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FROM THE BRAZILIAN PAY AS YOU GO PENSION
SYSTEM TO CAPITALIZATION: BAILING OUT THE GOVERNMENT

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THE GOVERNMENT^(*)**

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FROM THE BRAZILIAN PAY AS YOU GO PENSION SYSTEM TO CAPITALIZATION: BAILING OUT THE GOVERNMENT

1. Introduction

It has been generally recognized, chiefly after the promulgation of the 1988 Constitution, that the current official pension system in Brazil has to be extensively reformulated. The huge deficits that have already been experienced, and which are expected to grow,¹ have led to the establishment of a Special Congress Committee as well as to the presentation of several distinct proposals for its reformulation.²

One of such proposals, which has been known under the name of its sponsor, Instituto Liberal, and which was formulated by the present authors, suggests that the current pay as you go pension system should be replaced by an earnings-related fully-funded system, based on the principle of capitalization with individual accounts.³ That is, inspired by the Chilean experience,⁴ and thus following a tendency that appears that will also take place on many middle-income developing countries, and which was also already put forth in Australia, we advocate that our current pension system, which has been plagued by frauds and corruption and that has certainly contributed for the increase of the informal sector of the economy, be substituted by a system where the individual is the principal provider of the fund that will finance his or her income when retired.

¹ Some studies estimate that the expenditures with the current pension system can be as high as 8% of the GNP, by the year 2030. See A. Medici, F.E.B. Oliveira and K. Beltrão, "Subsídios para a Reforma Constitucional no Campo da Seguridade Social: Visão Histórica e Perspectivas", Planejamento e Políticas Públicas, nº 9 (junho de 1993), pp. 1-71.

² For an overview of some of the most comprehensive proposals see C. Carvalho Filho, "Propostas de Reforma da Seguridade Social: uma Visão Crítica", Planejamento e Políticas Públicas, nº 9 (junho de 1993), pp. 101-143.

³ Originally published by Instituto Liberal, in May 1991, the study was reprinted in Previdência Social no Brasil: Diagnósticos e Sugestões de Reforma, C. de Faro, Editor, under the title "Previdência Social no Brasil: uma Proposta de Reforma", J.L. Carvalho e C. de Faro, Rio de Janeiro, Editora da Fundação Getúlio Vargas, 1993.

⁴ For recent and very lucid appraisals of the Chilean experience, which can certainly contribute to the betterment of our proposal, see P. Arrau, S. Valdés-Prieto and K. Schmidt-Hebel, "Privately Managed Pension Systems: Design Issues and the Chilean Experience", and P. Diamond, "Privatization of Social Security: Lessons from Chile", both presented at the 12th Latin American Meeting of the Econometric Society, Tucuman, Argentina, August, 1993.

One of the focal points of our proposal, barring the event of disablement, which will be covered by a mandatory insurance policy, is the elimination of the actual possibility of retirements at very early ages. The individuals would no longer be allowed to retire when fulfilling the current time limits of effective work. Retirement occurs only when the individual reaches the age of 65 years.

Another focal point, besides the complete separation of the pension system from the system of medical assistance, is that the responsibility, which is mandatory, of contributing to the pension system belongs to the individual only. That is, the eventual employer would no longer be required to contribute. Releasing the current obligation of contributions by the employers may not only permit an increase in the wages that are actually paid, but will also have a positive effect in terms of reduction of the informal sector of the economy. However, for reasons that are going to be detailed on section 4, it will be suggested that the employers be required to continue with their contributions during the initial stage of the transition to the proposed system.

A recurrent criticism of our proposal is centered on the fact that we estimate the present value (of the order of 8.4% of GDP) of the transition costs from the current system to the proposed one, without explicitly considering the flow of funds necessary for the government implementation of such substitution. The purpose of the present paper is to specifically address this issue, submitting detailed estimates of the necessary funds that will have to be provided by the society as a whole.

2. The Basic Data

Assuming that the new system would be implemented in 1994, we have two basic components that will have to be financed by public funds. As the first component we have the current stocks, in 1993, of pensioners. These comprise the following groups:

a) Regular time retirement - which includes those that have completed the so called regular minimum number of years of work (which is 35 years for men and 30 years for women). Given that the majority of workers in the formal sector of the economy are men, we will adopt the simplifying assumption of a minimum working period of 35 years, with a person having the average age of 53 years when attaining that limit. The correspondent conditional life-expectancy is 20 more years of life, at the end of which we will add 7 more years to take into account possible dependents.

Making use of the same projection methodology that is fully described in our previous work, and taking into account the figures for 1990 which are presented in the mentioned work of A. Medici et al (1993), the total of such pensioners in 1993 is taken to be 1,294,687. In order to simplify the computations, we will assume that this stock will decrease linearly along 27 years, being totally vanished in the year 2020.

b) Special time retirement - which includes those that worked on jobs that are considered of special status under the actual Constitution. Among others, and certainly the most numerous, we have the teachers. For males, the minimum number of years of work is 30; while for females is only 25 years.

As a simplifying assumption we will consider 28 years as the average minimum of years of work, with a person having the average of 45 years of age when retiring. Including an allowance for dependents, we will assume that the total of 342,395 pensioners in 1993, will decrease linearly until being vanished in the year 2028.

c) Old age - which includes those that have reached the actual minimum age limit of 65 years of age for retirement. We will assume that the 1993 total of 3,555,518 pensioners have an average age of 65 years and will decrease linearly until being vanished in the year 2008.

d) Invalids or disabled - the 1993 total of 2,323,385 will be assumed to have an average age of 35 years, with a conditional life-expectancy of 30 additional years, to

which 15 more years will be added in order to account for dependents. This total is also assumed to decrease linearly, until being vanished in the year 2038.

e) Dependents - the 1993 total of 4,489,344 will be assumed to decrease linearly along 20 years. That is, this stock will be vanished in the year 2013.

Besides the current distinct stocks of pensioners, we have also to take into account the rights of all those that, in 1993, are registered contributors to the current pay as you go pension system. These comprise the second basic component that will also have to be financed by the government.

As our proposed system makes it mandatory a contribution for insurance covering the events of death and of disablement, we have only to consider as costs for the society those expenses that will only occur because of the substitution of systems. These comprise that following three categories of flows:

a) Regular time rights

Formally, we have to consider the rights even for those that entered the formal job market only in 1993, and that would have to work the minimum of 35 years under the old system. Under our scheme, these individuals will be entitled to receive $1/35$ of the amount that is currently being paid to those retired when attaining the regular 35 years of work. Thus, assuming he or she would complete the 35 years of work at the average age of 53 years, our individual would have the "right" of receiving a pension during 27 years (20 years of conditional life expectancy plus 7 years in order to account for dependents).

In order to account for such "rights", those individuals will be entitled to receive, at the age of 53 years, a bonus whose face value is equal to the present value, computed at the interest rate of 6% per year, of the mentioned flow of 27 years. However, the bonus will only be redeemable when the individuals reach the age of 65 years; including interest, at the same 6% per year interest rate. That is, the bonus will mature 12 years later.

Analogously, those individuals that started to work in 1992 would have "rights" of $2/35$ of the regular amount; and so forth.

In general, considering the cohort that, under the old system, would retire on year n , for $1993 < n \leq 2027$, the "rights" would amount to $(35 - (n - 1993)) / 35$ of the "regular" pension, during 20 years. The present value of this flow is transformed into a bonus, received at year n and redeemable, with interest, only 12 years later.

In order to compute the actual values that the government has effectively to disburse with each cohort, we need to have the size of each cohort. Starting with the mentioned estimate for the 1993 stock, we have projected the evolution of the stock making use of the same implicit rates of year by year increase which can be derived from the data that was presented on our previous work. The corresponding figures are shown on Table I.

From Table I, by taking the successive differences of the projected stocks of future regular time pensioners, we can easily compute the size of each cohort.

b) Special time rights

Given the already mentioned average of 28 years of work, for the cohort that would, under the old system, be entitled to retire at year n , for $1993 < n \leq 2020$, the "rights" amount to $(28 - (n - 1993)) / 28$ of the pension that would be paid for those retired under the current special clause. As these "rights" would be paid along 35 years, the members of the considered cohort will receive a bonus whose face value is equal to the present value, at 6% per year, of the associated flow. On the other hand, as the proposed system stipulates retirement at the age of 65 years for every one, the bonus will only be redeemable, with interest at the same rate of 6% per year, 20 years in the future.

Similarly as in the previous case, we have generated the corresponding stock data on Table I. From that, also by taking successive differences, we can derive the size of each cohort.

c) Old age rights.

Finally, we have to consider the "rights" of those that, having been contributors under the old system, would be entitled to retire, when attaining the age limit, after the institution of the proposed system.

Table I: Actual System Projected Number of Beneficiaries by
Kind of Benefit Paid

Year	Age Limit	Disableds	Special Time	Regular Time	Dependents
1993	3555518	2323885	342395	1294687	4489344
1994	3772703	2412169	364617	1366394	4764934
1995	3992273	2503171	387602	1441510	5053413
1996	4209640	2594075	411541	1506142	5355386
1997	4431335	2688391	435678	1576301	5671481
1998	4652688	2785273	460082	1647509	6002360
1999	4875303	2884928	484782	1719663	6348714
2000	5108652	2987387	509809	1792736	6711269
2001	5353775	3092638	535205	1866656	7090779
2002	5596977	3200315	561803	1943820	7488040
2003	5838253	3310588	589715	2024657	7903882
2004	6074736	3423287	618991	2109437	8339171
2005	6311113	3538630	649735	2198598	8794820
2006	6547417	3656553	682023	2292440	9271780
2007	6800421	3777417	715380	2390092	9771049
2008	7068274	3901532	749835	2491861	10293668
2009	7346187	4029029	785348	2597691	10840731
2010	7641548	4160064	821888	2707800	11413380
2011	7948784	4295361	860127	2822579	12016280
2012	8268373	4435059	900147	2942222	12651028
2013	8600811	4579301	942028	3066937	13319306
2014	8946615	4728234	985857	3196938	14022885
2015	9306323	4882010	1031726	3332450	14763630
2016	9680493	5040787	1079730	3473706	15543504
2017	10069707	5204729	1129966	3620950	16364574
2018	10474569	5374002	1182540	3774434	17229017
2019	10895710	5548781	1237560	3934425	18139122
2020	11333783	5729244	1295140	4101197	19097303
2021	11789469	5915576	1355399	4275039	20106099
2022	12263476	6107969	1418462	4456249	21168184
2023	12756542	6306618	1484459	4645141	22286372
2024	13269431	6511728	1553526	4842039	23463627
2025	13802942	6723509	1625807	5047283	24703070
2026	14357903	6942178	1701451	5261228	26007985
2027	14935177	7167958	1780614	5484241	27381830

Source: derived from F.E.B. Oliveira et al, Metodologia de Projecao dos Gastos Previdenciarios. Estudo sobre Economia do Setor Publico, N. 4, Rio de Janeiro, IPEA/INPES, mar. 1990.

In this case, given the faulty administration of the actual system, which lacks a detailed individual record of the current contributors, it is virtually impossible to know how much has a given cohort contributed prior to the year when the retirement age is attained. Therefore, we have no "rational" procedure to compute the correspondent "rights".

As a rather heroic measure, it will be arbitrarily assumed that the next 20 cohorts, starting in 1994, will be entitled to receive the minimum income during 15 years; each. The cut-off point can be justified on grounds that individuals that have at most 45 years of age in 1994, and that will be eligible for retirement 20 years later, will accumulate, in accordance with the capitalization scheme of the new system, more than the necessary amount to guarantee the minimum income for the rest of their existence (including dependents).

On Table I, making use yet of the same projection methodology as in the other two cases, we also present the evolution of the stock of contributors that will be retired for having reached the age limit, in each one of the 20 years after 1993. From that, once more by taking successive differences, we can derive the size of each cohort.

3. The Flow of Costs

In this section we will present the projection of the yearly flow of costs, that will have to be borne by the society as a whole, along the pertinent horizon of 47 years (starting in 1994). It should be stressed, beforehand, that we have to consider only the costs that can be directly associated with the implementation of the new system; and which are those already specified in the preceeding section. Thus, for instance, and as already mentioned, as the new system will require the payment of an insurance policy covering the events of death and of disablement, we do not have to take into account the projected new cohorts of dependents and of disabled.

In our previous work, the so called "salário mínimo de referência" (minimum wage of reference - SMR), which is now extinct and was precisely created as a device for ameliorating the deficitary situation of the current official pension system, was taken as numeraire. In December 1990 its value would correspond to Cr\$ 6.000,03 (roughly US\$ 36). As the new Constitution establishes that the minimum benefit is equal to the minimum wage, whose observed average value has been not much higher than US\$ 50, we have decided to take 1 SMR as equivalent to US\$ 50. With this parity, the

corresponding dollar value of the average SMR value of each kind of benefit will be taken to be equal to: regular time retirement - US\$ 260; special time retirement - US\$ 290; old age retirement - US\$ 123.75; disablement retirement - US\$ 105.50. For the case of the benefits that will be paid to dependents, the average dollar value will be assumed to be equal to the weighted average of the benefits paid for regular time, special time and disablement retirements; with the weights being the respective stocks of pensioners in the year 1993. This procedure led to the value of US\$ 171.78.

Taking into account that each pensioner is entitled to receive the corresponding benefit 13 times a year, Table II presents the yearly disbursements with the three previously mentioned kinds of beneficiaries that were, at least in 1993, contributors to the old system; regular time, special time and old age pensioners. The last column of Table II also presents the total yearly disbursement with these three types of future pensioners.

Given the assumptions, the first disbursement occurs in 1994, and is due only to the first cohort of old age retired individuals. On the other hand, the last disbursement will take place in 2040, being due to the cohort that, under the rules of the old system, would be entitled to retire, for reasons of attaining the special time limit, in the year 2020.

It is interesting to notice that, in terms of the yearly total, the maximum value will occur in 2014; which is the year when the initial payment to the cohort that would retire takes place, under the special time clause, in 1994.

On the other hand, Table III contains the corresponding estimates for the yearly disbursements with each one of the five distinct stocks, in 1993, of the old system beneficiaries: regular time, special time, age limit and disabled retired persons, as well as dependents. In the last column, it is also presented the resulting total.

Observing that the first disbursement occurs in 1994 and the last in 2037, it is interesting to notice that the maximum value will have to be paid exactly in 1994.

Table II: Flow of Benefits to be Paid to Previous System Contributors
(Values in US\$ 1000)

YEAR	Regular Time	Special Time	Age Limit	TOTAL
1994			141170	141170
1995			283890	283890
1996			425179	425179
1997			569281	569281
1998			713160	713160
1999			857860	857860
2000			1009537	1009537
2001			1168866	1168866
2002			1326948	1326948
2003			1483778	1483778
2004			1637491	1637491
2005			1791137	1791137
2006	6634197		1944734	8578931
2007	6745133		2109186	8854320
2008	5627877		2283291	7911169
2009	5918166		2322764	8240931
2010	5812948		2372029	8184976
2011	5693806		2430444	8124250
2012	5567536		2494075	8061610
2013	5430898		2566280	7997178
2014	5459255	3981735	2421580	11862570
2015	5499128	3965935	2269903	11734965
2016	5536657	3971619	2110574	11618850
2017	5580194	3844304	1952492	11376990
2018	5617817	3724871	1795662	11138350
2019	5580146	3606026	1641949	10828121
2020	5538457	3487863	1488304	10514623
2021	5471500	3370602	1334706	10176808
2022	5393169	3353719	1170254	9917142
2023	5309502	3334169	996149	9639820
2024	5208999	3302819	815506	9327323
2025	5090435	3264383	623521	8978339
2026	4952461	3214072	423818	8590351
2027	4793645	3099096	216085	8108825
2028	4612465	2972457		7584923
2029	4407314	2828090		7235404
2030	4176483	2667335		6843818
2031	3918164	2537695		6455859
2032	3630442	2390190		6020631
2033	3311288	2223465		5534753
2034	2958554	2036052		4994606
2035	2569968	1826385		4396353
2036	2143123	1592801		3735924
2037	1675474	1333528		3009002
2038	1164329	1046680		2211009
2039	606842	730252		1337094
2040		382114		382114

Table III: Flow of Benefits to be Paid to Previous System Beneficiaries
(Values in US\$ 1000)

YEAR	Regular Time	Age Limit	Special Time	Disableds	Dependents	Total
1994	4213967	5493915	1253947	3116381	9524142	23602352
1995	4051892	5101492	1217065	3045554	9022872	22438875
1996	3889818	4709069	1180183	2974727	8521601	21275398
1997	3727744	4316645	1143301	2903900	8020331	20111922
1998	3565669	3924222	1106419	2833073	7519061	18948445
1999	3403595	3531799	1069537	2762246	7017791	17784968
2000	3241521	3139376	1032655	2691419	6516521	16621491
2001	3079446	2746952	995773	2620592	6015251	15458015
2002	2917372	2354529	958892	2549765	5513981	14294538
2003	2755297	1962106	922010	2478938	5012710	13131061
2004	2593223	1569682	885128	2408111	4511440	11967584
2005	2431149	1177259	848246	2337284	4010170	10804108
2006	2269074	784836	811364	2266457	3508900	9640631
2007	2107000	392412	774482	2195630	3007630	8477154
2008	1944926	0	737600	2124803	2506360	7313688
2009	1782851		700718	2053976	2005090	6542635
2010	1620777		663836	1983149	1503819	5771581
2011	1458702		626954	1912322	1002549	5000528
2012	1296628		590072	1841495	501279	4229475
2013	1134554		553191	1770668	0	3458412
2014	972479		516309	1699841		3188629
2015	810405		479427	1629014		2918846
2016	648331		442545	1558187		2649062
2017	486256		405663	1487360		2379279
2018	324182		368781	1416533		2109496
2019	162107		331899	1345706		1839712
2020	33		295017	1274879		1569929
2021			258135	1204052		1462187
2022			221253	1133225		1354478
2023			184371	1062398		1246769
2024			147490	991571		1139060
2025			110608	920744		1031352
2026			73726	849917		923643
2027			36844	779090		815934
2028			0	708263		708263
2029				637436		637436
2030				566609		566609
2031				495782		495782
2032				424955		424955
2033				354128		354128
2034				283301		283301
2035				212474		212474
2036				141647		141647
2037				70820		70820

4- Bailing out of the Government

Table IV summarizes all governmental disbursements associated with our proposal as quantified here. The disbursements associated with the transition from the actual system to the proposed one are described under the head "Total Transition" and are in US\$ 1,000 and as a percentage of GDP. They refer to the flow of benefits to be paid to previous system contributors (Table II). To obtain the relative importance of this flow with respect to GDP, we assumed that in 1994 Brazilian GDP would be US\$ 450,000 thousands and it would grow at a constant rate of 3% a year. This is a very low rate given the country growth history in the last 50 years.

Total maintenance disbursements refer to the flow of benefits, in existence in 1993, to be paid to the actual system beneficiaries (Table III). They are also expressed in US\$ 1,000 and as a percentage of GDP. They do represent the bulk of total disbursements up until 2005. Also they correspond to more than 50% (4.2% of GDP) of total tax revenue collected by Federal Government up to 1997. We call attention to the fact that maintenance disbursements are a liability to Federal Government under any alternative. For this reason, in our previous work, as well as here, in the computations of the transition disbursements they have not been considered.

Federal government total disbursement associated with the national retirement system is about 5.3% of GDP in 1994 but has a negative trend and by the year 2024 corresponds to about 1% of GDP. Since total federal government tax revenue is about 8.4% of GDP, the crucial period for managing any new retirement system in Brazil is the initial one. According to our estimates, in 1994 alone the government would have a disbursement with the system of 5.28% of GDP. From 1995-1999, that is during the next governmental administration, under our proposal the system would require a yearly average disbursement of about 4.22% of GDP, which amounts to 50% of actual total tax revenue. No doubt, any government would refuse to promote a reform on these lines, as

TABLE IV : PROPOSED REFORM GOVERNMENTAL DISBURSEMENTS

YEAR	TOTAL MAINTENANCE		TOTAL TRANSITION		TOTAL	
	US\$ 1000	% GDP	US\$ 1000	% GDP	US\$ 1000	% GDP
1994	23602352	5,24	141170	0,03	23743522	5,28
1995	22438875	4,84	283890	0,06	22722765	4,90
1996	21275398	4,46	425179	0,09	21700577	4,55
1997	20111922	4,09	569281	0,12	20681202	4,21
1998	18948445	3,74	713160	0,14	19661605	3,88
1999	17784968	3,41	857860	0,16	18642828	3,57
2000	16621491	3,09	1009537	0,19	17631028	3,28
2001	15458015	2,79	1168866	0,21	16626881	3,00
2002	14294538	2,51	1326948	0,23	15621486	2,74
2003	13131061	2,24	1483778	0,25	14614839	2,49
2004	11967584	1,98	1637491	0,27	13605076	2,25
2005	10804108	1,73	1791137	0,29	12595244	2,02
2006	9640631	1,50	8578931	1,34	18219562	2,84
2007	8477154	1,28	8854320	1,34	17331474	2,62
2008	7313688	1,07	7911169	1,16	15224857	2,24
2009	6542635	0,93	8240931	1,18	14783566	2,11
2010	5771581	0,80	8184976	1,13	13956558	1,93
2011	5000528	0,67	8124250	1,09	13124778	1,76
2012	4229475	0,55	8061610	1,05	12291085	1,60
2013	3458412	0,44	7997178	1,01	11455590	1,45
2014	3188629	0,39	11862570	1,46	15051199	1,85
2015	2918846	0,35	11734965	1,40	14653811	1,75
2016	2649062	0,31	11618850	1,35	14267912	1,65
2017	2379279	0,27	11376990	1,28	13756269	1,55
2018	2109496	0,23	11138350	1,22	13247846	1,45
2019	1839712	0,20	10828121	1,15	12667833	1,34
2020	1569929	0,16	10514623	1,08	12084552	1,25
2021	1462187	0,15	10176808	1,02	11638995	1,16
2022	1354478	0,13	9917142	0,96	11271620	1,09
2023	1246769	0,12	9639820	0,91	10886589	1,03
2024	1139060	0,10	9327323	0,85	10466384	0,96
2025	1031352	0,09	8978339	0,80	10009691	0,89
2026	923643	0,08	8590351	0,74	9513994	0,82
2027	815934	0,07	8108825	0,68	8924759	0,75
2028	708263	0,06	7584923	0,62	8293185	0,67
2029	637436	0,05	7235404	0,57	7872840	0,62
2030	566609	0,04	6843818	0,52	7410427	0,57
2031	495782	0,04	6455859	0,48	6951641	0,52
2032	424955	0,03	6020631	0,44	6445586	0,47
2033	354128	0,02	5534753	0,39	5888881	0,41
2034	283301	0,02	4994606	0,34	5277907	0,36
2035	212474	0,01	4396353	0,29	4608827	0,30
2036	141647	0,01	3735924	0,24	3877571	0,25
2037	70820	0,00	3009002	0,19	3079822	0,19
2038			2211009	0,13	2211009	0,13
2039			1337094	0,08	1337094	0,08
2040			382114	0,02	382114	0,02

bulk of the cost would accrue during its turn. On the other hand, given that the actual system cannot be maintained unless the contributions (employer and employee) to it are substantially increased, or the benefits to be paid are reduced, several proposals have been made.¹

In general these proposals fall in one of the following three categories: *status quo*, pay-as-you-go with capitalization, and more market less State.

The *status quo* proposals maintain basically the system as it is, providing some supplementary tax revenue to avoid "conjunctural problems". Emphasis is also played on eliminating corruption as well as on taking back, through legal action, past debts.

The pay-as-you-go with capitalization proposals consider a dual system. The pay-as-you-go part, managed by the federal government, is compulsory and universal for all workers and employers, up to a limit that varies from 5 to 10 minimum wages. The capitalization part is private and voluntary. At the end, these proposals boil down to the actual situation since the bulk of workers earns no more than 5 minimum wages, and a private capitalization system is actually quite active in Brazil despite the excess of regulations they are submitted to.

Finally, the more market less State proposals rely fundamentally on a free market capitalization system, with the government providing a set of regulations of prudential and full disclosure natures. Some, like ours, place special attention to the humanitarian role to be played by the government in a retirement system.

The main reason for the mix proposal scheme to outnumber the others, is that they pay too much emphasis on the immediate future for obvious political reasons. It is our view that proposal such ours can be implemented with success even if one takes into account the political aspects.

¹ See for example Clovis de Faro (ed.) Previdência Social no Brasil: Diagnósticos e Sugestões de Reforma. Rio de Janeiro: FGV/EPGE, 1993; as well as the report of the special commission for fiscal reform: Reforma Fiscal: Coletânea de Estudos Técnicos (2 vol..). São Paulo: DBA - Dórea Books of Art, 1993.

Note that the transition cost associated with our proposal is relatively small. Since the bulk of government disbursement refers to the maintenance of actual benefits paid, there is no reason for not reforming the system. Also, the more the Brazilian society delays this reform, more costly it becomes because the stock of beneficiaries will increase.

In our original study, we proposed general taxes to cover the total expenditures associate with the actual system as well as to the transition. Actually, government tax revenue is about 8.4% of GDP while the average yearly disbursement for the period 1995-1999 is 4.2% of GDP. From our point of view there would be no impediment for the government to implement the reform; and its implementation would produce an important by product, that is a reduction in the size of the government.

If on the one hand it would be beneficial to the country such a reduction in governmental activities, on the political side it represents a source of resistance. It would be hard to believe that the Executive would take the lead in suggesting a reform such as ours. For example, the new government that will be elected this year would face a 50% reduction in disposable tax revenue if our proposal were to be adopted. The following government would use about 1/3 of total tax revenue to keep up with the reform program; the next would use about 28%, and so on.

Thus, the government that implements the reform pays a high cost and collects small political benefits (as the benefits that the reform produce are associated with the prevention of collapse of the actual system). For voters, maintaining actual official retirement plan payments is not identified as a benefit produced by the administration; while reducing other government programs to finance the reform is certainly viewed as a cost.

For the above reasons, we propose for the first 5 years after the implementation of the program the maintenance of all sources of revenue to the actual system; except the employee contribution. In 1990 total revenue of the system corresponded to about 6.3% of GDP, of which 5.03% of GDP accrued from the contributions based on wages and salaries. Since workers contribute with, at most, 10% of their wages, if we eliminate this

requirement, total revenue to the system would be about 4.7% of GDP; which is enough to cover the 4.2% of GDP yearly average disbursements under our proposal. For the next 5 years all sources of funds to the system could be reduced by about 60%, which is the reduction on the yearly average disbursement for the period 2000-04 as compared to the previous 5 years period (1995-99). This procedure could be maintained for all others ensuing 5 years period.

5- Conclusion

As pointed out, our proposal places a great political burden on the officials that start its implementation. Unless, as it is now the case, the reform is implemented on the very last year of the government administration.

Technically, given the current tax system, there is no major difficulty for the government to finance the reform of the pension system. Nevertheless, given the fact that, along the initial 5 years, the reform would consume around 50% of the governmental tax revenue, we suggest that the actual contributions to the system, excluding only those that are made by the employees, should be maintained along that crucial period.

Although the remedy of the current situation may be hard to swallow, it should be kept in mind that the alternative of not making the reform is a complete failure of the actual pension system.

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