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Social Security Reform in Brazil:

The Public Social Insurance System

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Acknowledgments

Most of this paper is directly related to my job in the Undersecretary of Planning and Budget (SPO) of the Ministry of Social Insurance and Public Assistance (MPAS) where I proudly have had a chance to discuss openly and participate in the decision making and decision taking processes directly related to Brazilian public insurance: innovative approaches in process management; institutional building; evaluation indicators development; information technology and, correspondingly, the normative improvements necessary to support these modifications. Whenever the nineties' public social insurance policies are examined, as far as the MPAS's attending and contributions collecting capacity are taken into account, SPO should be remembered for its active role.

More difficult was finding an opportunity to examine the extension and reasons lying beneath the historical changes in the Brazilian public insurance system. I gratefully acknowledge the *Instituto Cultural Minerva* – ICM which gave me the opportunity to do so, and their precious partnership with the Institute of Brazilian Business and Public Management Issues (IBI) of The George Washington University (GWU), that, beyond all my initial expectations, were able to help me in terms of research support. In truth, even before our arrival in Washington, D.C., Dr. Gilberto Paim of ICM and Dr. James Ferrer, Jr. of IBI/GWU, without whom this essay would never have been written, have carried out together the many conditions necessary for the course's actual success.

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Readers interested in more detail about this issue or who would like to send comments are strongly invited to contact me. Much of the material herein presented is available in more detailed working papers as well on Brazilian Federal Government Internet sites (http//www.mpas.gov.br; http://mpo.gov.br; and http://seap.gov.br). Finally, as a personal effort to understand and discuss the Brazilian Social Security transformation, all conclusions, errors and misinterpretations are solely attributed to the author.

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I – Introduction

The political challenge to negotiate and approve the Public Insurance Reformation in the Brazilian Congress constitutes an excellent example in understanding that "A political conflict among special interests is never restricted to the groups most immediately interested, instead, it is an appeal… for the support of vast numbers of people who are sufficiently remote to have a somewhat different perspective on the controversy."

The difficulties to approve the constitutional amendments include the challenge to modify largely-institutionalized schemes and politically-controversial agreements. This is completely conditioned by the government's ability to convert special-interest claims into a convincing public-interest and opposition-parties argument that would modify widely shared values in Brazilian society. Therefore, since 1993, all ministers in charge of the MPAS, the Ministry of Labor and the Ministry of Federal Budget and Management - more deeply concerned with the issue - have been expending a lot of their energy preparing and discussing the guidelines of public social insurance reformation in order to get along with and reshape public opinion.

Most of the last successes experienced by the Federal Government in terms of congressional support of public social insurance reform, for the analytical purposes of the present essay, were grouped into two periods: the first ranging from the end of 1993 until November of 1998 and the second, after the International Monetary Fund (IMF) loan agreement. Sometimes, the mutual and steady interlocution between legislative and executive branches, one undoubted characteristic of contemporary democratic states, have been complied with a costly rhythm vis-a-vis their economic effects.

During the **first** comparatively-long **period from 1994 to the end of 1998**, the legislature and public environment were challenging. The President was engaged completely in a fight to obtain congressional acceptance of something new to our republican history: presidential reelection. Once approved, the presidential as well as gubernatorial and mayoral reelections, the representative electoral races put aside the importance formerly attributed to public social insurance reformation in the political agenda. As a result, the Federal Government's partial achievements reflect its new and easeful strategy: to involve fewer and less complex parties (e.g., social security reform involving private workers instead of all workers), covering only selected subjects as negotiation resources, freeing Congress to be at ease about interest group (retirees, public servants in general, teachers, magistrates) pressures.

In contrast with the precedent, comparatively meaningless in terms of the modifications in the Brazilian social security framework, the **second period (late 1998 through the present**) introduced unparalleled changes in a short period, only explainable by understanding the role of Brazilian foreign exchange outflows. The greatest evidence of this affirmative can be demonstrated by the time elapsed between the two newest constitutional amendments – beyond six months - and the fact that the latest amendment was approved in the last day of the second legislative session.

0. – Social Security Systems in Latin America

Social security systems in Latin America and, more particularly, the law-recognized public social insurance programs are considered as one of the most outstanding achievements of XX Century, as far as it has been created as an institutionally-recognized framework to protect workers' rights.

In Latin America, public social insurance systems – PRS were structured over a large period of this century. Chronologically, the beginnings of PRS in this region can be divided in three distinct phases, although all of them share a set of characteristics in common: they were born as an answer to corporative claims, the presence of a strong non-formal labor market, a non-structured technical support and asymmetrical distribution of benefits and tax-revenues in the midst of social environment. Argentina, Brazil, Chile, Cuba and Uruguay – being the first to structure their PRS - are grouped as pioneer countries, providing pension and retirement benefits in cases of old-age, disability, length of service, destitution, and special retirement.

1.2 – Brazilian Public Insurance System

The Brazilian social security laws framework was adopted in 1923, forty years after its birth in Germany by Otto Von Bismarck's proposal in the end of XIX Century. At the suggestion of Representative Eloy Chaves, the Congress created (Decree number 4.682/1923) a Pension and Retirement Fund for railroad workers. These employees and their relatives could be treated, have health assistance, have specially priced drugs, retirement and pensions. Accordingly with this characteristic, Brazilian pension and retirement plans were initially restricted to working people in a very specific economic activity (GARCIA e CONTE-GRAND, 1997). This initial policy framework was not conceived to get along with other urban workers' claims nor those employed in the rural the area, in a predominantly agrarian and poorly industrialized country. In spite of these restrictions, the first Brazilian PRS embraced two universally accepted principles: (i) the contributive character (at least 30 years) and (ii) a minimum age (fifty years).

The United States and Japan would apply this kind of legislation years after, during President Franklin Delano Roosevelt's mandate. Since he signed this legislation into law on August 15th, 1935, the SSA as a national system of Old Age, Survivors, and Disability Insurance – OASDI is covering nearly every type of work activity providing wages or earnings from self-employment. Early in this century, being old meant being poor. That's the reason why thousands wrote to thank him for eliminating what one woman called "...the stark terror of penniless, helpless old age." The period from 1965 to 1995 witnessed a three-fifths decline in the ratio of older Americans living below the poverty threshold (from 28.5% to 10.5%).

Just seven years after the approval of Decree No. 4682/23, administrative inadequacy, unfunded liability combined with arbitrary determination of payrolls discounts and technical failures on assets management offered strong arguments for a presidential resolution. Decree No. 1954/1930 canceled out all pensioners and retirees' payments during a six-month period and reformulated the whole system. Based on technical analyses, the Getúlio Vargas's administrative period – characterized by a strong and committed leadership - provided the basic framework for a fairly more comprehensive coverage of urban workers, including the creation of a minimum wage, the regulation of work for women and minors, the eight-hour workday limit, the right to vacations, norms about labor accidents and the establishment of the Labor Judiciary. Instead of the former company-restricted arrangements, workers were grouped, for PRS, into six Institutes, in accordance with their professional likeliness (risks, wage pattern, diseases associated to their specific function). Extending his policymaking authority, he created a civil service retirement system replacing the protection, covering a small number of categories in the public sector.

Gradually, during the fifties, the social insurance system left the individual membership principle in favor of a new concept called regulated citizenship, whereby the most important distinguishable feature to be protected was the worker's right instead of a particular corporation. Much of the resistance faced by public officers directly involved in this process was born and expressed by labor unions, concerned about their inevitable political losses and fearful about the health services quality in the future. Finally, in 1960, the regulated citizenship was approved and, as a consequence, the Retirement and Pension Institutes - IAPs were administratively unified. Forty years later international experience has shown the inadequacy in concentrating the burden of social protection solely on the publicly administered PRS.

The next movement in the public social insurance field was a direct result of the sixties peasant' movements: the political pressures then observed brought about the extension of social protection to rural workers in 1963, with the institution of the Fund of Attendance to the Rural Workers – FUNRURAL.

Before starting to discuss the theme of this paper it is necessary to identify what exactly is included in the Brazilian social security complex, whose bulk institutional framework relies upon a constitutional ground. Activities related to **health insurance, public assistance,** and **social public insurance**, most of them state-managed, or with changeable rates of private sector participation along time, integrate what the Brazilian Constitution designates **Social Security**. In charge of civil service PRS; federal, state and municipality governments have their proper public insurance schemes. At the federal level, the Ministry of Federal Budget and Management is in charge of civil servants. In this paper, unless remarked to the contrary, the focus will be directed to private sector workers.

Activities related to the administration (collection, processing and accountancy) of tax revenue and benefits payment (pensions, public assistance and retirements) of the private sector workers, including state-run employees is under the responsibility of the National Institute of Social Security – INSS, which reports to MPAS. Formally covered by the General Regimen of Social Security – RGPS, private sector workers were until late 1998 the only group to be immediately affected by the constitutional amendments. Mainly as a result of the political environment before the Brazilian devaluation crisis in January 1999, even the Minister of Social Insurance had initially admitted an agreement to avoid the inclusion of a politically controversial issue: the retired civil servants' contribution to their own state administered PRS.

Despite the remarkable differences in the scale and fund ratio, both Brazilian and U.S. PRS have in common some of the institutional characteristics: decentralization procedures (regional management units and local offices), benefits payment through commercial banks, financing system, and tax basis (Table 1.1).

Table 1.1 – Comparison of Brazilian and United States PRS

Characteristics	United States PRS[1,2,3]	Brazilian PRS[3,4,5]
• Financing choice	Pay-as-you-go	Pay-as-you-go
• Institutional arrangement	Collection of payroll deduction and data processing: IRS Benefits payment and data processing: SSA	Collection of payroll deductions and benefit payment: INSS Data processing: DATAPREV
• Contributors	Employed workers (142 million workers) Self-employed workers	Employed workers (30 million workers)R Employers (payrolls and profits) Others (lotteries, new buildings, horse betting)
• Tax ratesR R	Employers – 6.20% Employees – 6.20% up to US$ 72,600 Self-employed – 15.7%	Employers – 20% up to R$ 15,600 plus - 1%, 2% or 3% payroll deductions to Work Insurance against Accident – SAT Employees – 8% (up to R$ 4,680) ◦ 9% (R$4,680.13-7,800) and ◦ 11% (up to R$ 15,600) Self-employed – 15.7% up to R$ 15,600
• Eligibility criteria	Workers are eligible as early as age 62 Spouse: maximum 50%	Workers with 65 (men) and 60 (women) AND vesting time of 35 (men) and 30 years (women) **R R R**

• Administrative characteristics of Federal Agencies	SSA: 65,000 people nationwide Administrative cost, as a percentage of benefit payment: 0.7% 10 regional management units and 13,000 local offices	INSS: 48,000 people nationwide Administrative cost, as a percentage of benefit payment: State superintendencies, 126 regional management units and 1,120 service units
• Number of beneficiaries	44.0 million – total 29.3 million – retirees 7.5 million– survivor benefits (pensions) 6.2 million – disabled workers	18.230 million 15.753 million – retirees and pensioners 0.641 million – disabled workers 1.836 million – public assistance

Sources: 1. SSA. **A brief description of the United States Social Security Program**. SSA Publication No. 61-009. January 1996. 2. SSA. **Social Security – Your taxes … What they're paying for and where the money goes**. SSA Publication No. 05-10010. January, 1999. 3. Rubin, Robert E. et allii. **A summary of the 1998 annual reports**. 12 p. 4. **Brazilian Constitution**. Article 201(after Constitution Amendments No. 20/1998). 5. MPAS home page (www.mpas.gov.br/3aa1.html)

Notes: R Brazilian presidents, vice-presidents, military personnel as well as public servants in the three branches of Government run their own PRS R R In the United States beyond tax to the OASDI and DI program there's a 1.45% on **TOTAL** payroll to Medicare program R R R Brazilian high school and elementary school's teachers' vesting time is reduced in 5 years

1.3 – Hidden liabilities: the implicit pension debt

In contrast to conventional public debt, both internal and external, public guarantees that imply large liabilities are not assessed and publicly reported by the authorities in most countries. Indeed, the European Union does not even include unfunded pension liabilities in the official European Monetary Union debt and deficit criteria – which is like measuring icebergs without looking beneath the water line. Besides obligations implicit in guarantees of bank deposits, rural credits programs, home mortgages, and student loans, one of the largest liabilities is the government commitment to provide income support in variable extent to its population. Cheikh and Palacios have divided these obligations into two broad categories: guarantee of private pension funds schemes and direct promises to pay pensions to individuals.

Being the largest one, the government obligation's to pay defined-benefit pension and retirement without correspondent funding, is directly bound to the concept of implicit pension debt (IPD), wherein it is recognized that workers and retirees have claims on current and future governments, much as government bondholders. In fact, many Brazilian interest groups have invoked constitutional protection to prevent government from reducing the value of accrued pension and retirement wealth.

Today, defined-benefit pension plans can be found in more than 150 countries and probably cover more than a half of the world labor force. As a result of a recent re-evaluation of their pension schemes, estimates of its magnitude are included in several countries of the Organization for Economic Cooperation and Development (OECD), former centrally planned economies and Latin America.

The empirical work does not use a consistent methodology, so there is a lack of cross-country analysis. The available estimates show that unfunded pension liabilities are large even in young, poor countries where pension coverage is limited. They can reach alarming proportions in demographically advanced developing countries.

The IPD measure is based on an analogy drawn from a country's external debt, e.g., cash-flow requirements as measured by country discounted future pension liabilities to the covered wage bill (Annex 1 has additional details about IPD).

II – Reasons to change

2.1 – The pay-as-you-go system

The PRS run by INSS works on a pay-as-you-go (PAYG) basis: a method of financing whereby current outlays on pensions and retirements benefits are paid out of current revenues from a earmarked payroll contribution.

In other words, active workers are obliged to pay today's retirees and pensioners. As a consequence of insufficient revenues from payroll deductions to pay out benefits each month and the non-existence of savings since 1997, an increasing amount of Treasury resources has been necessary to honor benefits' payment. The main explanations include:

- **low benefits (pension and retirement) coverage rates** on the INSS system: the number of active workers contributing to the INSS system divided by the estimated labor force is insufficient vis-a-vis the expenditures with benefits. Although the final effect is the same, the causes encompass several mutually independent phenomena such as the black market labor, a steady increase in the old-age dependency ratio; a decrease in the active to inactive worker ratio (Table 2.1) as well as payroll deduction evasion;

Table 2.1 – Work market and retired population

Year	Active to Inactive Worker Ratio
1970	4.2
1980	3.2
1990	2.5
2000	1.9
2010	1.6
2020	1.2

Source: Ministry of Social Security and Public Assistance *apud* STEPHANES, 1998

Notes: Before Constitution Amendment No. 20/1998

- **inclusion of public assistance in the retirement and pension system**. Beyond their beneficiaries (retired, disabled as a result of work activity and pensioners) the INSS is enforced to pay benefits to people with permanent or acquired disability and seniors aged 67 or plus. The fast increase in the social insurance system dependency ratio (inactive to active worker ratio) in the 1990's occurs more intensely as a result of the recent public assistance process, especially when it concerns benefits for rural workers or seniors aged 67 or older. The ratio above mentioned has skyrocketed in Western Europe; in Spain and Germany the actual value is almost 0.6. This relation depends directly on employment, or worse, on unemployment rates, besides birthrates and other leading economic variables. Anyway, in spite of each country's proper peculiarities, such as demographic characteristics, formal employment rates, and unemployment, there are general tendencies that should be considered;

- **reduced vesting period** (minimum time amount required to qualify for full ownership of retirement benefits). As a result of Constitution Amendment No. 20/1998 the minimum age was more properly adjusted to the Brazilian life expectancy. Nevertheless, the gender equalization toward old-age retirement for both urban and rural workers was not established by the aforementioned amendment despite a longer life expectancy for women and an increasing importance (i.e. quantitatively and in terms of earnings) in the labor market. As a consequence of women's preferential eligibility rules, the average effective retirement age suffered a reduction

On average, during the 1950's, eight contributors financed retirement or pension to one person, in short, the ratio active/inactive worker was equal to 8.0. Twenty years later the ratio dropped to 4.2 and in the nineties to 2.5 (Table 2.1), and had no modifications been done in the vesting period, by the 2020's, this ratio would reach 1.

The Public Social Insurance system, running in accordance with PAYG, accrues to some proper distinguishable characteristics. In the beginning, when the system was still immature, and the number of active workers fairly exceeds the number of pensioners, it was feasible to enforce low payroll deductions to individual contributors. As long as the system matured, without any sudden unexpected change, the dependency ratio will increase, giving place to increasing individual deduction. Such a phenomenon results in an intergeneration transference: the newest contributors – belonging to the currently active worker generation – subsidize the oldest ones, already retired.

To accomplish with a growing expenditure level, the Brazilian payroll tax – including employees and employers's contributions – rose considerably over time (from 17% in 1960 to 37% in 1980 and 45% in 1992). Given the undesirable effects of this progressively greater wage deduction, society as a whole has to discuss how to overcome such difficulties concerning eligibility criteria, private funds, PRS, and these billions of extra years of pay-outs.

2.2 – Inverted redistribution solidarity

As long as the PAYG system is considered, besides intergenerational transference, income can be transferred among individuals in the same generation. This second kind of transference – intragenerational - will be directly dependent on how the most important requirements affect a particular worker group: minimum age for retirement and pension value vis-a-vis income during working life and how the benefits value are determined. Brazil is facing severe income redistribution, where the poorest are financing the richest ones. Statistical evidence supports the assumption that on average length of service retirees usually experienced job stability or changed more difficulty in their workplace; are better qualified, and earned more. As for blue-collar workers, characterized by their difficulty to get along with labor market dynamics, it is increasingly burdensome to deal with these requirements as long as in general they expend a remarkable part of their life working without legal recognition. Frequently these unskilled workers are not able to prove their contribution time.

Although this paper does not deal with public retirement system, the absence of a benefit ceiling as well as an excessively liberal interpretation of constitutional disposition by the Judiciary Branch about the matter, offered another illustrative example of inverted redistribution solidarity. Another example of inverted solidarity can be found in the closed pension fund of the state-owned enterprises (SOE), wherein the employees are submitted to the RGPS and the proportion of employer's contribution has been increasing steadily. So, besides the INSS retirement (Table 2.2), SOE's employees can count with largely subsidized pensions.

This inverted redistribution solidarity is one of the largest reasons compelling the Government to foster changes in actual time-honored pension and retirement rules. Facing the music in this case means to eliminate retirement based exclusively on length of service. Retirement based exclusively on vesting time became an easy way for upper income workers to accomplish with legal requirements, put additional burdens on Federal Budget and, as a consequence, on the society in general. In the state-owned enterprises, the proportion of employers' contribution has been increasing steadily.

Table 2.2 – Retirement benefits in selected countries

Public managed PRS

Country	**Monthly benefits ceilings (and remarks) in US$ 1**
Brazil	1,000[1] (Brazilian retirees and pensioners receives 13 monthly payments: Art. 201, paragraph 6th)
Uruguay	650 (plus 1650 maximum value on optional defined contribution scheme)
Argentina	2,625 for older workers who belonged to the PAYG system and defined contribution to newly contracted workers
Spain	2,300
United States	25%, 45% or 60% of contribution basis and wage
United Kingdom	2,455
Germany	4,554 (minimum pension guarantee: 333)
France	80% active wage (on average)
Japan	4,230
Italy	80% active wage (plus 40 years of contribution)

Source: STEPHANES, 1998. p. 192 and 193

Notes : (1) As of January, 1999

2.3 – Demographic changes

2.3.1 - Population aging – Floridization

Aging has become a truly global challenge, and must therefore be given priority on the global policy agenda. A gray dawn fast approaches. It is time to take an unflinching look at the shape of things to come. Global life expectancy has grown more in the last fifty years than in the previous five thousand. Until the Industrial Revolution, people aged 65 or over never amounted to more than 2 or 3 percent of the population. In today's developed countries, they amount to 14 percent.

Many changes in the coming years will be carried out to address the fast-growing aging process: specific marketing strategies to cope with new and massive market demands; politically shaped demands in accordance with senior demand and an increasing number of non–governmental agencies enhancing senior collective questions. These initiatives are leaving behind the traditionally accepted senior citizen's lack of political participation. The American Association of Retired Persons (AARP) has already 33 million members; 1,700 trained employees; ten times the amount of trained volunteers; and an annual budget of US$ 5.5 billion. AARP has a lot of job to do over the next ten years. A baby boomer will turn 50 every eight second in the United States or, in other words, 11,000 birthdays every single day.

The large proportion of seniors in Florida – nearly 19% of the State population – represents humanity in the near future. As pointed out by Peterson, this phenomenon is a demographic benchmark that requires a handful of basic strategies, all of them difficult in an aging society: extending work life and postponing retirement; enlarging the workforce through immigration and increased labor force participation; encouraging higher fertility and investing more in the education of future workers; strengthening intergenerational bonds of responsibility within families; and targeting government-paid benefits to those in need while encouraging and even requiring that workers save for their retirement. All of these strategies unfortunately touch raw nerves - by violating cultural expectations, or by offending entrenched ideologies. (PETERSON, 1999)

The Brazilian people are aging quickly. Today we have the sixteenth highest number of seniors citizens in the world, and after the next thirty years, only four countries on our Planet – namely China, India, Japan and The United States – will have more aged people than Brazil. As pointed out by the World Health Organization of the United Nations Organization (WHO/UNO), Brazil is fairly the most fast aging country, something to be taken into account by specialists, in particular those who deal with social security issues.

The Brazilian Institute of Geography and Statistics of the Ministry of Federal Budget and Management (IBGE/MOG) reported an increase in the percent participation of seniors (people aged 65 and over) in the population: from 4% in 1980 to 5,4% in 1996. According with Institute of Applied Economics Research - IPEA, also attached to MOG, by 2020 this participation should peak at 11%. If the current PAYG system is maintained, the unfunded liability for pensions and retirements (that is, benefits already earned by today's workers for which nothing has been saved) will rise to unbearable levels, without adding health care and public assistance.

2.3.2 – Falling birthrates

Besides the aging effect, Brazil has experienced a continuous decrease in birthrates, in other words the number of birth per hundred women has decreased, dropping from 5.8% in 1970 to 2.6% in 1996.

Furthermore, with a life span increase and birthrates continuously dropping in the last decades, as shown on Table 2.3, the percentage of the younger population cohorts has shrunk progressively.

Table 2.3 – Brazilian fertility rates (1970 to 1991)

Year	Fertility rate (%)
1970	5.8

1975	4.3
1984	3.6
1991	2.6

Source: Brazilian Institute of Geography and Statistics – IBGE/MOG. Statistics Yearbooks 1970-1991 *apud* STEPHANES, 1998

As a direct result of the increasing demographic importance of Brazilian population aged 65 and older, an unprecedented economical burden is being placed on working age people as well as on companies. While the longevity revolution represents a miraculous triumph of modern medicine and the extra years of life will surely be treasured by the elderly and their families, pension plans and other retirements benefits programs were not designed to provide billions of extra years of pay outs.

2.3.3 – Expectations on benefits duration

Between 1931 and 1990, Brazilian public social insurance law did not allow a worker to receive benefits from PRS and, simultaneously, have a job in the same workplace. In accordance with actual PRS rules, approved in 1991, workers are not prohibited from receiving PRS benefits and, simultaneously, keep their former activities and, of course, wages.

The situation aforementioned has stimulated the proportional length of service retirement. Between 1994 and 1997, the length of service retirement increased more than 55.5%, wherein proportional modality answered by 78.3%. This growth is a direct consequence of the precocious retirement process, easily explained by a dramatic drop in the effective retirement age in the cases of length of service retirement: from 52.7 in 1994 to 49.4 in 1996. These empirical findings are in complete agreement with additional statistical analysis of probability distribution of retirement age among Brazilian workers.

In 1995, 72% of men and 81% of women retired before completing 55 years of age. Just one year later these percentages where 78% and 84%, respectively. This fact becomes more unfavorable when it is taken into consideration the length of service retirement benefits as a proportion of total expenditures: 39.5% in 1997.

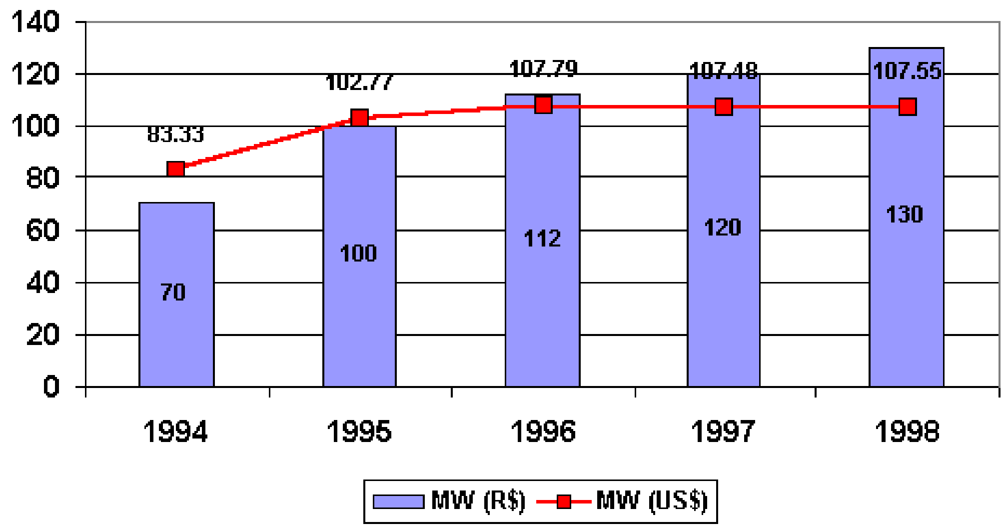
There is at least another side effect as a consequence of a smaller average effective retirement age. According to the Latin American Center for Demographical Studies (CELADE), while Organization for Economic Cooperation and Development (OECD) countries' retirees in 1993 could expect receiving benefits for 15.2 years on average, Brazilian retirees could have a total expectation of 17.5 years. Additionally, the Brazilian system redistributes in favor of women because of the combination of preferential eligibility rules and the higher life expectancy. In 1993, Brazilian women could expect to receive benefits for 20 years, thus above the 18.6 years observed within OECD countries.

2.4 – Same correction index is applied to wages and benefits

One of the consequences of the changes introduced after the 1988 Brazilian Constitution has been to increase the dependence of the social insurance fiscal position on changes in the minimum wage (MW). This occurred as the minimum benefit was doubled from half to one MW. Furthermore, the inflation erosion of benefits has increased over time the proportion of beneficiaries receiving the MW. In April 1993, about 52% of the benefits granted were set at one MW and by April 1994 the proportion had increased to 71%. In addition, under the new indexation rules, the index used to adjust the MW is the same used to adjust benefits: the minimum wage correction index (IRSM).

The economic stability of *Plano Real* increased the power of purchase of the MW, from US$ 83.33 in 1994 to US$ 107.55 in 1998 (Chart 2.1).

Chart 2.1 – Brazilian minimum wages (1994 to 1998)



January 1999

Source: FGV

The regression estimates show that, for every percentage increase in the real minimum wage, the real benefits increase by 0.52% in the following month. This leaves the social insurance system extremely dependent on the MW policy, which is periodically revised by the Congress. Henceforth, the indexation of the MW has acted as a cost containment mechanism. Between December 1985 and December 1990 the real minimum wage fell by more than 48%.

2.5 – Labor market characteristics

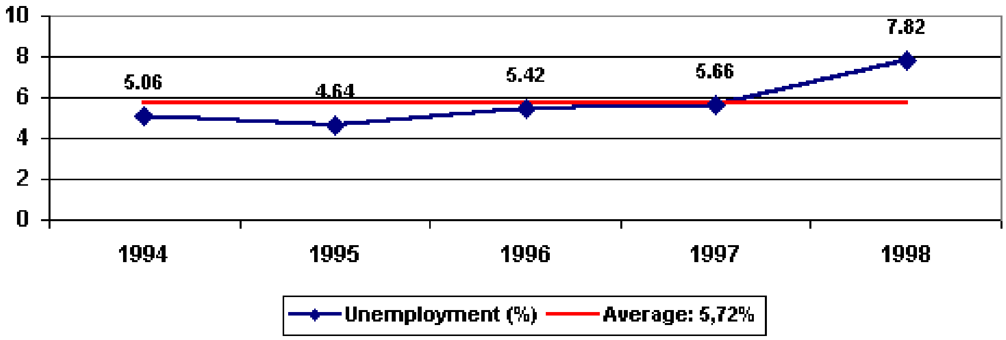
It is broadly accepted that there is a high positive correlation between educational level and earnings standards and relative adaptability to the labor market requirements. As a consequence, given the difficulties that badly trained manpower has to accomplish with flexible demand and skilled-intensive tasks, workers who lack technical training are the first to be put aside from the formal sector. The formal sector in Brazil has shrunk from 57% to about 50% in 1992, and increasing unemployment rates during following years forecast additional pressures to unskilled workers.

So, for low-income workers, characterized by their difficulty to get along with labor market dynamics, it is strongly burdensome to deal with public insurance requirements as long as in general they expend a remarkable part of their lives underemployed, unemployed or informally active. Frequently these unskilled workers are not able to prove their waiting period, that is the required years of contribution.

The participation rate is an increasing function of income: 37% of workers earning less than 3 minimum salaries contribute to the social security system or other subnational systems, while for those earning more than 10 minimum wages the corresponding figure is 84%.

Less public investments, increase of imports, reduction in the number of personnel in public service and the reduction of industrial production are considered the main factors in the increase in unemployment rates (Chart 2.2). In this sense, as the public insurance revenues are highly procyclical while expenditures are countercyclical, it follows that a recessionary anti-inflation program would be very damaging to the fiscal position of the public insurance system as it would entail an attack on its budget from two fronts.

Chart 2.2 – Brazilian unemployment rates (1994 to 1998)



Source: FGV

2.5.1 – Evasion and frauds

Another shortcoming of the Brazilian public insurance system is that it relies on high marginal payroll taxes, which have become an open invitation to evasion and are inducing major distortions in the sectoral allocation of labor. Two leading effects have been observed as direct consequences of overtaxation: (i) a percentage increase in the payroll tax is associated with a more than a proportional decline in the real revenues the following year; and (ii) regardless of gender and across different age brackets, an increase in the payroll tax decrease the probability of contributing to the public insurance system. Additionally, fourteen cross section studies examined by the U.S. Congressional Budget Office provide some evidence that public insurance wealth tends to reduce holdings of other wealth (see Box 2.1).

Source: PAGE, Ben. **Social Security and Private Saving: A review of the empirical evidence**. U.S. Congressional Budget Office. Washington, D.C. p. 2 and 10

III – Perspectives and transitional options

3.1 – Reform proposals

From the Federal Government's point of view, many of the reasons justifying the public insurance reform and, consequently, the constitutional amendments have to do with ethical, legal and administrative distortions impeding the PAYG survival.

As shown below, distinctly from the Liberal Institute's proposal, the Federal Government's proposal did not intend to extinguish the actual PAYG system but adapt it to cope with the requirements previously exposed.

As for the Workers' Party proposal, in spite of its agreement with the Federal Government about the financing option, it is not feasible to accomplish with the expectations suggested and, simultaneously, give additional years to the on going PAYG scheme. It will be presented, from the Federal Government's perspective, the reasons why the modifications weren't feasible as a public insurance reform.

3.1.1 – The Instituto Liberal purpose

Pursuant to the Chilean experience, the Instituto Liberal's (IL) proposal, although not transformed in a Constitutional Amendment, establishes a mandatory, individual, private managed and universally applied contribution defined funding.

The legal retirement age should be 65 and 60 years for men and women, respectively, in spite of the possibility to anticipate retirement benefits provided a minimum funding. As a defined contribution scheme, the benefit would depend solely on the employee's contribution plus the investment return. If desired and possible, the worker can maintain a complementary private owned and managed fund.

Part of the resources obtained by employers's contribution tax elimination would be paid to employees, and used to improve the workplace conditions and the labor productivity. The public health system would be financed by an earmarked tax based on the workers's wage.

In this approach, switching from a PAYG to a fully-funded scheme, the Federal Government plays a central role towards (i) monitoring private pension industry; (ii) providing a minimum pension guarantee whenever a worker's contributions are below a certain capital accumulation necessary to fund the pension, and (iii) honoring current benefits. To cope with these requirements, IL has proposed creating a federal trust fund wherein all the INSS assets, exception made to the health services units (e.g. rehabilitation centers in general), contribution arrears with the social insurance system and budgetary provisions. A number of constraints related to this proposal feasibility will be discussed later.

3.1.2 – The Workers Party purpose

The Workers Party purpose was conceived keeping in mind, on one hand, the existence of a mandatory universal, state managed PAYG scheme, and, on the other hand, an optional provident fund, however, in spite of its defined contribution and fully funded nature, just as IL's proposal, the funds are state managed.

In addition, PT's mandatory public insurance component submits for consideration: (i) reducing in five years the men's retirement age, establishes the same retirement age, eliminating women's five years advantage; (ii) creation of working time retirement benefit (just another denomination for length of service retirement); and (iii) establishing a closer relationship between contribution rate and maximum benefit value.

Since PT rules, if approved, should be applicable to the work force admitted henceforth, their financial effects should be felt thirty-five years later. When the reduction of men's retirement age is taken into account, PT's suggested modification becomes completely unfeasible in the short and in the long run. Taking into account women's higher life expectancy and growing participation on the labor market, it should be suggested that the legal retirement age be equalized at 65 years. This strongly opposes the PT's suggestion: a five-year cut on men's legal retirement age.

3.1.3 – The Federal Government Purpose

The Federal Government's final goal is, in fact, to improve the existing PAYG system, however, bringing back basic fundamentals. The costs associated with a complete switch from a PAYG to a individual, fully funded system will be discussed in the Conclusion. Even though, the purpose has faced the interest groups' pressure, in special those strongly influential on Congress and Judiciary's decision-making and decision-taking processes. After all, any reform proposal committed with privileges' reduction or their complete elimination is expected to face fierce opposition.

The Federal Government proposed (i) a legal retirement age of 60 and 55 years for men and women respectively I place of length of service retirement criteria; (ii) all three levels of government could create complementary regime provided all public servants' benefits obey the RGPS's ceiling; and (iii) creation of integrated funds whose assets should be constituted by payrolls contributions, arrears and rights of any kind aiming at to assure enough revenues to honor timely benefits' payment.

In March 1995, following international experience, the Federal Government proposed that a set of dispositions should be removed from Constitution, being treated by complementary and ordinary laws as well as by regulatory instruments. Besides the Public Insurance General Regime (RGPS) and the Civil Servants Public Insurance Regimes, the Federal Government proposal kept the Military Personnel Public Insurance scheme. The Civil Servants Insurance Regime should be applicable at the three levels of Government. Additionally, the proposal admitted the creation of optional, complementary, fully funded and autonomous closed pension funds schemes to the public servants.

Initially repudiated by the House of Representatives, the minimum age criterion was approved by the Constitution Amendment No. 20/98, raising the legal retirement age in five years in comparison with the Federal Government initial forecast (Table 3.1).

3.2 - Unfunded to funded transition

All resources collected by INSS (payroll contribution tax, premiums, rents and other incomes) are deposited in a **financial account** in the Brazilian Treasury. This **trust fund**, in the case of Brazil, holds all the revenues to pay benefits in the next month, so, the trust fund ratio (relation between the trust fund asset at the beginning of a year to projected benefits payments for that same year) is zero. This means that there is no short-term adequacy.

To facilitate the funding of public insurance, the Brazilian Federal Government and the National Congress have approved a constitutional amendment enforcing stiffer rules concerning the public insurance survival. As aforementioned, only taking into account the overwhelming pressure resulting from the public debt, the fiscal imbalance and the foreign currency outflows on December 1998 and in January 1999, can be understood why this Amendment was approved by the Congress.

Table 3.1

Proposed and effective changes on Social Security

Item highlighted	Federal Government	Instituto Liberal	Workers' Party	Constitution Amendment No. 20 (December 15th 1998)
Vesting time	35 years - men 30 years - women	-	Not applicable	35 years – men 30 years – women
Length of service retirement	Not applicable	Not applicable	Yes	Not applicable, except to acquired rights
Legal retirement age	60 years - men 55 years - women	65 years – men 60 years – women	60 years – men and women	65 years – men 60 years – women
Cost sharing	Employees and employers	Employees only	Employees and employers	Employees and employers
Closed funds	Yes, optional, individual, complementary under Federal supervision	Yes, optional, individual, complementary and privately administered	Yes, optional, individual account scheme administered by Federal Government	State owned (SOE) and private enterprises
Public insurance schemes	Military personnel's Public servants' General Public Insurance (RGPS)	Universal	Universal	Military personnel's Public servants' RGPS
Special retirement	Subsistence fishermen and farmers, elementary and high school teachers			
Retirees and pensioners liabilities	Active workers' payroll deductions Employers and self employed contributions Treasury	Treasury and Trust fund specially created (see section 3.1.1 for details)	Active workers' payroll deductions and Employers' and self employed contributions	Active workers' payroll deductions and Employers' and self employed contributions
Employers contributions	Same as employees	Workers experience a before-tax wages increase equivalent to the employers contribution	Same as employees	Same as employees
Health system funding	Treasury Employers contribution	Treasury Employee contribution	Treasury Employees' contribution	Treasury Employers' contribution Provisional Tax on Financial Operations (CPMF)

3.2.1 – The Public Insurance Imbalance and the Fiscal Stability Program

From the analysis of the Table 3.2, the imbalance of social security accounts for the major fiscal factor worsening the public sector fiscal results. The public sector's insurance consolidated result, in addition to the private initiative workers' social security, points to a deficit of the order of R$ 39.1 billion in 1998, despite of Ministry of Finance estimates of R$ 42.2 billion. That's the main reason why social security expenditures issue has been highlighted as the major factor worsening the public sector fiscal results.

Table 3.2

Federal, States and Municipalities' budgets aggregates[1]

Current prices as of 1998 - R$ Millions

Fiscal year (January to December)	Federal, States and Municipalities payroll expenditures including public insurance contributions	Federal transfers to States and Municipalities	Other Federal current and capital expenses	Public Insurance				Interest paid
				Private Sector's Workers		Public Sector's Workers		
				Contributions	Benefits	Contributions	Benefits	
1994	66,565	18,880	18,636	n. a. [3]	37,840	n. a.	n. a.	29,635
1995	80,505	22,816	18,670	41,199	40,090	n. a.	n. a.	42,343
1996	82,320	23,091	22,487	45,134	44,783	n. a.	n. a.	31,569
1997	81,605	26,014	27,157	45,380	48,560	6,541	38,403	30,322
1998 [2]	83,417	32,030	29,555	46,700	53,600	6,765	38,916	60,000

Notes: (1) Municipalities are considering only State Capitals; (2) provisional data on FY 1998; (3) n. a. means not available

Source: Fundacao Getúlio Vargas. IBRE. **Carta do IBRE - Conjuntura Economica** – November, 1998, p. 3-22.

As mentioned, it is necessary to introduce a set of modifications on Brazilian Constitutional framework in order to include sharp and politically unpopular budget cuts as well as promoting adjustment on structural support in fields such as work relations, tax distribution, pension and retirement systems and price indexes. Immersed by the last representative campaign, exactly at the midst of Russian's havoc, congressmen were clearly thinking about a "Plan B" to defeat Brazilian domestic challenges. The idea of introducing alterations was repeatedly postponed to 1998 extraordinary convocation period and to the new Congress.

In the Fiscal Stabilization Program, the public insurance is present in two sets of initiatives: in the **structural measures** - whose changes aim at lending appropriate form to the fiscal decisions, procedures and practices in the future - and in the **1999-2001 Plan of Action**, made up of immediate-impact initiatives. This last will build a "bridge" between the present situation and that which will exist when the already mentioned structural reforms start producing their full impact.

In the next item will be introduced the politically most controversial modifications and, in the conclusion, the immediate financial impacts of this measures, always framed by the Fiscal Stabilization Program.

3.2.2 – Constitution Amendment No. 20/1998

The Constitutional Amendment No. 20/1998 proposed by the Federal Government and approved by Congress on December 15th, 1998 establishes a new general framework or system, for the Brazilian Public Insurance. The public insurance regimes and general dispositions concerning pension funds compose this general framework. After approval in the Congress, the reform of the public insurance regimes and private pension funds schemes still needs to be regulated by complementary and ordinary law.

As for public insurance regimes, one protects private sector's workers (the RGPS's workers which includes the SOE's workers); the second one covers the public sector's civil workers at the three levels of government (federal, state and municipality) and the third one deals with military personnel. So, the two public insurance regimes in effect today will be maintained, but they both, whenever is possible, are required to maintain financial and actuarial balance.

The ***Public Insurance General Regime - RGPS*** main features, after the Constitutional Amendment No. 20/1998, are:

- **the elimination of length of service retirement** (based exclusively on the number of years in service) for all private company and SOE's workers who have retired up to the Amendment approval. The vesting time for retirement under new RGPS rules is 35 years for men and 30 for women. The vesting time applicable to fishermen (self employed), subsistence farmers, high school and elementary school teachers is reduced in 5 years (Art. 201, paragraph 7th, I). All benefits recipients under the RGPS (retirees, pensioners, old aged and disabled people) can not be considered as contributors (Art. 195, II);

- all the **philanthropic organizations are exempt**, so their payrolls are tax exempt, in despite of the fact their employees can retire and receive public insurance benefits (Art. 195, VII);

- the **establishment of a minimum age for retirement** (60 and 55 years for men and women, respectively) **as well as of a minimum period of contribution to public insurance** before retirement (35 years for men and 30 years for women). Beside the preferences in the women's eligibility criteria, the retirement age for the workers aforementioned must be reduced in 5 years (Art. 201, paragraph 7th, II);

- the **contribution basis was expanded** by inclusion of financial enterprise income (interests and service sales) and payroll (Art. 195). Formerly, the finance and banking sector had a special treatment (Table 2.2), so that their tax basis included only payroll and sale of services;

- establishment of a **ceiling for public insurance benefits** in general (Table 2.2);

- a **value ceiling for special legislation benefits** was set to war veterans and persecuted political activists during Brazilian Dictatorship (Art. 248 and Art. 37, XI). All the new or already conceded special benefits - whose values overpass that presented on Table 2.2 - can not exceed total wages paid to the Supreme Court Judges.

As for ***Public Servants's Insurance Regime*****,** the Amendment establishes:

- a **value ceiling for public servants' benefits** applicable to all benefits, including military personnel. All the benefits can not exceed total wages paid to the Supreme Court Judges (Art. 37, XI);

- **public servants can add their RGPS's contribution time to the Public Servants's Insurance Regime** contribution time and vice-versa (Art. 201, paragraph 9th);

- the **combination of the legal age of retirement with the vesting time**, which will limit the hypotheses of early retirements. Men can retire voluntarily with 65 years and vesting time equal to 35 years. Women's legal retirement age is 60 years and vesting time 30 years. It also established a minimum contribution time of ten years to the public insurance trust funds so that the public servants can achieve a full replacement rate (Art. 40, III);

- the **new pensions and retirements can not exceed total wage perceived or used as a reference** to calculate the recipient benefit (Art. 40, paragraph 2nd);

- the **introduction of a rule of transition** with an accretion during the period of contribution (Art. 40, III);

- **special retirements are restricted** to cases wherein exist real threats for the workers's health and physical integrity (Art. 40, paragraph 4th);

- **elimination from the Constitution of artificial expansion of working time** for effect of benefit concession, used to calculate vesting time (Art. 40, paragraph 10).

The general rules for ***Public Servants's Closed Pension Funds Regime*** were established aiming at the operational effectiveness of SOE's Closed Pension Fund within the three levels of government. Some of the points are the following:

- **prohibition of the establishment of special funds within public administration to grant special retirement benefits**. Whenever the employer is a state-owned enterprise, its contribution to closed pension funds is limited to the same amount invested by the employee (Art. 202, paragraph 3rd);

- the funds must be based on individual capitalization of contributions, with retirement benefits calculated on the basis of contributions as well as the employee's life expectancy at the time of retirement (check out);

- the Federal government will have the authority to monitor and supervise existing funds.

Additional Alterations of the Social Security System

Once approved the Social Security Reform, a set of additional initiatives aimed at eliminating the distortions that still persist will be put through by the Federal Government.

Regulation of the reform: the new Social Security design should follow the basic rule of the actuarial balance, both general and individual, that is, the forecasting of the equivalence between the expected present value of the contributions and of the benefits.

The project of the General Law of Social Security will propose general rules for the organization and functioning of the closed pension funds of federal, state, Federal District, and municipal public servants.

Law on Crimes against Social Security: the text will define as crimes the various conducts that generate losses to the social security system, such as omission of information on the payroll and the release of restricted information.

IV – Conclusions and suggestions

4.1 – The nature of social insurance system's revenues

All the actions discussed herein must be understood and coupled to the Brazilian financial crisis (December 1998) and, consequently, to the Fiscal Stability Program. Many of the amendment dispositions on Social Security issues aim to increase the INSS revenues in order to reduce the Federal Government debt. Additionally, the measures adopted (Table 4.1) have to do with the immediate consequences of former Congress' denial of the Executive Branch proposed measures.

Given that the public insurance system's revenues are highly procyclical, the effect of a recessionary anti-inflation program would be very damaging to the fiscal position of public insurance system as it would entail an attack on its budget from two fronts.

4.2 – Central recording system

Since 1995, MPAS has already been exploring the possibilities as a result of the Federal Government's selective database check crossing. In this sense, the Ministry of Labor and the Ministry of Finance databases have been selectively examined in order to detect possible failures on tax payment. In addition, the MPAS's decentralized units have increasingly been using records on active workers' wages as evidence of their eligibility for retirement and pensions.

4.3 – Measures of immediate impact

Since the Social Security Reform will only produce its effects in the medium and long terms and given the growing imbalance of the public servants and private workers' social security regimes, a set of legal instruments with immediate impact will be adopted. Even in the short term, the measures enforced by the Constitutional Amendment No. 20/1998 can be subdivided in two groups; those whose expected effect is a revenue increase and another set of measures aiming at reducing the social security imbalance and, consequently, the public sector's consolidated debt.

4.3.1 – Reduction of expenditures and public insurance deficit

In the RGPS, immediate effect measures will be adopted with a view to reduce the fiscal abdication and to combat evasion of social security contributions. As a whole, those measures will have an impact of the order of R$ 2 billion during their first year.

The measures proposed for the Federal Public Servants Social Security Regime have the objective not only of reducing the system´s deficit of some R$ 18.3 billion in 1998, but also of alleviating the existing distortions. The measures, listed below, should have an estimated impact of R$ 4.3 billion in the first 12 months.

With the approved universalization of the 11% bracket for contributions, civilian retirees and pensioners were enforced to contribute toward the Federal Public Servants' Social Security Regime. State and municipal administration can, thus, adopt the same procedure provided that Constitutional support is available. The intention behind the universalization of the 11% contribution, thereby ensuring the fair sharing of the system's costing, which will represent an annual financial impact of some R$ 1.7 billion. The measure affects 446,942 retired federal public servants and pensioners. As mentioned, amplifying the range wherein this benefits deduction is applied will decrease these initial forecasts.

Adoption of an additional 9% temporary bracket incident on that portion of the remuneration that exceeds US$ 700.66: the measure, which will be in force for a five-year period, will represent an annual inflow of resources of the order of R$ 2.7 billion. The contingent immediately affected by the proposal total 488,989 active federal public servants.

4.3.2 – Raise in tax revenues

As already noted, within a legal context that imposes restrictions on sharper cutbacks of expenditures, the magnitude of the primary surplus necessary to trigger a sustained move toward the stabilization of the debt/GDP relation, with the reduction of interest rates and the acceleration of growth, makes the topical raising of revenues necessary. It is indispensable to adopt measures that offer a degree of flexibility in the handling of the Union General Budget (OGU). The reasons that form the base for the proposal of measures on the described below:

- equalization of the fiscal treatment of COFINS: Complementary Law draft 215/97 aims at universalizing the incidence of 3% COFINS on total income, correcting distortions that reveal a non-isonomic handling;

- raising the COFINS bracket: the intention is to increase by one percentage point the COFINS bracket, admitting a compensation through the Enterprises' Income Tax (IRPJ). The proposal is an important instrument for raising resources indispensable for the fiscal equilibrium, without raising the fiscal burden of small and medium businesses, which have opted for the fiscal regime of presumed profit, a hypothesis in which there would be the integral absorption under the form of compensation through the IPRJ due. The businesses opting for the SIMPLES will not be affected by the rise in the COFINS bracket. The Contribution to Social Security Financing (**COFINS)** rate was raised from 2% to 3%;

- the Social Contribution on Enterprise Profits (**CSLL)** formerly did not include interest, loans and finance operations and, after the EC 20, Federal Government foreknows a additional R$ 4 billion per year in revenues. For FY 1999, just R$ 2 billion must be collected, as far as one takes into account the new CSLL will be effective in July, 1999;

- the Tax on Financial Operations (**IOF)** increase of 0.38% (precisely the CPMF rate not approved by Congress) from January, 24th, yielding an additional tax collection of R$ 1.9 billion in 1999. As foretold by Federal Government this increase be will phased out as soon as the CPMF is effective by July 1999.

4.4 – Structural measures

It should be recognized that in pursuing the constitutional reform of public insurance system, the macroeconomic environment is the most obvious and important one. After the immediate measures adopted, whose impacts where already described, is already to consider the Chilean solution. Switching from a PAYG to a individual, fully funded system – as proposed by Instituto Liberal - would require resources in excess of what Brazilian economy can afford today. These transitional costs are needed because in a individual, fully funded and defined contribution scheme, the public insurance system ceases to receive employers and employees contributions, which are deposited in individual accounts. At the same time, it is required to honor current benefits as well as guarantee the amount paid by active workers. When Chile introduced its fully funded system in 1981, the cash deficit of the public sector was 1.2% of GDP. Three years later the deficit was 3.9% of the Chilean GDP. In addition, the size of Brazilian IPD was estimated in 1995 as 188% of Brazilian GDP, with contributors' acquired rights representing about 138% of GDP.

Thus, in examining the reform option adopted by the Federal Government, the underlying premise in this paper is that Brazil will keep one mandatory PAYG system.

4.4.1 – Third pillar

The PAYG, however, support the idea of government-induced private saving through a mandatory scheme based on individual accounts and defined contribution. The advantage of such an arrangement is that the redistributive scheme can be achieved by the social insurance system already established (first pillar or RGPS) while the efficiency gains arising from workers treating contributions as a deferred compensation rather than a tax would be achieved by the mandatory private scheme (second pillar). This pillar would be less conducive to informal employment while inducing beneficial effects on capital accumulation. The third pillar (open pension funds with individual accounts, contribution defined and privately administered) which already exists in Brazil, would enable additional coverage for the formal sector' workers and initial coverage for informal workers. These different tools can improve the Government ability to adjust the RGPS to changing circumstances and, simultaneously, decrease the tax burden on the wage bill.

4.4.2 – Incentives to individual saving: tax deduction

Currently, Brazilian workers' contribution to closed and open pension funds are not tax deductible. In other countries, providing such a deduction has proved to be a very important incentive as taxation is postponed to the time the benefits are granted. The government could consider employee contribution tax deductible.

Table 4.1

Changes on Social Security financing characteristics

Constitutional Amendment number 20/1998

Item highlighted	How it was	How is going to be	Practical effects to contributors
Tax contributors	Exclusively employers	All the enterprises and enterprise-like entities	The remarkable broadening on contributors number and elimination of pleadings submitted to courts
Payroll contributions	Based exclusively on payroll	Incidence on payrolls in addition to any other work incomes paid or credited to a person even when self-employed	Now dispositions on the theme can be set forward by ordinary law
COFINS and PIS	Based exclusively on income from commercial and industrial activities (finance operations weren't included)	Incidence on total income (starting February, 1999): 3% to COFINS and 0.65% to PIS	Eliminate the universally used practice of argue the applicability to of this contribution to financing and banking operations
CSLL	Based on equity principle, recognized after judicial pleas, banks used to apply just 8% on their net profit instead of law-established 18% specific rate to finance system	There will be no judicial pleas concerning applicability of 18% rate on net profits	The foregone conclusion is the immediate and drastic decrease on judicial pleads concerning equity principle violation by Federals

Source: Machado e Associados *apud* Gazeta Mercantil – p. A-10, 22 de dezembro de 1998

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ANNEX 1

Pension debt overhang

Some interesting analogies can be drawn between a country's external debt and its implicit pension debt - IPD. It is usually accepted that when it comes to servicing external debt, two aspects should be taken into account. The first concern is the immediate cash-flow requirements as measured by **the country's debt-service ratio (**that is the ratio of scheduled debt-service payments for the current year to annual exports of goods and services**).** The second, and longer-term, concern is **the extent of debt overhang**, as measured by the ratio of the discounted present value of all future debt-service payments to annual exports of goods and services. Applying these concepts to pensions, one can measure cash-flow requirements by using the cost rate – that is, the ratio of pension expenditures to the portion of the wage bill covered by the pension system. Because most pension expenditures are financed through payroll taxes, the wage bill is the relevant tax base, just as exports are relevant base for external debt servicing. A cost rate above the statutory contribution rate would indicate that pension expenses could not be met by contributions alone and therefore would require transfers from general revenue, a higher contribution rate, or a lower pension benefit. In short, the cost rate is to a country's pension system what the debt-service ratio is to it external debt.

The concept of external debt overhang can be applied to pensions. The **pension debt overhang** would be captured by the ratio of discounted future pension liabilities to the covered wage bill. This ratio is shown in columns (2) and (3) of the table, using two different discount rates to calculate net present value. The discount rate of 8% is added to allow direct comparison with the external debt overhang shown in column (5). Usually, an external debt service ratio of 200%, calculated on present-value basis with an 8% discount rate, indicates a severe external debt problem. For the countries in the table, except Peru and Venezuela, the pension debt overhang is well above 200%. These figures show in stark terms that pension liabilities deserve far more attention than they have received so far. Indeed, a case can be made for making the calculations of a country's implicit pension debt a requirement for any long-term assessment of its fiscal policy.

When the pay-as-you-go pension schemes become unsustainable, either on their own or when the IPD is considered with other public debt, the government must seriously consider reducing the IPD. They can do this by raising the retirement age and reducing the statutory value of the pension as a proportion of the worker's wage (the replacement rate). In Ukraine, for instance, equalizing the retirement age at 65 (from the current levels of 60 for men and 55 for women) would reduce the pension debt overhang by about 23%. By comparison, under the Toronto terms for repayment of bilateral non-concessional loans, low-income developing countries were granted an average reduction of their external debt, in present value terms, of about 20% of their non-concessional debts. Correcting the imbalances of pension systems thus might very well bring more debt relief than a typical debt-reduction scheme.

The IPD is a fiscal burden that cannot be ignored in low and middle-income countries, especially whose used to be planned centrally, or anywhere else for that matter. In addition to the long-term balance of the pension scheme, the IPD measures intergenerational transfers of massive proportions. Changing the parameters of a country's pension system can help, but a more important objective would be to move away from schemes that entail large burdens that get as heavier as population become older. This can be achieved by moving toward fully funded, defined-contribution schemes.

Selected countries: implicit debt during the early 1990s[1]

Region	IPD/GDP	IPD/Wage bill		External debts indicators	
	DR = 4%	DR = 4%	DR = 8%	Stock/GNP	Present value/exports
Country	(1)	(2)	(3)	(4)	(5)
Latin America – South America					
Uruguay	214	959	713	59	287
Brazil	187	591	390	28	300
Peru	37	174	113	63	436
(recognition	(3)	(15)	(7)		
Venezuela	30	303	199	65	195
Africa					
Cameroon	44	410	318	65	195
Senegal	27	467	324	64	161
Asia					
China	63	414	324	64	161
Europe					

Croatia	350	739	486	Not available	Not available
Hungary	213	745	549	67	186
Ukraine	141	779	220	2	7
Turkey	72	592	388	51	170

Source: 1. Kane, C. and Palacios, Robert ***Op. cit.*** 2. World Bank. p. 5

Notes : 1. The IPD estimates in this table are based on data for different years in the early nineties. The IPD calculation is based upon a termination liability concept that measures the value, under certain assumptions, of the accrued pension wealth of contributors and pensioners at a given point in time. In contrast, some other studies calculate the present value of all future pension spending assuming that scheme continues indefinitely. The present-value of debt service payments is based on a discount rate of 8%.

ANNEX 2

The TIAA- CREF Case Study

• What is TIAA-CREF?	The Teachers Insurance and Annuity Association – College retirement Equity Fund – TIAA- CREF is the world largest pension fund based on assets under management, provides financial services for the education and research communities. For eighty years, the TIAA-CRE has been providing fully funded, portable retirement savings vehicles that allow educators and researchers to move from one employer to another, secure in the ownership of their accumulated retirement funds.

• How is its financial health?	Independent rating agencies – A. M. Best Company; Duff and Phelps Credit ratings Company; Moody’s Investors Service; and Standard and Poor’s Insurance Rating Services – credited the highest possible ratings to TIAA-CREF financial strength (see table below), including operating and investment performance and the ability to meet benefit obligation to participants.

TIAA-CREF asset composition As of January 31, 1998 *US$ billion*	
Item	
	Total assets 215
Real estate in 47 US States and DC	6
Commercial mortgages	19
Publicly traded and privately traded bonds	64
Common stock	111
Short-term debt obligations and fixed-income securities	3.8
Not available information (as for March 16, 1999)	11.2

• Which institutions are eligible for TIAA-CREF support?	As a non-profit and nationwide organization, TIAA-CREF helps employer design, implement, and update retirement and group insurance plans in keeping their staff benefits goals. TIAA-CREF serves a wide range of non-profit institutions in the research, educational, cultural field such as museums and teaching hospitals, and libraries.

• What kind of assessment can employees obtain from TIAA-CRE ?	TIAA-CREF institutional consultants help employees on their personal retirement planning and conducts seminars on campuses covering such topics as investing for retirement, changing tax laws, estate planning and, Social Security.