden	63.3	62.1
Ireland	63.4	60.1
Portugal	63.6	60.8
Turkey	63.6	66.6
United States	63.6	61.6
Norway	63.8	62.0
Switzerland	64.6	60.6
Japan	66.5	63.7
Iceland	69.5	66.0

1. 2000.
Source: OECD Secretariat's estimates based on *Economically active population* 1950-2010, ILO (December 1996). For Brazil, MPAS.

9. The main exceptions are France, Belgium (for both sexes) and Italy (for women only), where the statutory retirement age is 60. Italian men's statutory retirement age is 65.

10. See Blöndal and Scarpetta (1998).

15. It is not clear, however, if the recent changes will indeed bring the system towards financial balance in the medium to longer-run. The Ministry of Social Security (MPAS, *Ministério da Previdência e Assistência Social*) and the Ministry of Finance (MF, *Ministério da Fazenda*) have three scenarios for the general regime's deficit until 2020, the main difference between which is the assumption for real output growth (3, 3.5 and 4 per cent). In the least optimistic scenario, the system's deficit would reach 1.8 per cent of GDP in 2020, up from about 1 per cent in 2000, but below the 2.5 per cent that would have been expected if reforms had not been implemented. In the central scenario, considered by authorities to be the most likely, the deficit would stabilise at 1 per cent of GDP. These scenarios also hinge on other assumptions, including wage bill growth, the growth of non-pension expenditures, and the annual re-adjustment of benefit levels. These variables, however, depend on a series of factors that have not been addressed by recent reforms. Indeed, future challenges to social security finances are likely to come from factors affecting these variables: the growing share of informal employment (which affects growth of the formal wage bill), the growth of social assistance expenditures imputed to the system, and the present link between the minimum wage and the level of benefits.[11]

The growth of informal activities

16. As a result of, *inter alia*, a growing tax burden, the increased use of sub-contracting in industry and insufficient flexibility in labour legislation,[12] the informal sector has expanded faster than the formal economy in the past ten years. In the decade to 1999, the share of formal employment in total employment fell steadily from 59 to 45 per cent.[13] As far as pensions are concerned, this trend has also been shaped by the design of the old-age social assistance programme. This means-tested programme benefits all residents over the age of 67 regardless of whether they have ever contributed to the social security system, discouraging older informal sector workers from joining the formal sector.[14] By reducing the number of active contributors, this trend poses an important threat to the system's financial balance. In 1998, there were an estimated 38.7 million workers outside the social security scheme. Most were either self-employed, a category that includes a large number of street vendors, or domestic employees. In these two categories, only a fraction of workers contributed to the system: about a sixth and a quarter respectively. Low coverage rates were also prevalent in the construction and agricultural sectors. Raising coverage among these categories would significantly increase social security revenues.[15] The authorities have thus

11. Health expenditure (and revenues earmarked for this, mostly the CPMF) are also part of the social security sub-sector, creating problems of cross-subsidisation between the different components of social spending. This section deals only with the narrower definition of social security, which includes most social assistance but not health spending.

12. In this regard, there are a number of initiatives taken recently by the government to overcome these rigidities. Among others, they cover speeding-up procedures, streamlining the Labour Courts, introduction of new fixed-term contracts, opening the possibility for training periods in the labour contracts. For developments concerning Brazil's labour markets, see IPEA's monthly report "*Mercado de Trabalho: conjuntura e análise*".

13. Between 1989 and 1999, the number of informal employees rose from 20 to 26.5 per cent of total employment. The share of the self-employed and employers has also increased.

14. Transfers related to the old-age assistance programme are of a similar amount to the minimum pension granted under present rules, which requires a minimum of ten years' contribution to the social security system, rising to 15 years by 2005. Entitlement is subject to a maximum household per capita income of ¼ of the minimum wage.

15. About half of non-covered workers were either without income or with incomes below the minimum wage, making them hard to target. If public sector employees were also excluded from the count, the number of potential new contributors would fall to a still significant 18.5 million. Of these, 8.4 million are self-employed and 2 million are domestic employees.

identified a number of target groups for increasing coverage rates and designed specific policy measures to reach them. Some of these measures also serve wider policy objectives such as incentives to SMEs and other social goals, but their direct effect on social security is through coverage rates. Several special regimes are now in place, including:

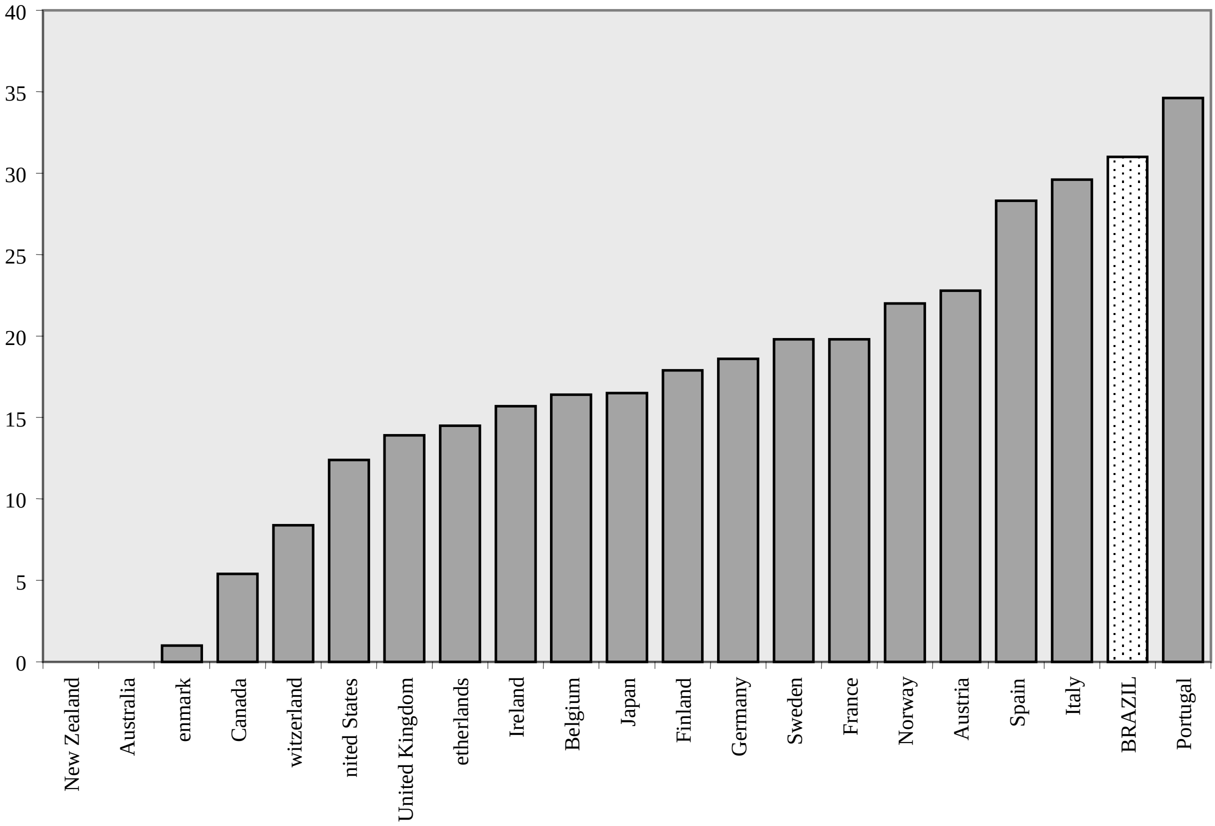
- Domestic employees: the employer's rate has been reduced from 20 to 12 per cent. The employee contributes at the normal rate (8 to 11 per cent).
- Rural workers: rural enterprises contribute 2.6 per cent of turnover, independent farmers contribute 2.1 per cent of sales. No other employee contribution is required.
- Small and medium enterprises: employers' contribution rate fixed between 3 and 7 per cent of turnover (progressively). Employees contribute at the normal rate.

17. This strategy has its limits, however. The National Institute of Social Security (*Instituto Nacional de Segurança Social*, INSS) estimates that these various exemptions and reduced contribution rates cost close to 0.7 per cent of GDP annually through revenue losses.[16] Moreover, taxing turnover is inefficient since it cumulates through the production chain and complicates on-going discussion of tax reform. Finally, special regimes greatly complicate collection and facilitate evasion. For instance, the rural worker's contribution of 2.1 per cent of sales is theoretically imputable to first purchasers of farm products, but is hardly collectable.

18. Recognising this fact, other steps have been taken to expand coverage, including the creation of mechanisms to prevent losses from the introduction of sub-contracting and increased flexibility and simplification of procedures. Education campaigns have been stepped up and a law codifying crimes against Social Security (*Lei de Crimes contra a Previdência Social*) was approved in mid-2000. This new law strengthens the ministry's legal authority to prosecute fraud and evasion. A number of measures were also taken in the context of the programmes to generate employment and income (*Programas de Geração de Emprego e Renda*). All these measures go in the right direction, but are unlikely to halt the increase in informal employment. This calls for a broader strategy that should include a deeper review of labour legislation and the tax system – and more specifically, the reduction of payroll taxes. Brazil's pension contribution rates remain among the highest in the world (Figure 8).

16. This figure includes losses from all special regimes, including those applying to philanthropic (charity) institutions.

Figure 8. **Pension contribution rates**
Per cent



Source: United States Department of Health and Human Resources, Social Security Programs Throughout the World (various issues).

The weight of non-pension benefits

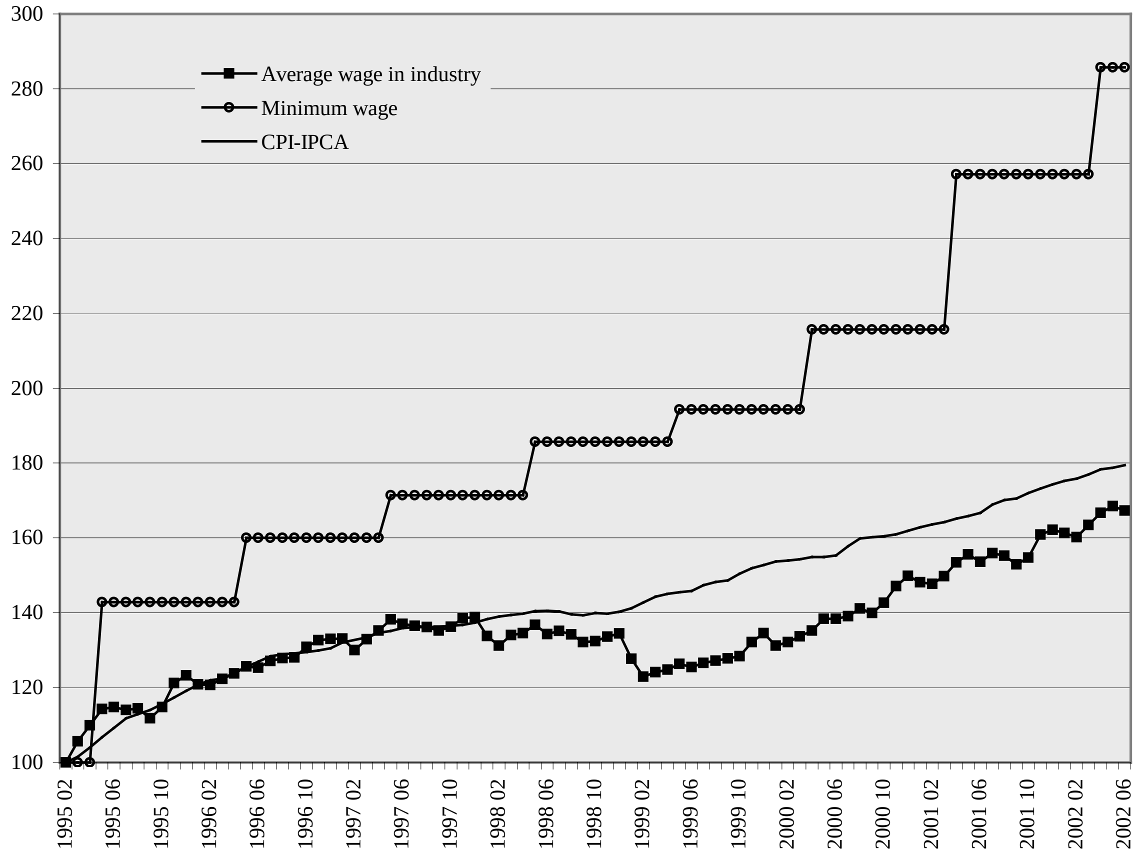
19. The social security system is also responsible for the payment of non-pension benefits such as maternity and sick pay, accident insurance and old age assistance. In the first half of 2000, there were approximately 3.2 million beneficiaries of these types of social assistance, compared with over 15 million pensioners. As the average non-pension benefit is modest (close to one minimum wage, or BRL 151), their share of overall social security expenditures remains small (less than 5 per cent). Still, both the scope and scale of these benefits have increased steadily in the past few years as the social safety net has been gradually extended. If this trend persists, social assistance transfers may threaten the long-term financial balance of the social security system no matter how actuarially-balanced its pension segment is. It would be desirable, therefore, to segment social security accounts more clearly isolating non-pension expenditures and funding. This would enhance the transparency of policy choices and could lead to a more efficient and progressive system of financing social expenditures, relieving the pressure on payroll taxes.

The link between minimum pension benefits and the minimum wage

20. The minimum wage is proposed by the executive, but subject to congressional approval. It is usually adjusted in line with the forward-looking CPI, plus an additional, often politically determined, real increase. In the recent past, this adjustment has significantly exceeded the growth of average earnings (Figure 9).[17] The value of the minimum wage affects social security benefits, since it serves as a floor for pensions. The significance of this institutional link is large, since about two-thirds of all benefits are at present equal to the social security floor, including almost all rural workers' pensions. As a result, continuous real increases in the minimum wage could threaten the social security system's financial balance.[18]

Figure 9. **Average earnings and the minimum wage**

February 1995 = 100



Source: IBGE, IPEA,CNI

17. The effect of increases in the real minimum wage can be substantial. The large re-adjustment of the minimum wage in 1995 has had an annual impact equivalent to 0.6 per cent of GDP on social security accounts, according to MPAS's calculations.

18. In early 1999, benefits equal to the minimum wage represented 35 per cent of total social security transfers.

21. The use of the minimum wage as a floor for benefits, is mandated by the constitution.[19] A constitutional amendment to de-link the minimum wage and the pension benefit's floor would be desirable, since it would also allow authorities more freedom in setting the former; about 75 per cent of the impact of a minimum wage increase on the federal budget derives from its social security component. De-linking would also serve to reinforce the incentives for later retirement built into the *fator previdenciario*. At present, the marginal increase in pension benefits for an additional year of activity for workers earning the minimum wage is close to zero.

The special regimes for civil servants: a major source of financial imbalance

22. There are a multitude of PAYG pension schemes applying to civil servants. Other than at the federal level, each of the 27 states have their own pension systems[20]. As rule, municipalities follow the general regime, although some (often larger ones) have their own special schemes. These schemes differ slightly from each other in terms of contribution rates, but in almost all cases they are considerably more generous than the general scheme. Between 1987 and 1995, federal pension expenditures have increased by a factor of four (in real terms), being one of the main reasons behind the sharp increase in federal payroll expenditures, which jumped from 3.5 to 5.8 per cent of GDP (Figure 10). Indeed, while the federal payroll has been roughly stable since 1995, pension expenditures have continued to increase in line with GDP. About half of the federal payroll is now spent on pensions.[21]

23. The strategy of freezing pay and recruitment in order to offset the growing financing requirements of civil servants' pension schemes may be reaching its limit in some states. By 2001 there was growing pressure for pay rises, and the average age of working civil servants had grown steadily. As a result, it is unlikely that in the next few years increased pension spending could be offset by a reduction in active payroll expenditures. This situation is generally replicated at the state and municipal level. The aggravating factor is that payroll expenditures usually represent a much larger share of state's current revenues, typically between 60 and 80 per cent, against less than 50 per cent for the federal government. The size of the problem varies significantly among states and municipalities. In 1998, about three-quarters of the total pension deficit was concentrated in the five states discussed above (*São Paulo, Minas Gerais, Rio de Janeiro, Rio Grande do Sul and Paraná*). Among municipalities, the problem is mostly concentrated in the two largest cities (*São Paulo and Rio de Janeiro*) and other nine large metropolitan areas.

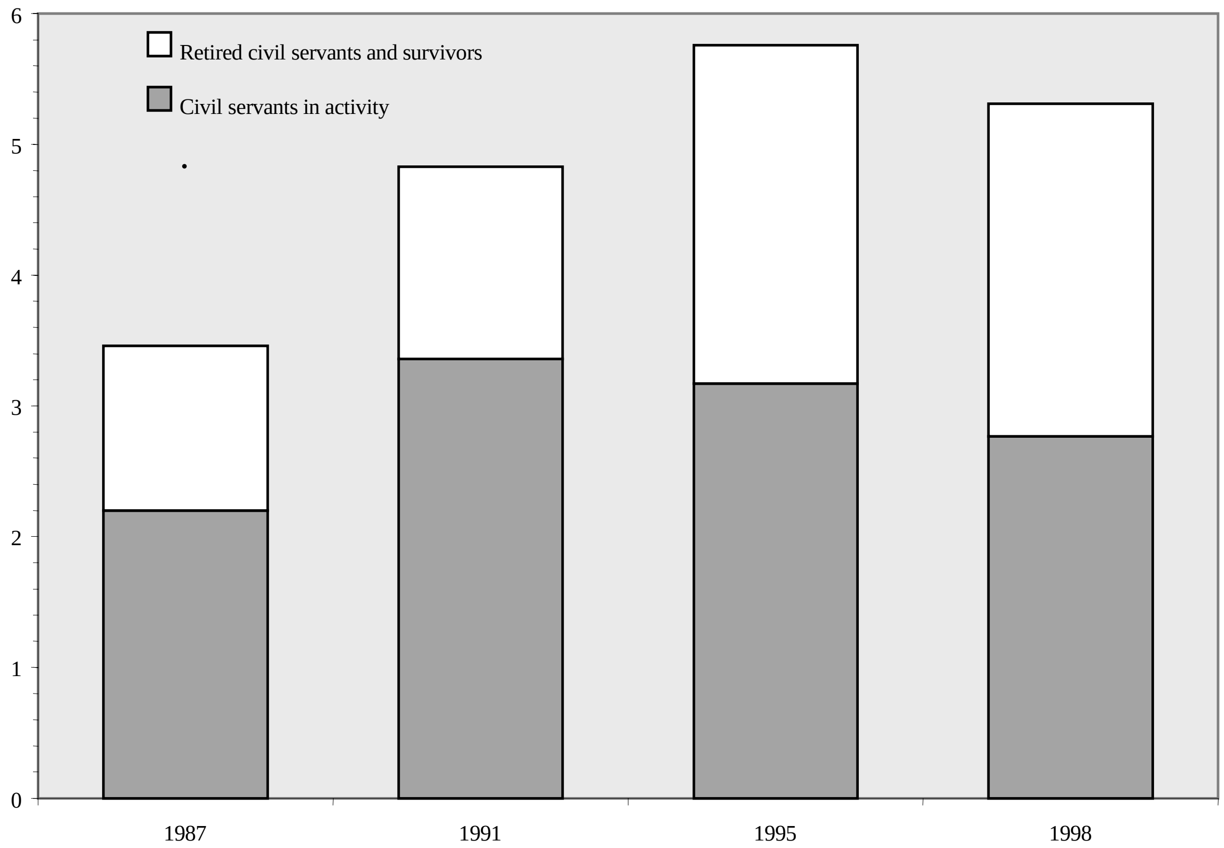
---

19. Note that the majority of OECD countries have indexation mechanism based on prices, or a combination of prices and average (not minimum) wages. This should be considered in Brazil.

20. For a discussion of fiscal decentralisation issues, see Fukasaka and de Mello (1999), Serra and Afonso (1999), IMF (1997) and OECD (2000).

21. Pension expenditures include survivors' pensions. Calculations are made using the IGP-DI of the *Fundação Getúlio Vargas* (FGV) as a deflator.

Figure 10. **Federal Payroll expenditure**
Per cent of GDP



Source: Ministério da Fazenda

Reform initiatives have not been sufficient

24. The growing pressure of civil servants' pensions on payroll expenditures has led the government to propose a series of reforms to congress, some of which involved changes in the constitution. Reforms, partly approved in 1998-99, eliminated some abuses and inequities but have not significantly changed the benefit formula, for workers hired before their implementation (Box 5). This formula equating benefits to 100 per cent of the last basic salary, independently of the level of the contribution, has been the main source of distortions in the system. For workers hired after 1998, some important changes were made, including the institution of a higher minimum retirement age. Reforms (pending the approval of secondary, implementing legislation) have also widened the possibility for governments at all levels to recruit civil servants under the general regime and/or to cap benefits at the same level as that in the general regime, with additional benefits guaranteed by a complementary scheme. Authorities hope these measures will lead to the elimination of present inequities. It is not clear, however, whether governments at all levels will widely use this possibility since it implies short-term fiscal costs (i.e. increasing social security contributions of public employers).

Box 5. **Recent reforms to civil servants' pension schemes**

Attempts at reforming public sector pension schemes have encountered significant legal and political obstacles. Reforms approved by congress in 1998 fell significantly short of original proposals by the executive. Although some tightening of eligibility requirements was approved and the worst abuses curtailed, most measures will apply only to civil servants joining the system after implementation of the reforms. Moreover, entitlements have not been significantly changed, with the effect that very little progress has been made towards the financial and actuarial balance of the various public sector pension schemes.

The main reform measures were:

- Institution of a minimum retirement age, starting at 53 years for men and 48 years for women. Through a transitional formula linked to the years of contribution prior to the approval of reform, this minimum retirement age will increase effectively to 60 and 55 years respectively. New entrants will automatically be subject to the higher minimum retirement age.

- Requirement that workers contribute for at least ten years to a public sector pension scheme before drawing retirement benefits. The scope for early retirement before having made 35 years of contribution for men and 30 for women (including previous contributions to the general scheme), has been limited for current workers and abolished for new entrants.

- Abolition of favourable special regimes for certain categories of civil servants, such as university teachers, judges, financial controllers and members of congress.

- Elimination of the possibility of adding 'bonus time' to the length of contribution, which used to bring forward considerably the average age of transition to retirement.

- Requirement that a worker remain five years in a post before drawing pension benefits before drawing pension benefits equivalent to the salary of that post. This eliminates the practice of fictitious promotions close to retirement age.

- Institution of a ceiling on pension benefits, equal to the civil servant's last salary. This measure eliminated loopholes that allowed some civil servants to incorporate non-wage advantages to their pension benefits, which in practice meant that their pensions could be higher than their last salary.

Of the original reform proposals not approved by congress, the most significant were the capping of benefits to 70 per cent of the last basic salary, the immediate application of the higher minimum retirement age of 60 for men and 55 for women to all civil servants rather than to new entrants only, and the linkage between wages and pensions. Congress had approved the institution of pension contributions by retired civil servants and an increase in pension contributions by current civil servants, but this has been declared unconstitutional by the supreme court.

25. Faced with tight budgets and barred from changing defined pension benefits by the federal constitution, state governments have taken a series of initiatives to reform their civil servants' pension systems. The most common reform has been to create a pre-funded component to guarantee existing benefits. These funds have usually been financed by privatisation receipts and/or increased contribution rates. *Bahia, Pernambuco, Paraná and Rio de Janeiro* have been among the most advanced in that regard (see Box 6). These initiatives are welcome, but barring changes to constitutionally mandated benefits, or sharp increases in contribution rates, these pre-funded systems are unlikely to prove actuarially balanced. As such, they merely provide a temporary relief to state governments' accounts rather than a permanent solution to their growing pension liabilities. The World Bank estimates that even *Paraná's* well-funded security (second) pillar may be depleted in 20 to 30 years depending on assumptions over wage growth and rates of return.[22] Consequently, the main challenges for reform still lie ahead.

Box 6. **Creation of public pension funds at the state level: the cases of *Paraná and Bahia***

By the late 1990s, payroll expenditures accounted for 75 per cent of *Paraná's* current net revenues, of which around one third were spent on pensions (including survivors' pensions). Moreover, the share of pension expenditure had grown steadily as the ratio between active and retired civil servants declined. To deal with these challenges the state government introduced a major reform of the pension scheme in December 1998, raising contribution rates, creating a pension fund and introducing a two-tier pension system. The top marginal contribution rate rose from 10 to 14 per cent for salaries above BRL 1 200. The average contribution rate rose from 9.0 to 11.1 per cent. Employee contributions are matched one to one by the state government. A pension fund was created as an independent social service institution, linked to the state government by a management contract. The fund has been gradually capitalised using privatisation revenues, the transfer of real estate assets and the securitisation of receivables, to a total estimated at over BRL 5 billion over 1998-2003.[1] This fund will be split between two pension 'pillars'. The second, security, pillar applies to civil servants up to 50 (male) or 45 (female) years old. This pillar will be entirely covered by the pension fund, which, according to state officials, is actuarially balanced with a real rate of return of 6 per cent. The first, financial, pillar applies to older workers and will only be partly financed by the fund, with the balance covered by direct transfers from State Treasury.[2] The state expects that, with these reforms, payroll expenditures will fall towards 50 per cent of current net revenues in the next 15 years, with a declining share of the total spent on pensions.

In *Bahia*, the State Legislature has approved the gradual increase in employee contribution rates from 5 per cent in 1999 to 12 per cent in 2004. Employer contributions will also be phased in gradually, from 5 per cent in 2001 to 21 per cent after 2012. Moreover, a reserve fund was created with the proceeds from the privatisation of *Coelba*, the state Electricity Company. This fund is to a large extent independently managed and has relatively tight investment guidelines, as a means to reduce the risk of political interference in administrative and investment decisions.

1. The largest privatisation was that of *Copel*, the state Electricity Company. Receivables included royalties from electricity generated by the *Itaipu* dam, on the border with Paraguay, and federal government debt. The latter refers to national social security institute (INSS) debt towards the state pension scheme, linked to the transfer of pension rights of former private sector workers who became state civil servants.

2. It is expected that the fund will be able to cover about half the expenditures of the financial pillar in the next three years, declining gradually towards zero in 2010.

22. See World Bank (2000).

A still overly generous system

26. As a result of loose eligibility requirements it is estimated that in 1998 about a quarter of male federal pensioners, and about half of female pensioners, had retired at or below the age of 50. Most eligibility requirements are defined in the constitution and apply to all levels of government. Since the reforms of 1998-99, these requirements do not differ markedly from the general scheme (see Annex II). The main difference is that a minimum retirement age for civil servants has been introduced, rising gradually to 60 years for men and 55 for women.

27. Contribution rates vary widely between the different special schemes,[23] but in all cases, they are far from being enough to finance defined benefits (Table 4). Overall, civil servants' pension schemes offer considerably generous entitlements. Civil servant pensions are equal to 100 per cent of the last basic salary, as long as a worker has been in the post for at least five years.[24] In most cases, the marginal increase in pension benefits for an extra year of activity is zero, encouraging civil servants to retire as soon as they meet eligibility requirements. The possibility of drawing a pension while in activity elsewhere (in the private sector or at a different public sector level) further encourages immediate retirement. An eventual affiliation to the general system prior to joining the civil service counts towards the length of contribution requirement. As a result, it is not uncommon for workers joining the civil service in their 40s and 50s (university professors and upper managerial echelons, for instance) to retire a few years after being hired. Recent reforms introduced the additional requirement of a minimum service of 10 years in the public sector, but this is unlikely to change the overall incentive to retire early. Last but not the least, pensioners do not pay pension contributions, so their after-tax income actually increases in the transition to inactivity.

Table 4. **State pension schemes: some selected data**

	Employee marginal contribution rates		Financing requirements
	December 1998	January 2000	1998 (R$ billion)
	Per cent		
Federal	**11.0**	**11.0**	**33.3**
São Paulo	6.0	6.0	4.5
Minas Gerais	7.7	7.7	1.7
Rio de Janeiro	11.0	11.0	1.6
Rio Grande de Sul	7.22	7.22	1.5
Paraná	10.0	10 to 14	0.8
Bahia[1]	5.0	6.5	0.3
Ceará	8.5	11.0	0.2

1. Rates will increase progressively to reach 12 per cent in 2004.
Source: Ministério da Previdência e Assistência Social.

23. At the federal level, employees contribute with a flat 11 per cent, whereas states levy a contribution ranging from 4 to 14 per cent. Several states have raised rates in recent years. Some states also levy contributions from retired civil servants (and their survivors), pending a Supreme Court decision on the constitutionality of the matter. In most cases, the employer contribution is only notional.

24. If this requirement is not met, the pension entitlement will be based on the salary of the post the civil servant occupied five years before. This recently introduced provision limits the possibility for certain practices artificially increasing entitlement benefits.

28. A further source of inequities in the entitlement system has been that, until recently, a series of loopholes allowed civil servants (especially on the top echelons) to incorporate non-wage advantages to their pension benefits, which in practice meant that their pensions could be significantly higher than their last salary. This practice was to a large degree curtailed with the 1998 reforms, which instituted a ceiling on pension benefits, equal to the civil servant's last salary. This measure does not apply to civil servants already in retirement, however, so past abuses have not been corrected. It is not uncommon to find civil servants (or their survivors) with pensions above 100 minimum wages. Authorities in *Rio Grande do Sul*, for instance, estimate that the top 10 per cent of beneficiaries accounted for almost half of the state's pension spending. In that state, past abuses seem to have been especially prevalent in the judiciary, which has a large degree of autonomy over its pay.

The main challenge: the need to reduce privileges

29. Acknowledging the need to address existing inequities in the civil servants pension regime, the authorities have proposed a number of reforms. These included implementing legislation to allow employment of civil servants under the general regime, or under (less generous) conditions determined at state or local level. Further measures under discussion in congress would cap benefits to a level similar to that prevailing in the general regime. The reform strategy is designed to reduce inequities by fostering a gradual convergence of public sector pension schemes towards the rules applying in the general regime. This is appropriate, but since measures will apply only to new entrants, they will not lead to a significant reduction in the systems' financing requirements in the short and medium-run. By 1999, more than half of federal employees were older than 40, and will soon qualify for early retirement. Even without new entrants, demographic pressures alone are likely to lead to a steady increase in the number of pensioners and in special regimes' pension expenditures over the next 10 to 15 years. Estimates about future spending in the civil servants pension schemes are particularly sensitive to assumptions about real wage and pension growth as well as the number of new entrants to these schemes. According to the government's actuarial evaluation, the deficit in the civil servants pension schemes may now stabilise as a percentage of GDP before declining steadily from 2015. Based on less favourable assumptions, the World Bank estimates that the special schemes' deficit may increase by as much as one further percentage point of GDP by 2015, before declining slowly.[25]

30. Several measures could be envisaged to help move the various public sector pension schemes towards financial and actuarial balance. Eligibility requirements should be tightened further, especially in the case of the minimum period of contribution to public sector pension schemes, which should be lengthened. Contribution rates should be raised in some states, notably S. Paulo, and sub-federal levels of government should be further encouraged to create pre-funded pension schemes. Finally, issues related to regulation of these pre-funded schemes should be resolved. Preferably, they should be regulated under the same rules as the 'complementary' schemes to ensure independent, sound and actuarially based management.

31. These measures alone would, however, not be enough. Although desirable, changes to eligibility requirements and contribution rates are unlikely to eliminate the system's financial and actuarial

25. The main differences between the Brazilian government and World Bank estimates concern GDP growth (respectively 4.5 per cent until 2004 and 3.5 per cent thereafter, and a flat 3 per cent); real wage and benefit growth (1.5 and 2.5 per cent respectively); and the number of new entrants to the special schemes. Concerning this last category, the government expects that only 20 per cent of civilian entrants will join special schemes, with the rest going to the general system. World Bank projections assume that all new civil servants will join the special schemes. For further details on the projections, see World Bank (2000) and the Brazilian Social Security Bulletin (www.previdenciasocial.gov.br/07_11.htm).

imbalances. These derive mostly from the excessive generosity of the entitlement system. Even abstracting from the fact that the average public wage is higher, the difference between the two sectors is large. At the same level of income (medium skill level), the pension of a male worker retiring at 55 under the general regime would amount to about two-thirds of his last salary, compared with 100 per cent in the public sector's special regimes. The special systems are also quite generous by international standards. The OECD Secretariat has constructed a synthetic indicator of expected old-age gross pension replacement rates, based on a few simplifying assumptions to permit cross-country comparisons of the relative generosity of pension schemes.[26] Whereas the Brazilian general scheme's replacement rate is close to the OECD average, the public sector schemes are among the most generous in the world; only Greece has a higher replacement rate (Figure 11).

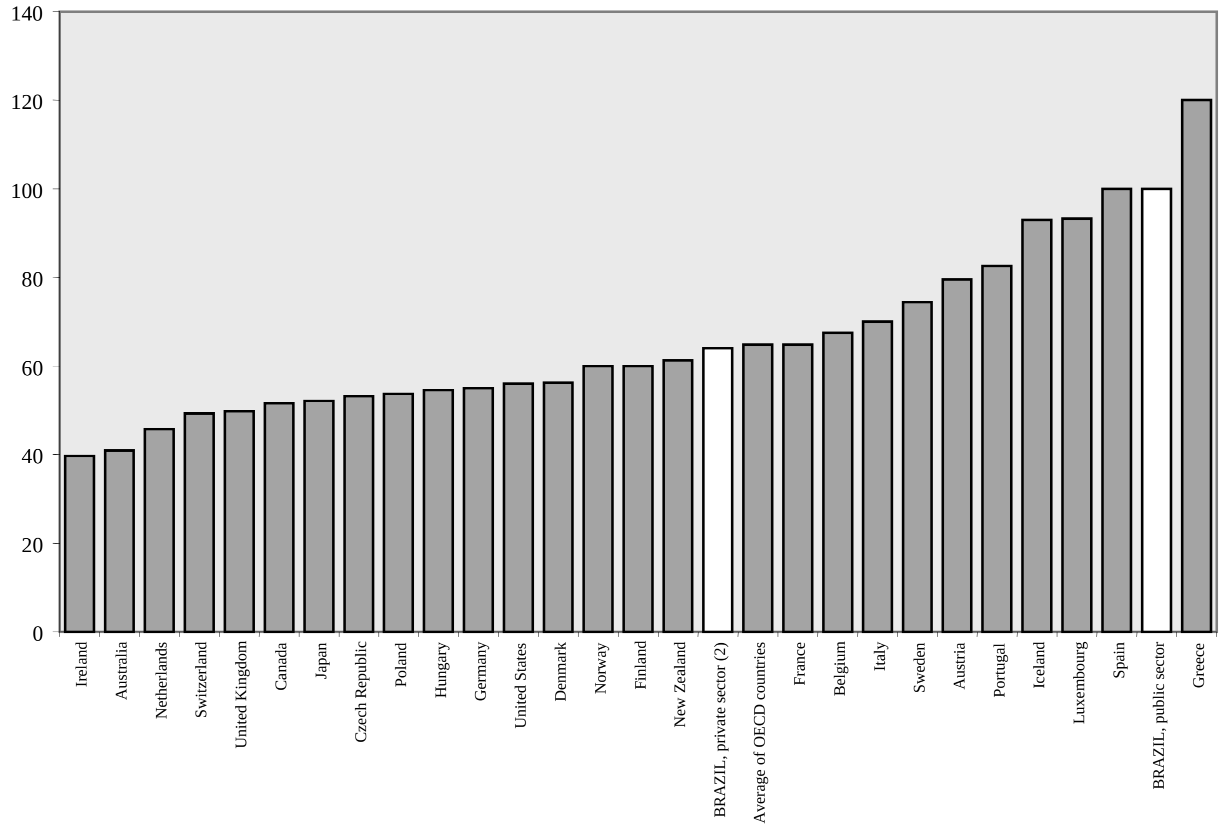
32. It is true that civil servants have special regimes in many OECD countries and that these are generally more generous than private sector schemes. But typically, OECD civil servant pensions do not equal 100 per cent of the last salary with such loose entitlement requirements. Replacement formulae generally consist of a share of the final salary (typically between 1.75 and 2 per cent) per year served, up to a maximum (generally between 35 and 40 years). So, after an entire career as a civil servant, the most a pensioner can claim is between 70 and 80 per cent of his/her last salary. Those with shorter careers in the public sector generally get much lower pensions. These PAYG "extended earnings" systems, although considerably less generous than their Brazilian counterparts, have been under pressure in most OECD countries, since they have often led to an unsustainable build-up of contingent liabilities. As a result, many countries have started to move away from them: in Canada, the Netherlands and the US, for instance, civil servants already derive the majority of their pension earnings from a funded component. It is a testimony to the excessive generosity of the Brazilian special pension regimes that much wealthier countries have found their (less generous) systems unaffordable.

33. In anticipation of deeper reforms in the special regimes for civil servants, at the very least a less generous replacement formula should be immediately applied, capping benefits at a fraction of the last salary. More ambitiously, an equivalent of the reform introduced in the general system should be applied to all civil servants, with a very short transition period and a higher minimum retirement age. This measure would also ease portability between the public and private sectors, eliminate distortions and abuses associated with workers joining the civil service close to retirement age, and facilitate the introduction of a fully-funded complementary pension scheme.

26. See Blöndal and Scarpetta (1998) for the construction and main assumptions of this indicator. In the case of Brazil, it is assumed that real earnings increase by 3 per cent per year and that the average private sector worker does not hit the social security ceiling. The Brazilian authorities use a working assumption that wage increases followed inflation plus half GDP volume growth.

Figure 11. **Expected gross replacement rates**[1]

Per cent



1. The figures refer to theoretical replacement rates for a 55-year old and are based on assumptions as reported in Blöndal and Scarpetta (1998), Box III.1.
2. Data refer to male workers who have not hit the social security ceiling.

Source: Blöndal and Scarpetta (1998).

The complementary regime

34. Complementary funds are voluntary, privately managed, fully funded pension schemes. The complementary system in Brazil in its present form dates back to the mid-1970s, when a regulatory framework was created to allow the constitution of both open and closed pension funds. Assets have increased steadily in the past few years, from 8.6 per of GDP in 1995 to 14.3 per cent in 1999. However, the number of contributors stagnated in the past five years, at between 1.5 and 2 million, barely 3 per cent of the total private sector labour force. Compared to OECD countries, the Brazilian complementary system is relatively small. In the OECD, fund assets are generally in excess of 100 per cent of GDP and coverage rates are above 50 per cent of total labour force. This is only partly related to the skewed distribution of income in Brazil, since only about a sixth of higher income workers – defined as those with income above the general system's ceiling – contribute to complementary pension regimes.

The lack of an appropriate regulatory framework

35. The main factors hampering the development of complementary funds in Brazil have been the inadequate regulatory and supervisory structures, the unfavourable and uncertain tax system and the associated high administrative costs. The latter is in part related to the tax on financial transactions (CPMF) and other administrative and regulatory burdens affecting the financial system as a whole (including high reserve requirements and a complicated tax system). An ambitious reform agenda includes the creation of a new general regulatory framework and an independent supervisory agency, an increase in the flexibility of benefit plans and wider use of risk pooling. Measures to increase transparency (information disclosure) and to clarify the tax treatment of pension funds have also been proposed. Also under discussion in Congress is the creation of a complementary regime for civil servants, associated with the capping of pension contributions and benefits for new entrants. These reforms, if approved, would go a long way in removing existing obstacles to the development of a wider complementary pension scheme.

Public companies' complimentary regimes: the impact on government accounts

36. The development of complementary pensions funds have indirect effects on government accounts, related *inter alia*, to the tax treatment of pension contributions and benefits, and the development of an alternative system for civil servants. It also has a more direct bearing on the sustainability of the recent fiscal adjustment, to the extent that two-thirds of funds' assets are linked to state-owned enterprises' pension schemes, chiefly among those, *Previ*, the closed fund for *Banco do Brasil* employees. These plans are predominantly based on defined benefits – a fixed monthly pension – which tend to be significantly more generous than their private sector equivalent. In 1999, average pension benefits in the general government sector were close to average salaries, whereas in the private sector they were only half as high. This generosity is partly financed by high employer contributions -- employer/employee contribution ratios are often above 2 to 1 -- but in some cases, benefits are higher than it would be warranted, raising questions of actuarial balance. In fact, in recent privatisation processes, large contingent liabilities associated with overly generous pension systems significantly reduced sale proceeds.

37. Following recent legislation limiting the ratio of employee/employer contribution rates to one, these differences between the private and public sectors are likely to diminish gradually. On the other hand, this measure is likely to make concerns over actuarial imbalances more pressing, especially in view of the generally inadequate level of disclosure from some of those schemes. Aware of the problem, authorities have been conducting actuarial studies of several state-owned enterprises' pension fund, in order to enhance transparency and eventually implement measures to tackle imbalances. It seems inevitable that any review will need to curtail pension benefits and/or increase employee contribution rates, especially if a costly re-capitalisation exercise affecting general government accounts is to be avoided.

Concluding remarks

38. At about 9 per cent of GDP, Brazil's public pension expenditure is relatively high, especially in view of Brazil's young population, and is above the OECD average. This drains resources away from other areas, such as much needed social investment in health and education. Recent reform of the general regime have gone a long way to ensuring a fair, equitable and transparent pension scheme, available to all workers. An adjustable formula (*fator previdenciário*) relates pensions to the duration and level of contributions, and life-expectancy. It introduces some welcome flexibility to the system, as benefits are automatically adjusted for the affects of population ageing. However, it is not clear whether recent reforms will be sufficient to ensure the long-term actuarial and financial balance of the general system. The large share of informal employment, the weight of non-pension benefits imputed to the system and the inadequate mechanism of pension indexation all pose a threat to the system's future balance. The solution to these challenges cannot be found in isolation from wider tax and labour market reforms. Finally, a complementary fully-funded pension system has recently grown rapidly. But its development will depend on modernising the regulatory and supervisory framework.

39. The main challenge is to reform the special pension regimes for civil servants. These represent about half of total pension expenditure, attesting to the extreme inequities of the Brazilian pension system. While estimates about future spending trends are sensitive to assumptions, it is likely that, in the absence of further reforms, pension expenditure under these schemes will not decline as percentage of GDP over the next 10-15 years. This would reinforce inequity and create difficulties for fiscal policy. Initiatives to date, such as changing the employment conditions for civil servants joining since 1998 will only bring benefits in the very long-term. Benefits remain generous, and not sufficiently linked to the amount and length of contributions. Hence more forceful measures are required to address existing distortions. Benefits should at once be capped at less than 100 per cent of last salary. A more ambitious reform would introduce, as in the general system, an adjustable formula for all civil servants. This latter measure would ease portability between the public and private sectors, reduce incentives for early retirement and facilitate introduction of a fully-funded complementary pension scheme.

BIBLIOGRAPHY

BLÖNDAL, S., S. SCARPETTA (1998), “The retirement decision in OECD countries”, *OECD Economics Department Working Papers* no. 202, June.

FUKASAKU, K., L. R. DE MELLO (1999), “Fiscal Decentralisation in Emerging Economies. Governance Issues”. Development Center Seminars. OECD. Paris.

IPEA, Mercado de Trabalho: conjuntura e análise, several issues.

MINISTÉRIO DA PREVIDÊNCIA E ASSISTÊNCIA SOCIAL (MPAS), “Boletim Estatístico da Previdência Social”, various issues.

MINISTÉRIO DA PREVIDÊNCIA E ASSISTÊNCIA SOCIAL (MPAS), “Informe da Previdência Social”, various issues.

OECD (2000), Managing Across Levels of Government, Paris.

ROSEVAERE, D., W. LEIBFRITZ, D. FORE, E. WURZEL (1996), “Ageing populations, pensions systems and government budgets: simulations for 20 OECD countries”, *OECD Economics Department Working Papers* no. 168, September.

SERRA, J.R., R. AFONSO (1999), “Federalismo Fiscal à Brasileira: Algumas Reflexões”. *Revista do BNDES*, V.6, N.12, pp 3-30, Rio de Janeiro.

UNITED NATIONS (1998), “World Population Prospects 1950-2050”, 1998 revision.

UNITED STATES DEPARTMENT OF HEALTH AND HUMAN RESOURCES (1999), “Social Security Programs Throughout the World”, *Social Security Administration*, 1999 edition.

UTHOFF, A. (1999), "Perfil de Responsabilidades Fiscales de una Eventual Sustitución hacia un Sistema de Capitalización Individual en Brasil", UN-CEPAL, September.

WORLD BANK (2000), Brazil: Critical Issues in Social Security, Washington.

ECONOMICS DEPARTMENT

WORKING PAPERS

339. *Challenges in the Mexican Financial Sector* (August 2002) Marcos Bonturi

338. *Coping with Population Ageing in Hungary* (August 2002) Andrew Burns and Jaromir Cekota

337. *Next Steps for Public Spending in New Zealand: The Pursuit of Effectiveness*
(July 2002) Dave Rae

336. *Strengthening the Management of Public Spending in Hungary*
(July 2002) Jaromir Cekota, Rauf Gonenc and Kwang-Yeol Yoo

335. *Automatic Stabilisers and Market Flexibility in EMU: Is There a Trade-Off?*
(July 2002) Marco Buti, Carlos Martinez-Mongay, Khalid Sekkat and Paul van den Noord

334. *The Economic Consequences of Terrorism*
(July 2002) Patrick Lenain, Marcos Bonturi and Vincent Koen

333. *Investment in human capital through post-compulsory education and training: Selected efficiency and equity aspects*
(July 2002) Sveinbjörn Blöndal, Simon Field and Nathalie Girouard

332. *Enhancing the Effectiveness of Public Spending in Switzerland*
(June 2002) Isabelle Joumard and Claude Giorno

331. *Competition and Efficiency in Publicly Funded Services*
(June 2002) Jens Lundsgaard

330. *Policy Pre-Commitment and Institutional Design: A Synthetic Indicator Applied to Currency Boards*
(May 2002) Marie-Thérèse Camilleri Gilson

329. *The Role of Policy and Institutions for Productivity and Firm Dynamics: Evidence from Micro and Industry Data*
(April 2002) Stefano Scarpetta, Philip Hemmings, Thierry Tressel and Jaejoon Woo

328. *Improving the Efficiency and Sustainability of Public Expenditure in the Czech Republic*
(April 2002) Andrew Burns and Kwang-Yeol Yoo

327. *Increases in Business Investment Rates in OECD Countries in the 1990s: How much can be explained by fundamentals?*
(April 2002) Florian Pelgrin, Sebastian Schich and Alain de Serres

326. *Sectoral Shifts in Europe and the United States: How They Affect Aggregate Labour Shares and the Properties of Wage Equations*
(April 2002) Alain de Serres, Stefano Scarpetta and Catherine de la Maisonneuve

325. *Coping with Population Ageing in the Netherlands*
(March 2002) David Carey

324. *Public Spending in Italy: Policies to Enhance its Effectiveness*
(March 2002) Alexandra Bibbee and Alessandro Goglio

323. *Overheating in Small Euro Area Economies : Should Fiscal Policy React?*
(March 2002) Peter Hoeller, Claude Giorno and Christine de la Maisonneuve

322. *Encouraging Environmentally Sustainable Growth in Austria*
(February 2002) Jens Høj and Andreas Wörgötter

321. *Health Care Reform in Japan*
(February 2002) Yutaka Imai

320. *Enhancing Expenditure Control with a Decentralised Public Sector in Denmark*
(February 2002) Steen Daugaard

319. *Options for Reforming the Finnish Tax System*
(February 2002) Isabelle Joumard and Wim Suyker

318. *Product Market Regulation and Wage Premia in Europe and North America: An Empirical Investigation*
(January 2002) Sébastien Jean and Giuseppe Nicoletti

317. *Competition, Innovation and Productivity Growth: A Review of Theory and Evidence*
(January 2002) Sanghoon Ahn

316. *Labour Market Institutions, Product Market Regulation, and Innovation : Cross Country Evidence*
(January 2002) Andrea Bassanini and Ekkehard Ernst

315. *Ongoing Changes in the Business Cycle - Evidence and Causes*
(January 2002) Thomas Dalsgaard, Jorgen Elmeskov and Cyn-Young Park

314. *Comment encourager une croissance ecologiquement durable en France?*
(December 2001) Ann Vourc'h et Patrick Lenain

313. *Increasing Efficiency and Reducing Complexity in the Tax System in the United States*
(December 2001) Richard Herd and Chiara Bronchi

312. *Product and Labour Markets Interactions in OECD Countries*
(December 2001) Giuseppe Nicoletti, Andrea Bassanini, Ekkehard Ernst, Sébastien Jean, Paulo Santiago and Paul Swaim

311. *Modelling Import Responsiveness for OECD Manufactures Trade*
(October 2001) Mara Meacci and David Turner

310. *Trade Linkages and the Trade Matrices in the OECD Interlink Model*
(October 2001) Laurence Le Fouler, Wim Suyker and Dave Turner

309. *Encouraging Environmentally Sustainable Growth in Australia*
(October 2001) Ann Vourc'h and Robert Price

308. *Financial Market Liberalisation, Wealth and Consumption*
(September 2001) Laurence Boone, Nathalie Girouard and Isabelle Wanner

307. *The Economic Integration of Germany's New Länder*
(September 2001) Eckhard Wurzel

306. *Standard Shocks in the OECD Interlink Model*
(September 2001) Thomas Dalsgaard, Christophe André and Pete Richardson

305. *Fiscal Implications of Ageing: Projections of Age-related Spending*
(September 2001) Thai Thanh Dang, Pablo Antolin and Howard Oxley

304. *The Width of the Intra-European Economic Borders*
(August 2001) Alain de Serres, Peter Hoeller and Christine de la Maisonneuve