

**THE GAMBIA**

**IMPROVING CIVIL SERVICE PERFORMANCE**

**VOLUME II: PUBLIC SERVICE PENSIONS POLICY REFORM NOTE**

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## **Currency Equivalents**

Currency Unit = Dalasi (GMD)

US\$1 = 28.38 GMD (as of June 27, 2005)

## **Fiscal Year**

January 1 – December 31

## **ACRONYMS AND ABBREVIATIONS**

FPF	Federal Pension Fund
GDP	Gross Domestic Product
ILO	International Labor Office
IMF	International Monetary Fund
IPD	Implicit Pension Debt
NDC	Notional Defined Contribution
NPF	National Provident Fund
OPM	Office of Personnel Management
PAYG	Pay-As-You-Go
PMO	Personnel Management Office
PSPS	Public Service Pension Scheme
PROST	Pension Reform Options Simulation Toolkit
SSHFC	Social Security and Housing Finance Corporation
WOPS	Women and Orphans Pensions Scheme

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## Executive Summary

**This report was prepared at the request of the Government of The Gambia in order to provide the World Bank's view of policy options for reform of the pension scheme provided to Public Servants.** The report evaluates key strengths and weaknesses to the scheme's adequacy and predictability of benefits, Government and worker affordability, equity between different worker cohorts, gender and income levels, and system sustainability. We utilize the Pension Reform Options Simulation Toolkit (PROST) to project the costs and benefits of different reform options aimed at addressing the key weaknesses identified. The report also suggests a medium-term process for contemplating more comprehensive pension reform measures. This report is the second volume of the main report, *Improving Civil Service Performance*, which was prepared by the Government, the World Bank, the Africa Development Bank and the UK's Department for International Development.

**Providing a secure vehicle to smooth consumption from worklife into retirement is an essential part of the compensation package to recruit, retain, motivate and reward public servants in The Gambia.** The structure and operation of the Public Service Pension Scheme (PSPS) not only affects public servants; it has powerful implications for the labor markets and fiscal management more broadly.

**Our findings from our review of the existing system and baseline projections suggests that:** (i) low and unpredictable benefits provide insufficient smoothing of consumption for full term workers into retirement and insufficient protection against the risk of poverty in old age; (ii) the bulk of pension benefits are assured shortly after retirement but with considerable risk and uncertainty for the duration of the retirement period; (iii) the benefit formula and qualifying conditions create weak incentives and inequities between different workers; (iv) the disability program does not cover workers prior to vesting and provides very limited benefits for younger, vested workers and the survivor program is practically non-existent; and (v) although the pension system seems to be currently affordable, it's long-term costs are projected to escalate due to a deterioration of system demographics.

**In response to these findings as well as the Government's interest in moving from a non-contributory to a contributory scheme, we employed the use of PROST to review the following reform options:** (i) introduction of contributions; (ii) automatic price indexation of benefits; (iii) actuarially fair commutation factors for lump-sum distributions at retirement; (iv) actuarially fair benefit reductions claimed prior to the retirement age of 60; (v) gradually increasing the averaging period for reference wage calculations from the current 3 years to lifetime average with valorization to wage growth; (vi) periodic increases to the retirement age in line with increases in life expectancy; and (vii) a combination of these measures.

**Our findings were:**

- ③ ***Making the PSPS contributory*** will have a limited effect on benefits, though can be beneficial in smoothing public expenditures and could strengthen the foundation for pension portability and labor mobility. Financing the contributions anticipated to the PSPS will have an estimated fiscal impact of about 19.4 million Dalasis in 2009 when it might be introduced (See Table 1). Although this is a modest fiscal cost that would affect the 2009 budget, it is of course possible to place all or part of such funds into Government debt instruments thereby

mitigating the fiscal cashflow impact. Over time, reliance on debt financing would impact the Government domestic debt burden. This suggests the need for careful consideration of the short and medium-term financing strategy for the additional contribution requirements. Making such scheme contributory also creates investment risks if such funds are invested in the Gambian economy and actively managed. We have suggested measures to address such risks. There are additional legal and operational issues that need to be addressed in order to carry this proposal forward.

- ③ ***A key weakness to the predictability of benefits and the credibility of the pension promise has been that discretionary nature of benefit indexation*** after retirement. We therefore have suggested automatic indexation of benefits to the consumer price index. We also suggest a retroactive top-up for existing beneficiaries to a minimum subsistence level then afterwards an automatic price indexation.
- ③ ***Additional parametric adjustments to the public pension schemes*** would improve incentives, equity and fairness. These include: (i) introducing an actuarially fair benefit reduction for early retirement; (ii) making the commutation factor actuarially fair; (iii) increasing the income averaging period for determining benefits; and (iv) establishing a framework for gradual increases in the retirement age as the life expectancy at retirement increases.
- ③ ***Applying the combination of these parametric reform measures would be a pension scheme for public servants that provides a far more equitable and predicable retirement benefit.*** The proposed reforms measures remedy weak incentives and inequities between workers, including some regressive effects in the benefit calculation. Finally, the combination of measures is likely to be both fiscally affordable and financially sustainable over a 70 year timeframe.

Table 1 below summarizes the core rationale behind each of these parametric reforms and the estimated short and long term fiscal costs of each reform and the combination. As indicated, the combined reform scenario is projected to result in a positive financing gap or financial surplus over the 70 year projection period and can therefore result in sustainability of the scheme.

**We also reviewed options and costs for increasing benefit levels for current and future retirees.** The first option considered was an increase in the pension benefit for all current retirees to at least the lower poverty line in an effort to ensure a minimal subsistence for these retired public servants and to index such benefits to inflation in the future to ensure that such retirees remain above the poverty line. This is estimated to result in an estimated increase in fiscal costs of about 6.5 million Dalasis in 2009 when it would be introduced and about 6.0 and 5.5 million Dalasis in 2010 and 2011, respectively (See Table 1). Additional measures to increase the benefits for current retirees such as increases to reinstate the real value of their pension benefits at the time they retired would result in substantial additional costs.

The second option considered was the inclusion of non-wage allowances in the wage base for the calculation of both pension contributions and benefits in 2009. This would have the long-term effect of providing a much more meaningful replacement in retirement of pre-retirement total compensation, though it would substantially increase benefits to certain cohorts unless phased in gradually. The estimated incremental cost would be 6.3 million Dalasis in 2009, 9.2 million Dalasis in 2010 and 12 million Dalasis in 2011 or an increase in the long-term financing gap over 70 years by 10.3 percent of 2006 GDP.

Finally, we reviewed a one-time substantial increase in basic (pensionable) wages for public servants in 2008 which would also have the effect of increasing pension contributions and benefits. As with the inclusion of allowances in the wage base, such an increase in pensionable wages for public servants results in some cohorts enjoying much higher pension benefits than others. The estimated pension costs associated with such a wage increase were 11.7 million Dalasis in 2009, 16.1 million Dalasis in 2010 and 20.4 million Dalasis in 2011 or an increase in the long-term financing gap over 70 years by 16 percent of 2006 GDP.

**The reforms proposed above, particularly making PSPS a funded contributory scheme, have substantial legal and operational implications that need be addressed.** These include: (i) establishing the legal form and framework for the funding of benefits under new legal fund established on behalf of the PSPS; (ii) establishing the legal foundation for accountability, transparency and good governance, including the operational parameters for reserve management; and (iii) undertaking conforming amendments to the provisions of the Federated Pension Scheme consistent with the policy direction of the PSPS.

**There are a number of policy options for the investment of reserve accumulations which will be generated if the Government decides to make the PSPS contributory.** The following are three options and the rationale behind our suggested option:

- (i) Entrust the SSHFC with investment management responsibilities through an agency agreement. In this case, it will be important to establish an investment policy framework including the investment policy, investment strategy, asset allocation guidelines and processes for revising them, and incentives to ensure appropriate fiduciary management of funds;
- (ii) Establish a similar agreement with a private investment manager either locally and/or from abroad. Just as in the first option, an infrastructure for investment management governance would still need to be established; and
- (iii) Maintain notional individual accounts for each member and record all employer and employee contributions in such accounts but remit all positive cash balances (contributions in excess of benefit disbursements) to the consolidated fund. The notional individual accounts could be remunerated at a rate to be determined such as the average growth in pensionable wages or a market reference rate such as the weighted average observed rate on 91 day treasury securities.

The last option we suggest has the advantage that no investment, governance or transfer risks are created; implicit pension debts are made explicit over time; and almost all management and transaction costs are eliminated. Although the disadvantage of this option is that no potential returns in excess of the market reference would be yielded on such funds, we believe that the long-term risk of underperforming such a benchmark is substantial and therefore this option is the should be seriously considered.

**Going forward, we suggest the above parametric reforms be considered in the context of a strategy to harmonize the pensions for public servants with employees in public enterprises covered by the Federal Pension Fund to support labor mobility through pension portability.** Further, we suggest a medium term process to establish a unified framework between the Public Service Pension Scheme, Federal Pension Fund and Federal Provident Fund

so that ultimately all workers in The Gambia could fall under a unified framework and then enjoy the benefits of mobility between the public and private sectors.

**Finalization and implementation of a reform of the pension provisions for public servants includes four processes:** (i) additional diagnostic assessment; (ii) review of policy options and taking of decisions; (iii) drafting legislation, guidelines; and (iv) developing implementation plans, including, as necessary, institutional development plans. We have summarized these in Table 10 within the main text. Additional diagnostic work needs to be undertaken, consideration of medium-term objectives and enactment of reform measures consistent with the findings by this report and those reports that complement it.

**Table 1: Summary Effects of Proposed Parametric Changes on Costs and Retiree Benefits**

		Million Dalasis				% of Base Year GDP		Key Rationale behind Parametric Change	Summary of Fiscal Cost Effect
		2008	2009	2010	2011	Financing gap	Implicit Pension Debt		
<b>Baseline</b>	<b>Projection of current scheme, with no contributions, or reforms assumed and no indexation)</b>	56.08	57.63	62.48	67.09	-23.9%	6.9%		
	<b>Price Indexation</b>	58.70	62.12	68.39	74.43	-28.6%	8.4%		
Reform 1	Introduction of 15% contribution rate (10% - employer, 5% - employee).		77.07	84.32	92.23	-6.0%	8.4%	Contributions create an alignment with Federal Pension Fund for pension portability;	Contributions establish the possibility of smoothing fiscal costs; savings created through contributions postpones costs and therefore reduces the present value of the financing gap.
Reform 2	Introduction of automatic benefit price indexation.		62.12	68.39	74.43	-28.6%	8.4%	Establishes old-age income security by assuring purchasing power of pension after retirement.	No increase in fiscal costs compared with indexed scenario, modest increase in cost compared with non-indexed baseline; automatic nature of cost adjustment reduces fiscal flexibility.
Reform 3	Introduction of actuarially fair commutation factors (assuming commuted pension is indexed to prices).	60.80	66.56	72.28		-28.6%	8.3%	Increases equity and fairness by making most retirees indifferent between commutation and full annuitized benefit.	Negligible cost effect over time.
Reform 4	Introduction of actuarially fair reduction coefficients for early retirement.	60.39	66.10	71.45		-25.7%	7.7%	Increases equity and fairness between those retiring early and those retiring at the normal retirement age of 60. Eliminates incentives for early retirement.	Small fiscal cost reduction over time.
Reform 5	Gradual increase of the averaging period for reference wage calculations from the current 3 years to lifetime average (by 1 year every year); wages are valorized to wage growth.	62.10	68.40	74.50		-26.0%	8.2%	Increases equity and fairness between different cohorts and individuals with different wage growth profiles.	Small fiscal cost reduction over time.
Reform 6	Retirement age is increased regularly in line with life expectancy at retirement.	62.12	68.39	74.43		-26.1%	8.4%	Maintains a constant period of retirement between cohorts in the face of increases in life expectancy.	Small fiscal cost reduction over time.
<b>Reform 7</b>	<b>Combination of reforms 1-6.</b>	77.15	84.61	92.69		1.7%	7.3%	Combination of reforms results in a substantially more equitable, predictable and fair pension provision with indexed benefits. Reduction in the investment and longevity risks shouldered by retirees and improvement in public service recruitment incentives.	Substantial cost reductions from contributions and from reforms 3-6 resulting in a long-term financial surplus and financial sustainability.
<b>Additional Reforms Reviewed</b>									
Reform 8	One-time benefit top-up for current retirees and beneficiaries	68.65	74.36	79.86		-28.8%	8.6%	Brings existing retirees up to the poverty line; introduces automatic indexation to ensure that existing retirees stay above the poverty line.	One time cost impact and continued cost over time.
Reform 9	Including allowances in pensionable emoluments	68.46	77.61	86.44		-38.9%	10.8%	Increases effective replacement rate but imposes increased contributions for younger workers.	Substantial one time cost impact and continued cost over time.
Reform 10	One time increase in public service wages	67.94	73.80	84.45	94.83	-44.6%	12.2%		Substantial one time cost impact and continued cost over time.

**Definitions**

**Financing Gap:** The present value of current balances over the next 70 years, equal to the years projected in PROST.

**Current Balance:** Benefits net of contributions.

**Implicit Pension Debt:** Pension liabilities accrued by the system at a given point in time.

**Table 1 (continued): Summary Effects of Proposed Parametric Changes on Costs and Retiree Benefits**

		<u>Million Dalasis</u>				<u>% of Base Year GDP</u>	
		<u>2008</u>	<u>2009</u>	<u>2010</u>	<u>2011</u>	<u>Financing gap</u>	<u>Implicit Pension Debt</u>
<b>Incremental Cost (Compared with Baseline with indexation)</b>							
Reform 1	Introduction of 15% contribution rate (10% - employer, 5% - employee).		14.95	15.93	17.80	22.6%	0.0%
Reform 2	Introduction of automatic benefit price indexation.		-	-	-	0.0%	0.0%
Reform 3	Introduction of actuarially fair commutation factors (assuming commuted pension is indexed to prices).		(1.32)	(1.82)	(2.15)	0.0%	-0.1%
Reform 4	Introduction of actuarially fair reduction coefficients for early retirement.		(1.73)	(2.28)	(2.98)	2.9%	-0.7%
Reform 5	Gradual increase of the averaging period for reference wage calculations from the current 3 years to lifetime average (by 1 year every year); wages are valorized to wage growth.		(0.02)	0.01	0.07	2.6%	-0.2%
Reform 6	Retirement age is increased regularly in line with life expectancy at retirement.		-	-	-	2.6%	-0.1%
<b>Reform 7</b>	<b>Combination of reforms 1-6.</b>		<b><u>15.03</u></b>	<b><u>16.22</u></b>	<b><u>18.26</u></b>	<b><u>30.3%</u></b>	<b><u>-1.2%</u></b>
Reform 8	One-time benefit top-up for current retirees and beneficiaries		<b><u>6.53</u></b>	<b><u>5.97</u></b>	<b><u>5.43</u></b>	<b><u>-0.2%</u></b>	<b><u>0.2%</u></b>
Reform 9	Including allowances in pensionable emoluments		6.34	9.23	12.01	-10.3%	2.4%
Reform 10	One time increase in public service wages		<b><u>11.68</u></b>	<b><u>16.06</u></b>	<b><u>20.40</u></b>	<b><u>-16.0%</u></b>	<b><u>3.8%</u></b>
		<u>Percent of GDP</u>					
<b>Incremental Cost (Compared with Baseline with indexation)</b>							
Reform 1	Introduction of 15% contribution rate (10% - employer, 5% - employee).	0.077%	0.075%	0.076%			
Reform 2	Introduction of automatic benefit price indexation.	0.000%	0.000%	0.000%			
Reform 3	Introduction of actuarially fair commutation factors (assuming commuted pension is indexed to prices).	-0.007%	-0.009%	-0.009%			
Reform 4	Introduction of actuarially fair reduction coefficients for early retirement.	-0.009%	-0.011%	-0.013%			
Reform 5	Gradual increase of the averaging period for reference wage calculations from the current 3 years to lifetime average (by 1 year every year); wages are valorized to wage growth.	0.000%	0.000%	0.000%			
Reform 6	Retirement age is increased regularly in line with life expectancy at retirement.	0.000%	0.000%	0.000%			
<b>Reform 7</b>	<b>Combination of reforms 1-6.</b>	<b>0.077%</b>	<b>0.076%</b>	<b>0.078%</b>			
Reform 8	One-time benefit top-up for current retirees and	0.034%	0.028%	0.023%			
Reform 9	Including allowances in pensionable emoluments	0.033%	0.043%	0.051%			
Reform 10	One time increase in public service wages	0.060%	0.075%	0.087%			

## I. INTRODUCTION

1. **Description.** Current pension schemes in The Gambia are: (i) the Public Service Pension Scheme (PSPS) which covers government employees (civil servants and uniformed services); (ii) special provisions for National Assembly members, Local Government Authority employees and District Chiefs; (iii) the Federated Pension Fund (FPF) which covers non-government public sector employees; (iv) the National Provident Fund (NPF) which covers private sector employees; and (v) a number of registered Occupational Schemes. The Social Security and Housing Finance Corporation (SSHFC) manages the FPF, the NPF and other housing finance schemes.

2. **Coverage and characteristics.** An estimated 135,000 workers – a majority of the estimated size of the formal sector labor force – participate in mandatory pension schemes and of these about 18,700 are members of the PSPS and the remainder are in private sector schemes. However, given the importance of agriculture and the informal sector in the Gambian economy, the coverage rate in terms of the estimated total labor force is only about 20%. Active members of the PSPS represent about 14% of workers covered by all mandatory pension schemes, about 2.8% of the estimated size of the labor force and 1.2% of the Gambian population. The benefit structure and qualifying conditions are similar for the PSPS and the FPS (See Appendix 5). Yet while these schemes share such similarities, there is no mechanism that we are aware of to facilitate mobility of workers and portability of accrued rights between the public sector schemes.

3. **The importance of pensions for public servants.** Pension benefits are a key part of the remuneration package for civil servants, the military and police in The Gambia. Such deferred compensation is an essential part of the incentives to recruit, retain, motivate and reward public servants. In this way, an assessment of the PSPS cannot be isolated from a broader assessment of overall public servant compensation and other incentives for public officials. This is of particular importance in The Gambia given the anticipated Civil Service Reform Program.

4. **Report Objective.** This report examines the Public Service Pension Scheme (PSPS) with a view towards advising the authorities on its proposal to convert it to a contributory scheme managed by the Social Security and Housing Finance Corporation (SSHFC). In addition, it analyzes other reforms which would improve the adequacy, predictability and equity of pension benefits, and a medium-term strategy for pension reforms more broadly. We reviewed the current PSPS utilizing baseline projections of the scheme according to current parameters and paying particular attention to issues of adequacy, predictability, affordability and sustainability. The proposed pension reform will be an integral part of the Government's overall Civil Service Reform program. The main outputs from this report have been incorporated into a separate report on the country's overall civil service capacity and reform options.<sup>1</sup>

5. **Organization of the Report.** The report is organized as follows: Section II provides a brief description and analysis of the current scheme; Section III analyzes reform options; Section IV reviews institutional issues including governance and investment management; Section V suggests next steps and Section VI concludes.

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<sup>1</sup> World Bank, DFID and AfDB, *Improving the Performance of The Gambia's Civil Service*, draft, January 2008.

## II. THE NEED FOR REFORM: DESCRIPTION AND ANALYSIS OF THE CURRENT SCHEME

6. The key diagnostic findings from our review of the existing system and baseline projections are that: (i) low and unpredictable benefits do not provide sufficient smoothing of consumption for full term workers in retirement and provide insufficient protection against the risk of poverty; (ii) the benefit structure is frontloaded with the bulk of benefits assured shortly after retirement but with very limited support for the duration of the retirement period; (iii) the benefit formula and qualifying conditions create weak incentives and inequities between different workers; (iv) the disability program does not cover workers prior to vesting and provides very limited benefits for younger vested workers, and the survivor program is practically non-existent; and (v) although currently affordable, the pension system's sustainability is undermined by long term costs which are projected to escalate due to a deterioration of system demographics.

### A. DESCRIPTION, COVERAGE, COSTS AND BENEFITS

7. The PSPS is a non-contributory defined benefit scheme providing old age, disability and survivorship benefits to public sector workers (See Appendix 5 for a detailed description of benefits and qualifying conditions). The PSPS is regulated under the Pensions Act of 1950. There is no single body managing the scheme within the Government; administration is divided between the Personnel Management Office, the Public Service Commission, the Treasury and the Auditor General. Table 2 presents the main pension scheme indicators estimated for 2006.

**Table 2: Main Pension Scheme Indicators, 2006**

Indicators	Civil Services	Uniform Services
Number of members (1000s) 1/	10.31	8.38
Male	7.36	7.96
Female	2.95	0.42
Number of old age pensioners (1000s)		5.87
Male		5.10
Female		0.78
System dependency ratio		0.31
Total pension expenditures (mil dalasis)		51.07
For old age regular pension payments		37.45
For old age (commutation=25% of pensions)		8.98
Other pension expenditures 2/		4.64
Total pension expenditures (% of GDP)		0.36
Total pension expenditures (% of wage bill)		13.29
Average annual basic wage (1000s dalasis)		20.57
Average annual pension (1000s dalasis)		6.38

1/ Pensionable positions only

2/ (1) Gratuities to persons with less than ten years of service; (2) gratuities to contractors; (3) gratuities to survivors; and (4) pensions paid to teachers in non-government schools.

8. **Coverage.** The scheme covers central government employees, military, police and other uniformed services. In 2006 there were 18,684 employees holding pensionable positions (10,305 civil servants and an estimated 8,379 employed with uniformed services) and 5,873 pensioners.<sup>2</sup> Thus, the system dependency rate – a ratio of the total number of pensioners to the total number

<sup>2</sup> The number of employed in the uniformed services was estimated using the number of records in the PMO and the Treasury databases: the former captures only civil servants whereas the latter covers all government employees. 2006 was the base year used in the projections.

of active members – was about 30% in 2006, which is rather high given the country’s young population.<sup>3</sup>

**Table 3: Official Poverty Lines**

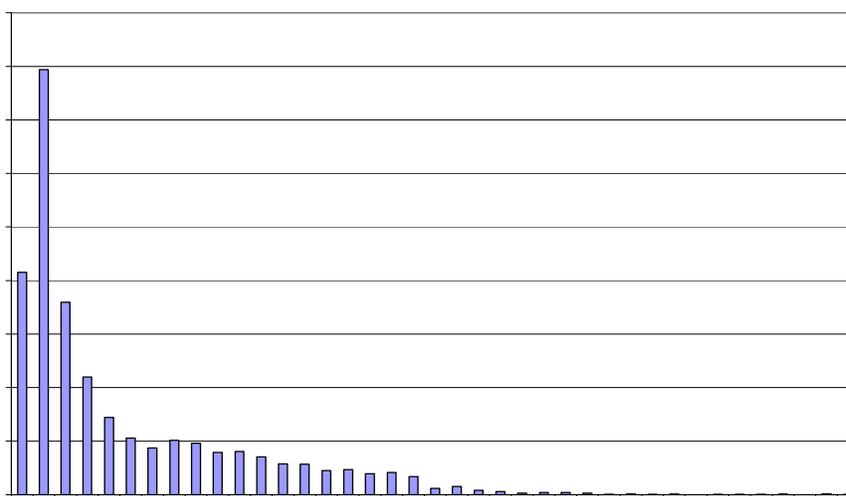
(Dalasis per year)

	Lower	Midpoint	Upper
Banjul and Kanifing	5,636	6,012	6,388
Other Urban Areas	5,835	6,303	6,771
Rural Areas	6,145	6,577	7,009

Source: Government official estimates.

9. **Pension expenditures and benefit levels.** Total pension expenditures amounted to about 0.4% of GDP in 2006 which is relatively low compared to countries with a similar size of civil service.<sup>4</sup> This is due to several factors including the very modest benefit levels. The average pension for all retirees in 2006 was only about 31% of the average pensionable wage for all public sector workers in 2006. Low pension benefit levels were raised as a major concern in discussions in Banjul in December 2006 with the Multi-Sectoral Task Force.<sup>5</sup> This concern was also raised by Minister Bala-Gaye during a meeting in Washington in April, 2007.

**Figure 1: Distribution Annual Benefits for All Pensioners in 2006**



3). As suggested in Figure 1, benefits for most current pensioners are below the poverty line. Also, the income range among pensioners is very broad: the average benefit of the top decile is about 35 times higher than that of the lowest decile.

<sup>3</sup> The old age dependency ratio – defined as the ratio of the total population above age 60 to the working age population (age 15 to 59) – is estimated to be about 10%.

<sup>4</sup> By comparison, in Uganda civil servants (including teachers) account for 1% of the population and pension expenditures equal about 1% of GDP.

<sup>5</sup>The Multi-Sectoral Task Force was set up in 2006 by the Government to lead the pension reform exercise.

## B. LOW AND UNPREDICTABLE BENEFIT LEVELS

11. **Low pension benefits** result from: (i) ad-hoc benefit adjustments which have been less than half of the inflation rate over the past decade; (ii) low levels of basic wages at retirement used to determine initial pension benefits; (iii) early retirement which tends to lower the benefit; and (iv) favorable commutation formulas by which almost all retirees reduce their benefits by 25% in exchange for a commuted benefit up-front. As discussed below, the benefit formula also results in regressive transfers from low-income to higher-income workers.

12. **Relative replacement rates.** The benefit formula is generally consistent with that observed in the Sub-Saharan region (see Table 4). The annual accrual rate is 2% for statutory staff and 1.5% for non-statutory staff (grade 1 and daily rated employees), which increases the gap between higher and low income workers because non-statutory staffs both have lower income and receive lower pension benefits. Since recent data suggests that retirees averaged 28 years of service at retirement and practically everybody commuted 25% of their pension, the average replacement rate for new retirees was around 42% of the individual's average pensionable wage at retirement.<sup>6</sup> The average pension for newly retired in relative terms is fairly reasonable: an average full pension (if not commuted) would be about 58% of the individual's average pensionable wage at retirement.

**Table 4: Accrual Rates and Indexation for Select National Pension Schemes<sup>7</sup>**

	Civil Service		National scheme	
	Accrual rate (%)	Indexation	Accrual rate (%)	Indexation
Benin	2.0	D	1.71	D
Botswana	Defined contribution		No contributory	
Burkina Faso	2.0	P	1.33	P
Burundi	1.67	D	2.0	D
Cape Verde	2.9	W	2.0	D
Cote D'Ivoire	2.0	D	1.7	W
Gabon	2.0	D	1.57	D
Ghana a/	2.5 (up to 20 yrs, 1.5 after)	D	2.5 (up to 20 yrs, 1.5 after)	D
Kenya	2.5	D	Provident Fund	
Madagascar	2.0	D	2.0	D
Mali	2.0	D	1.67	P
Mauritius	2.0	W		D
Senegal	2.0	D	1.0	D
Sierra Leone a/	2.0	D	2.0	D
Tanzania	2.22	D	2.0 (up to 15 yrs, 1.5 after)	D
Togo	2.0	W	1.33	P
Uganda	2.4	D	Provident Fund	
Zambia a/	1.8	D	1.8	D

a/ Civil service and national schemes were merged for workers entering after a given date.

D=discretionary; P=prices; W=wages

Source: Palacios and Whitehouse, *Civil-service Pension Schemes around the World*, 2006; and Staff estimates.

13. **Pensionable wages exclude allowances.** While the benefit formula may offer a reasonable accrual rate, absolute benefit levels are relatively low due to the relatively low

<sup>6</sup> This figure is calculated by  $(.02 * 28) * .75$ .

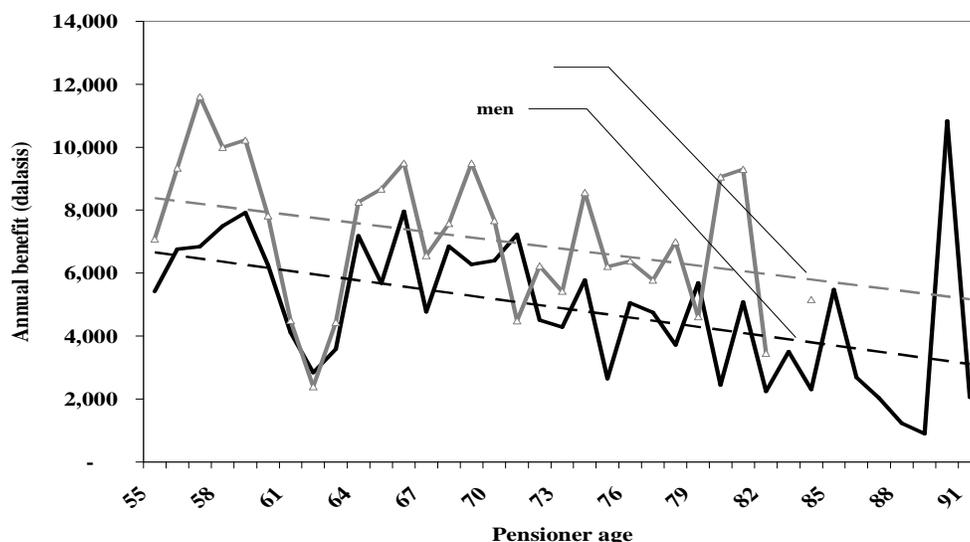
<sup>7</sup> As of 2004 except for Uganda, Tanzania, Sierra Leone, Ghana which are 2006.

compensation in the government sector which is aggravated by the fact that pensionable emoluments exclude allowances. The latter constitute a considerable part of worker's total compensation – about 30% on average, though the amount may vary substantially by grade, wage level, position, and departments. Accordingly, when calculated as a proportion of total compensation prior to retirement, the 42% average individual replacement rate for new retirees calculated above is equivalent to only about 29% of the average individual total compensation (basic wage plus allowances), again, after commutation.

14. **Ad hoc benefit adjustments not compensating for inflation.** Pension adjustments that occurred on an ad hoc basis have been less than half of average annual inflation from 1990 to 2006 resulting in substantial benefit depreciation in real terms. The law does not provide for automatic indexation as is the case with many laws in the Sub-Saharan African region (see Table 4). In 1990-2006 the average annual inflation was about 6% whereas pensions were increased by an average of 2.9% in annual terms.

15. **Ad hoc adjustments making benefits unpredictable and unfair.** Ad hoc indexation makes benefits unpredictable and vulnerable to erosion from inflation and thus reduces the ability of the pension to deliver on the promise to employees to smooth pre-retirement consumption into retirement and increases risk of poverty for pensioners. In addition, such ad hoc adjustments tend to benefit those who are fortunate enough to retire shortly before a substantial benefit increase while penalizing those who retire long before such an increase occurs. This unpredictability makes public service less attractive for the working age population. It also makes benefits and costs of the system vulnerable to the politics of ad hoc adjustments.

**Figure 2: Average Annual Benefit by Age for Existing Pensioners, 2006**



Source: Treasury database.

16. **Pensions as a proportion of average wages are also projected to decline during retirement.** The age distribution of benefits of existing pensioners may suggest that in the past pensions were growing at a lower rate than the average basic wage: Figure 2 shows an apparent trend for benefits to decrease with age.<sup>8</sup> This results in pension reduction in relative terms – as a

<sup>8</sup> There may also be other factors contributing to this phenomenon, e.g. lower length of service at retirement in the past compared to more recent years, or many people retiring from lower grades in the past, and so forth. More information is needed to explain it.

share of the average wage of current workers. The current average benefit for existing pensioners is significantly lower than that of the newly retired: 30% versus 45% of the current average basic wage for all workers.

### C. OTHER WEAKNESSES IN PARAMETERS

17. **Minimum retirement ages and vesting periods.** Qualifying conditions in terms of minimum retirement ages and vesting period are quite lenient as is also the case in a number of other countries in Sub-Saharan Africa (See Table 5). Though the mandatory retirement age was raised in 2005 from 55 to 60 for both genders, the minimum retirement age is 45 and the minimum length of service required for a regular pension is only 10 years, so there are opportunities to retire early with no penalty. Currently, about 35-40% of new retirees retire before they reach the mandatory retirement age of 60.

**Table 5: Age and Service Requirements for Select African Civil Service Pension Schemes**

	<b>Minimum Age of <u>Retirement</u></b>	<b>Normal Retirement <u>Age</u></b>	<b>Minimum Years of <u>Service</u></b>
Burkina Faso	53	60	
Burundi		55/60	
Cape Verde		60	
Cote d'Ivoire		55/60	
Ethiopia		55	10
The Gambia	45	60	10
Ghana a/	55	60	20
Kenya	50	55	10
Malawi	45 (w/20 yrs service)	55	10
Mauritius		60	15
Senegal		60	30 (for full benefit)
Sierra Leone a/	55	60	15
South Africa	50	65	
Tanzania		60	15
Togo		55	15
Uganda	45 (w/20 yrs service)	60	10
Zambia a/	50	55	10

a/ Civil service and national schemes were merged for workers entering after a given date.

Source: Palacios and Whitehouse, *Civil-service Pension Schemes around the World and staff estimates*.

18. **Incentives to retire early.** Since no benefit reduction is applied to those who retire prior to the mandatory retirement age of 60, early retirees receive pension for a longer period of time and the present value of their expected benefit payments is higher than for those who retire at the normal retirement age of 60.<sup>9</sup> Even if an individual retires early with fewer years of service and lower wages – therefore with a lower pension – than he/she would have had at age 60, he/she may still get more from the system in terms of pension wealth.<sup>10</sup> This creates incentives for early retirement; it provides greater benefits for those who retire early compared to those who wait to retire and thus is inequitable; and such benefits come at the treasury's expense. In addition, early

<sup>9</sup> The average life expectancy is estimated at about 24 years for 45 year old and 14 years for 60 year old males, and 26 and 15 years for 45 and 60 year old females respectively.

<sup>10</sup> Pension wealth is the present value of expected benefit payments over individual's lifetime in retirement, including the commuted pension.

retirement aggravates low pensions through: (a) lower replacement rates due to fewer years of service and lower reference wage at retirement; and (b) a longer period of retirement which, in the absence of proper indexation, may result in real reductions in benefit levels. Early retirement also can result in the loss of productive staff with substantial experience.

19. **Maximum replacement rate.** The maximum replacement rate set at 2/3 of individual's reference wage encourage early retirement. Workers with 33 years of service have no incentive to continue working as regular staff since additional years do not generate higher replacement rates. Accordingly, many of them choose to retire, receive regular pension and at the same time continue working for the Government on a contractual basis. Upon final retirement from their contractual position, they then get a gratuity as contractors in addition to their regular pension. Fiscal costs therefore increase due to: (i) higher wages for contractors doing the same work as statutory employees; (ii) the longer period of regular pension payments to these individuals; and (iii) gratuity payments upon these individuals' final retirement. With the mandatory retirement age having been raised to 60, more employees accrue 33 years before reaching normal retirement age, so early retirement may increase if the cap on replacement rates is not removed.

20. **Wage basis used for pensions calculations.** Current pension benefits are determined based on an individual's final three years' average wages, with such three years adjusted or valorized based on the average wage growth for the public service during these years, or based on an individual's last wage in some cases (see Appendix 5 for details). Calculating the pension benefit based on three years' wages creates incentives for gaming promotions and salary increases prior to retirement. It is also generally regressive because those individuals with the highest wages prior to retirement also tend to have had the greatest wage escalation during their work histories. The final three years formula therefore tends to provide a higher replacement of lifetime income to those individuals who have had the greatest increases in their income prior to the final three years. This both creates poor incentives and is often viewed as unfair by those workers that have had less wage escalation. Such additional pension benefits for those individuals with higher wage escalation will also be a factor that could discourage some lower income workers from joining the public service because the relatively lower and uncertain pension benefit offered.

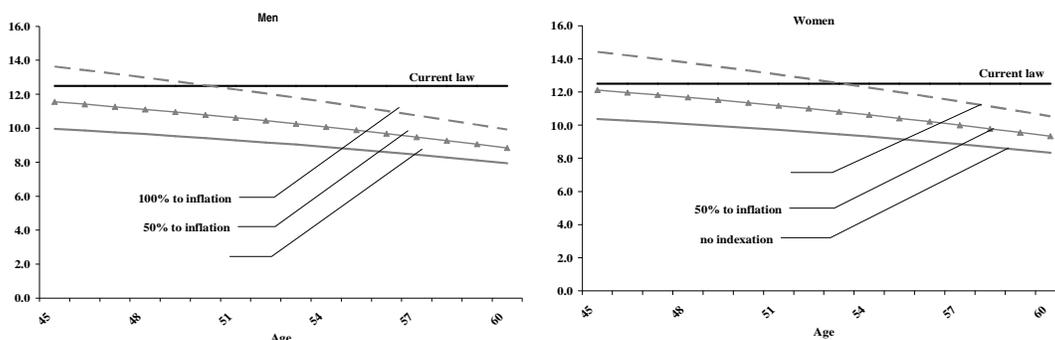
21. **Commutation of Benefits.** Currently individuals can get up to 25% of their annual retirement benefit up front as a lump sum and receive a reduced regular pension throughout the remainder of their life during retirement. The 12.5 commutation factor applied in the calculation of commuted benefits is not actuarially fair because most beneficiaries get more in present value terms than they would get from the present value of the annuitized retirement benefit.<sup>11</sup> Figure 3 presents actuarially fair commutation factors estimated for 2009 under three variants of pension indexation policy: (i) no indexation, (ii) indexation by 50% of inflation rate (which is close to the current trend), and (iii) full indexation to inflation. Appendix 3 provides more details regarding discount and mortality rate assumptions. Under the first two variants of indexation policy, the current factor of 12.5 is significantly higher than actuarially fair commutation factors for all ages and both genders. With full price indexation, actuarially fair factors are below 12.5 for most ages. If a higher discount rate is assumed, which may be reasonable for a country like The Gambia, the gap will increase even further. So, the existing system is likely to create incentives

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<sup>11</sup> An actuarially fair commutation factor ensures that the calculated lump sum is equal to the present value of expected payments of the commuted portion of individual's benefit over the commutation term. Since the 25% benefit reduction is never restored in the PSPS, actuarially fair commutation factors coincide with lifetime annuity factors.

for commutation by providing a greater benefit up front than would be received during retirement in the form of regular payments. According to available data, most retirees commute the maximum 25% of their pension calculated at retirement. This results in a substantial additional benefit to workers up-front yet makes the same workers vulnerable in old-age because of a lower annuitized benefit.

**Figure 3: Comparison of Actuarially Fair Commutation Factors with Current Factor**



Source: Authors' calculations

22. **Disability and survivorship.** The benefit formula and eligibility criteria for the disabled are the same as for old age pensioners. This means the system does not provide disability protection to workers not meeting the minimum vesting requirement and provides very low benefits for younger workers because disability risk is not pooled between younger and older workers to establish a more uniform benefit. Even less protection is provided to survivors. Survivors of active members receive a death gratuity but no regular pension; and survivors of old age pensioners do not get anything. There is an additional program – the Widows and Orphans Pension Scheme (WOPS) – which is voluntary, contributory (4.5% of the basic salary) and is offered only to men. The program works as a savings account: if a worker dies while in service, his survivors get the accumulated balance; otherwise, he withdraws the balance at the time of retirement. Very few PSPS members are enrolled in WOPS.

#### D. BASELINE PROJECTIONS

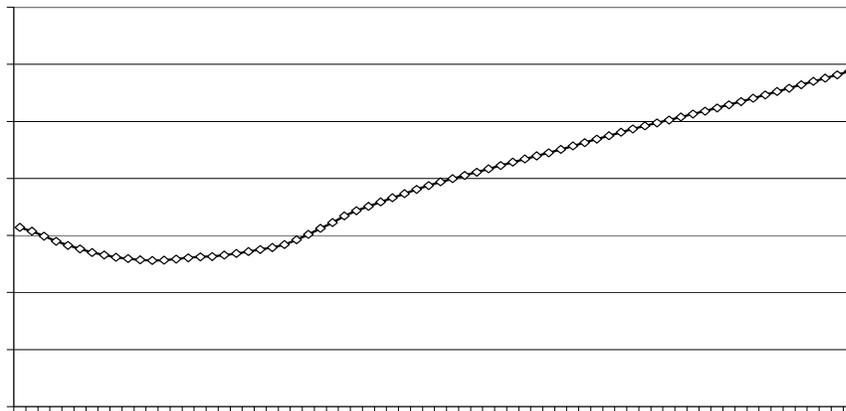
23. **Importance of projections.** Projection models are an essential tool to analyze existing pension systems and systematically evaluate policy reform options. Since the fiscal costs and benefit effects of pension systems are only realized over long periods of time, it is essential to employ the use of an actuarial model which systematically projects these effects over multiple generations. Much of the analytical basis for the review of the existing scheme (the baseline) and reform options in this report was the use of projections utilizing the World Bank's Pension Reform Options Simulation Toolkit (PROST) model. A brief description of the model is provided in Appendix 4 while the key data and assumptions used in the modeling exercise are summarized in Appendix 3.

24. Baseline financial projections evaluate the current system assuming no changes to the current policy framework. With respect to adequacy and predictability of benefits, average pensions projected under different pension indexation policy scenarios provide a measure of what scheme members may expect to receive when they retire and to what extent promised benefits smooth their lifetime income and protect them from poverty. Projected system expenditures, the contribution rate required to balance the system if the system were

contributory, and the implicit pension debt (liabilities accrued by the system at a given point of time) are the key output indicators in the analysis of affordability and sustainability.

25. **Projected baseline demographic patterns and the system dependency rate.** Apart from the system rules, the projected time path of benefits and system finances is largely driven by system demographics and expected changes over time. Assuming the workforce in the public service grows in line with population growth and retirement patterns do not change, the system dependency rate is projected to slightly decline over the next few years but then to steadily increase going up from the current 30% to about 60% by the end of the simulation period (See Figure 4).<sup>12</sup> Some improvement in demographic characteristics in the short run is projected to emerge from the current youthful age distribution of employees. As Figure 28 and Figure 29 in Appendix 3 show, this distribution is skewed more towards younger- to medium age groups: the average age is 39 for civilians and 30 for uniformed service employees.<sup>13</sup> For that reason, the projected increase in the number of new pensioners over the next few years is fairly small, and the system dependency rate is projected to even slightly decrease. In the future, when today's medium-aged workers approach retirement, the number of new retirees is projected to significantly increase. Growing life expectancy at post-retirement ages also increases the number of pensioners who must be supported by the pension system. In the medium- to long-run, these two factors are projected to yield increases in the number of pensioners at a rate faster than the expansion of the workforce. If the system were contributory (as proposed in the first reform option considered below), a rising system dependency rate would imply that with the given level of benefits the contribution rate required to balance system finances will have to increase as more pensioners will be supported by each active member.

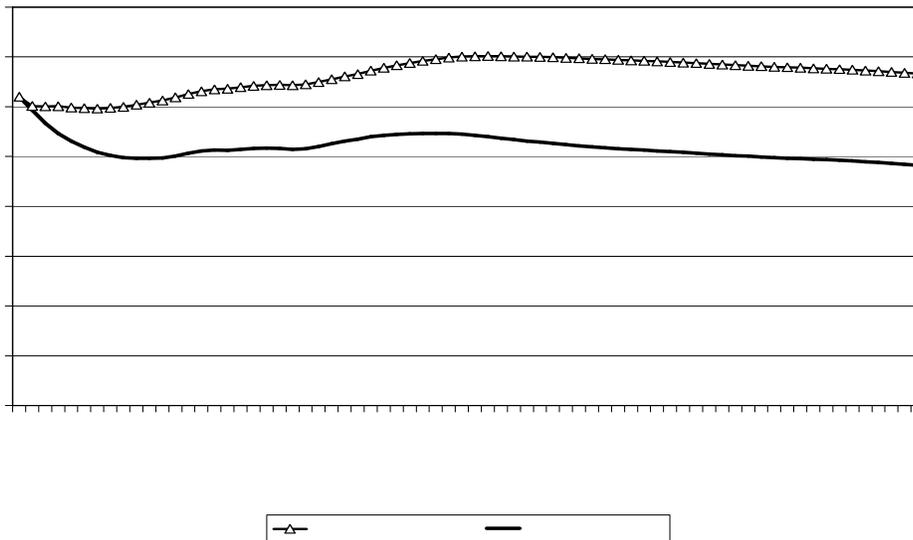
**Figure 4: Projected Baseline System Dependency Rate**



pension calculations as well as pension indexation policy. Baseline projections assume that all policy and behavior variables affecting new pension calculations – the benefit formula, the retirement pattern, the accrual of years of service, and the earning profile – do not change. It is also assumed that everybody elects to commute 25% of their pension. To deal with the uncertainty of discretionary indexation policy, two extreme cases were modeled: (i) post-retirement pensions not indexed at all (no adjustments to benefits after retirement); and (ii) post-retirement pensions are adjusted each year in accordance with the consumer price index. As mentioned above, since 1990 pensions have been adjusted by roughly 50% of the inflation rate, though not at an even rate each year. If this type of policy of sporadic adjustments but not full price indexation persists, expected benefits are likely to be somewhere between the two variants. If pensions are fully indexed to prices to maintain their real value, the average benefit for all retirees is projected to hover at about 30-35% of the average wage for all contributors in a given year (See Figure 5). In the no-indexation variant, the average replacement rate is expected to eventually drop to 24-25%.

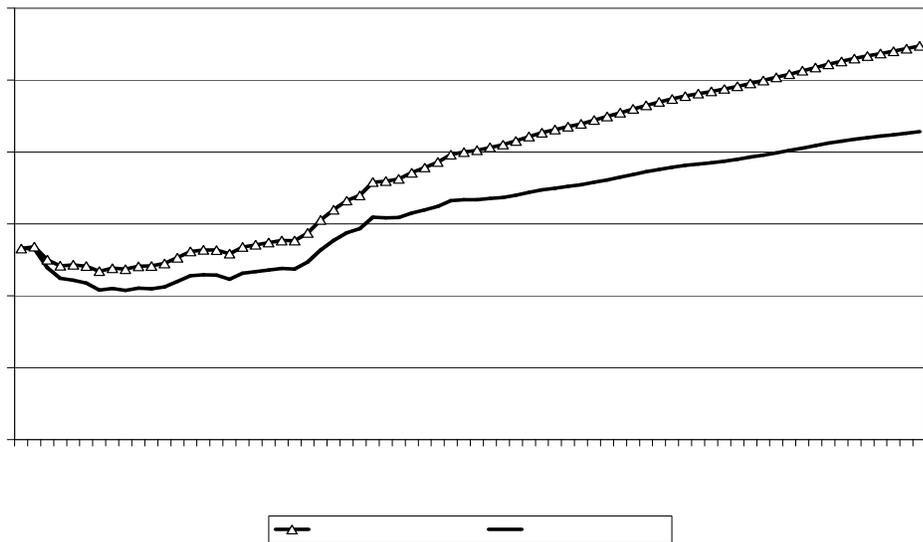
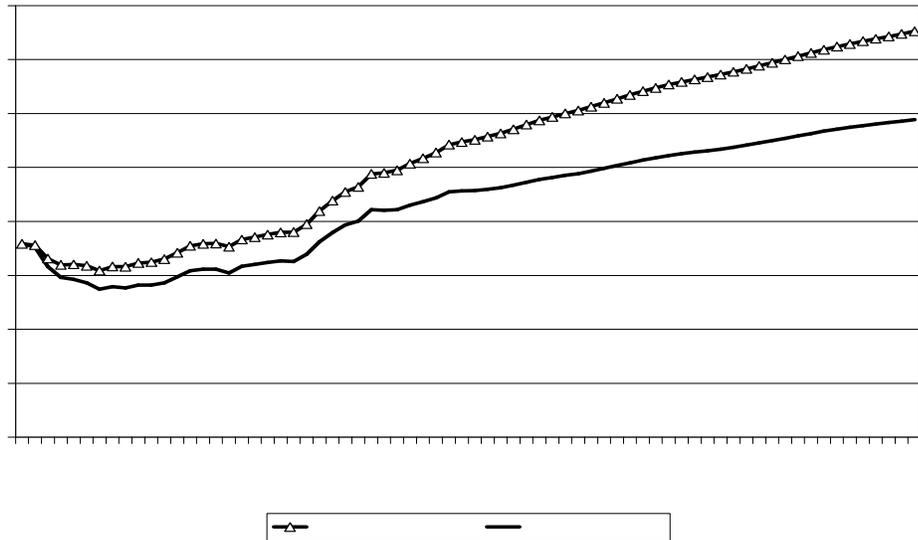
27. **Individual effects.** Of even greater importance is the effect on individual retirees of the depreciation in the purchasing power of their retirement benefit as well as the disparity between such benefits between retirees based on the size and frequency of ad hoc adjustments. As long as benefit adjustments are less than inflation, pension levels for individuals will depreciate substantially during their lifetime even though the average benefit level for all retirees only adjusts modestly.

**Figure 5: Projected Baseline Average Replacement Rates for the Stock of Retirees\***



driven mainly by the rising system dependency rate. With no projected dramatic changes in the average replacement rate, pension expenses are projected to increase to 21% of the pensionable wage bill with no indexation and 27% with full price indexation. So, in the medium- to long-run the system is likely to become more costly and the issues of affordability and fiscal sustainability are likely to become more relevant.

**Figure 6: Projected Baseline Pension Expenditure (as % of GDP)**



for the public service in The Gambia. With benefit levels that are projected to remain relatively stable vis. a vis. pensionable wages, the dynamics of the equilibrium contribution rate follow the time path of the system dependency ratio in a way similar to projected pension spending. In the long run, the required contribution rate is expected to increase to relatively high levels of 21-27% depending on the indexation scenario which may not be affordable – and this is just to finance relatively low benefits.

30. **Projected baseline implicit pension debt.** We define implicit pension debt (IPD) as the present value of the benefits that the pension system has agreed to pay to its current participants (active members and retirees) and their survivors on the basis of their pension rights accrued prior to any particular year for which the calculation is made. New pension rights earned after the year for which the IPD is calculated are not considered, so this measure shows how much it would cost to discontinue the pension scheme and pay out all up-to-date obligations.<sup>15</sup> This is a common indicator used by the international community and fiscal affairs experts when comparing the maturation and fiscal burden of different pension systems.

31. For 2006, the pension liabilities accrued by the system are estimated to be 8.4% of GDP for the full price indexation variant and at about 6.9% of GDP for the no-indexation variant. The real discount rate used in the simulations was 5%.<sup>16</sup> This fairly low IPD results mainly from low benefits. For instance, the IPD estimate for a more generous civil service scheme with a comparable coverage (Uganda) is significantly higher – about 25% of GDP.

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<sup>15</sup> The IPD calculated here is an approximation to the projected benefit obligation (PBO) concept used in the US literature.

<sup>16</sup> This is an approximation of an average market real interest rate expected in the good state of the world under the assumption that the long term real GDP growth rate is 3%. It is important to note that this indicator is sensitive to the discount rate used in the calculations. With 3% real discount rate which is a long term government bond rate observed in stable economies and which may be a reasonable discount rate to use in government liability estimates, the estimated IPD increases to 12.1% and 9.6% of GDP for price and no-indexation variants, respectively. Other discount rate assumptions may be considered in further simulations.

### III. REFORM OBJECTIVES AND OPTIONS

#### A. OBJECTIVES AND ARCHITECTURE

32. **Core objectives.** Prior to embarking upon a reform program, we suggest consideration of the core objectives which the authorities seek to achieve in the short- medium- and long-run. Ideally, we suggest a process to identify the desired scope and architecture of pension provision for both the public and private sector in The Gambia by both public and private providers. Once that vision is established, then the parametric reforms to the public sector schemes can be decided-upon in a way consistent with such long-term objectives. Table 6 below provides a matrix of such objectives and short- medium and long-term measures for consideration. Table 10 in the Next Steps section elaborates potential diagnostic and policy measures in greater detail.

**Table 6: Possible Objectives and Modalities**

<u>Overall Objective</u>	<u>Short-term</u>	<u>Medium-term</u>	<u>Long-term</u>
Ensure adequacy, predictability, affordability, and sustainability of PSPS	Parametric reforms to the public service pension schemes.		
Improve Labor Market Mobility	Potential introduction of contributions to align public service pension schemes with the Federated Pension Scheme.	Introduce portability between the Public service pension schemes, the Federated Pension Scheme and the National Provident Fund.	
Extend Old-age Income Protection to a larger scope of the labor force	Review design characteristics of the National Provident Fund.	<ul style="list-style-type: none"> <li>③Enact design reforms to the National Provident Fund.</li> <li>③Evaluate the feasibility, affordability and utility of introducing a non-contributory social pension.</li> <li>③Enact mechanisms to support facilitation and improved oversight of voluntary savings arrangements.</li> </ul>	Enact a non-contributory social pension with links to contributory schemes.
Develop and strengthen mechanisms for Basic Income Support for the Elderly		<ul style="list-style-type: none"> <li>③Evaluate the feasibility, affordability and utility of introducing a non-contributory social pension.</li> <li>③Enact mechanisms to support improved oversight of voluntary savings arrangements.</li> </ul>	

33. **Focus of this report on the first objective.** The focus of this report is on the first objective - ensuring adequacy, predictability, affordability, and sustainability of PSPS. There are a broad variety of reform paths that The Gambia can take, but generally potential reform options for pay-as-you-go (including non-contributory) defined benefit public systems can be classified into two principal categories: parametric reforms and systemic (or structural) reforms. Parametric reforms generally leave the defined benefit structure and pay-as-you-go financing strategy unchanged but adjust the parameters of the scheme, such as the qualifying conditions for receiving pensions, the benefit formula and the contribution rate. Systemic reforms however, change the more fundamental architecture of the system, such as moving from a defined-benefit to a defined-contribution scheme, changing the funding strategy from pay-as-you-go to fully

funded or opting for a combination of defined-contribution and defined-benefit pillars or multi-pillar system.

34. **Proposed parametric changes.** We have examined both the Government's proposed introduction of contributions as well as a number of parametric reform options summarized in Table 7 below. Reform 1 is the introduction of contributions. Reform 2 is the introduction of automatic price indexation of benefits which we believe is essential to old age income security of public servants. We have reviewed further parametric adjustments (Reforms 3-6) to improve the equity of benefits between individuals and between cohorts, improve the labor market incentives to work or to retire and offset higher costs incurred by introduction of automatic price indexation of pensions. Reform 7 evaluates a combined reform program. Reforms 8-10 review a series of measures to increase the benefits for current retirees and increase overall pension benefits (and contributions) for future retirees.

**Table 7: Summary of Projected Changes to Parameters<sup>17</sup>**

<b>Baseline</b>	<b>Projection of current scheme, with no contributions, or reforms assumed under two pension indexation policy scenarios</b> (price indexation and no indexation)
Reform 1	Introduction of 15% contribution rate (10% - employer, 5% - employee).
Reform 2	Introduction of automatic benefit price indexation.
Reform 3	Introduction of actuarially fair commutation factors (assuming commuted pension is indexed to prices).
Reform 4	Introduction of actuarially fair reduction coefficients for early retirement.
Reform 5	Gradual increase of the averaging period for reference wage calculations from the current years to lifetime average (by 1 year every year); wages are valorized to wage growth.
Reform 6	Retirement age is increased regularly in line with life expectancy at retirement.
<b>Reform 7</b>	<b>Combination of reforms 1-6.</b>
<b>Additional Reforms Reviewed</b>	
Reform 8	One-time benefit top-up for current retirees and beneficiaries
Reform 9	Including allowances in pensionable emoluments
Reform 10	One time increase in public service wages

35. **Medium-term objectives and rationale behind parametric reforms.** We understand that the Government is very concerned about the immediate adequacy and security of pension benefits for public servants. We suggest that there are additional reform objectives that it may want to consider in designing the reform parameters which satisfy these concerns: (i) increasing the old-age income security of public service workers and retirees through greater predictability of benefits; (ii) tightening technical parameters to improve incentives, namely improving the relationship between lifetime contributions and benefits; (iii) introducing potential portability of accrued rights from the public to the private sectors in order to improve labor market mobility and also make it more attractive to work in one or more of the public sector institutions; and (iv) improving sustainability by increasing efficiency of spending and penalizing undesired retirement behavior.

36. **Parametric reforms as a basis for a medium-term strategy.** A series of parametric reforms to the PSPS can remedy the key weaknesses identified in its parameters while also creating the basis for labor mobility between the public sector and state-owned enterprises covered under the Federal Pension Fund. In the medium-term, the structure of the National

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<sup>17</sup> All reforms are assumed to start in 2009.

Pension Fund, occupational schemes and Government basic income support for the elderly could all be reviewed in an effort to create a unified framework which supports labor mobility, consumption smoothing and old age poverty protection.

37. **Why not a more radical approach?** Some may advise that The Gambia should opt for a more radical reforms of its PSPS such as not only opting for making the scheme contributory but also changing the architecture from Defined-benefit to defined-contribution, replete with active asset management and transferring investment risks from the Government to the workers. We do not advise such an approach because we believe that in spite of the excellent record of the SSHFC to date, The Gambia does not have a strong enough governance framework, deep enough financial markets and stable enough macroeconomic environment to justify such an approach.

38. **Why not adopt a Notional Defined Contribution (NDC) scheme?** Others may ask why we are not advising the Government to shift the framework of the PSPS from a non-contributory defined-benefit scheme to a contributory notional defined-contribution or NDC scheme. An NDC scheme has a number of compelling characteristics which may be appropriate to the needs and conditions in The Gambia and we are eager and willing to discuss this option further. We would also like to point out that the proposed parametric reforms, in particular lifetime income averaging, age-specific benefit reductions and automatic benefit indexation are consistent with an NDC approach and would make a potential adoption of an NDC architecture that much easier if this was decided upon at some point in the future.

## **B. REFORM 1: INTRODUCTION OF CONTRIBUTIONS**

39. The authorities have indicated their preliminary interest in moving the PSPS from being non-contributory to a fully contributory scheme and have suggested contribution rates for the Government as employer of 10% and for the employee of 5% of wages.<sup>18</sup> We neither strongly support nor oppose such a measure but, rather would like to note the following advantages and disadvantages, fiscal implications, legal and operational requirements:

### **B1. Advantages**

- ③ Contributions create a stock of reserves to support the accrued pension rights of workers and thus may lessen the risk that such benefits may not be forthcoming.
- ③ Contributions save for the benefits paid at a later date and thus smooth the fiscal expenditures over time.
- ③ It is possible, though not likely that an investment pool could yield rates of return in excess of the Government's cost of borrowing.
- ③ Employee contributions give employees a stronger stake in the receipt of benefits and thus can contribute towards greater accountability.

### **B2. Disadvantages**

- ③ Active fund management creates investment performance risks thereby increasing potential fiscal vulnerability and volatility. The government also assumes other risks including some potential liquidity risks, transfer risks, and credit risks.

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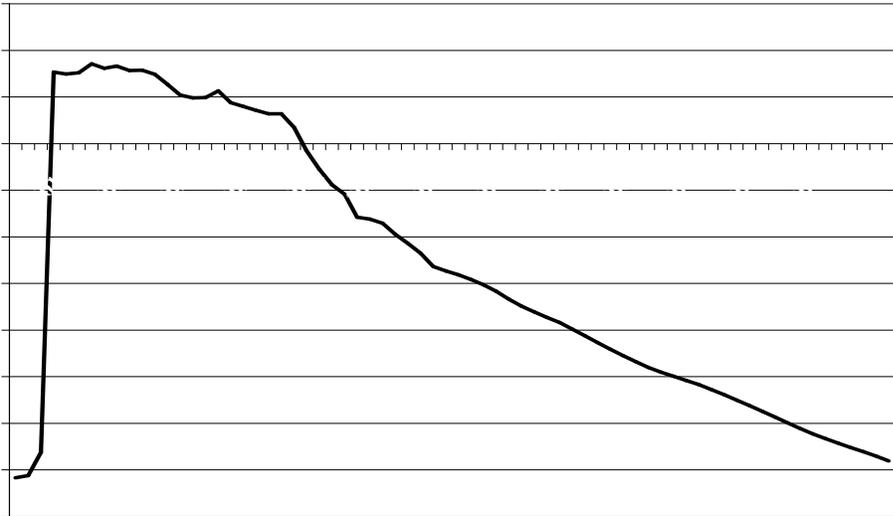
<sup>18</sup> Our understanding is that the Federated Pension Fund (FPF) has an employer contribution rate of 19% of pensionable emoluments (Source: *Social Security Programs throughout the World*). This suggests that a contribution rate of 15% would align the PSPS with the National Provident Fund (NPF) but not with the FPF.

- ③ The employer contribution requirements represent an additional current fiscal cost that will affect both the fiscal balance and the potential borrowing requirements.
- ③ The employee contribution either will result in a one-time across the board reduction in take-home pay or will require a one-time across-the-board wage increase that will create a fiscal cost. The latter is particularly likely given the low level of wages in the public service.
- ③ There is a risk that maximizing the risk-adjusted return on pension assets may conflict with the objective of supporting needed public investments and other development priorities.

**B3. Fiscal Implications**

40. The introduction of a 15% contribution rate would change the phasing of the Government’s costs because in the short-to medium term the Government has to save for future benefits and may have to compensate workers for their 5% contribution rate through additional wages. Of course in the medium to long-term, the net accumulations of contributions minus benefits and administrative costs would generate revenues and the fund accumulation would be used to reduce some of the fiscal burden of pension benefit costs in the medium-term. If a 15% contribution rate is introduced in 2009 and there are no other parametric reforms and assuming price indexation, the system’s current balance is projected to have a surplus through 2028 and then turn negative with the deficit increasing throughout the rest of the simulation period and reserves running out about eight years later (See Figure 8). During the period when reserves are utilized to fund pension benefits, the total fiscal cost will be lower than in the baseline scenario. Once the reserves are depleted, the fiscal costs under Reform 1 become identical to the baseline scenario. Under the assumption that funds are not invested, reserves are expected to deplete in 2036. Options with varying rates of returns should be modeled for more in-depth analysis of this reform option. Moreover, it is essential to consider other financing options such as additional non-wage taxes, redistribution and public sector borrowing as well as opportunities for investment of accumulating reserves if a contributory scheme is considered.

**Figure 8: Reform 1 - Introduction of Contributions**  
(Projected Current Balance, % of GDP)



## **B4. Funding Options**

41. If the public pension scheme becomes contributory, there are different options for the modalities for funding pension benefits. These options include: (i) establishing a legal provision for the transfer from the consolidated fund for any cost for benefits which cannot be paid from (a) the current year's revenue, (b) interest and capital gains from the existing stock of reserves under management, and (c) the sale of reserves; (ii) paying all benefits accrued prior to the implementation of the reform from the consolidated fund and paying all benefits accrued after the reform from the current year's contributions, interest and capital gains and asset disposition; or (iii) some combination of "i" and "ii." In addition, a policy decision would need to be made as to the transfer of reserves and the requirements attributed to past service liabilities in cases where individuals move from one public service unit to another and transfer their acquired rights.

## **B5. Operational Requirements**

42. **Current and additional administrative functions.** Currently, the key pension administrative functions are: (i) recording work histories, including time in public service, age and applicable wages; (ii) administering the process of validation of eligibility for benefits; (iii) benefit calculation; and (iv) benefit disbursement.<sup>19</sup> In addition, making the scheme contributory introduces a number of other functions including: (a) contribution and arrears recording and compliance management; (b) record-keeping, account management, audit and financial reporting; (c) investment management; (d) as needed asset custody, clearance and settlement; and, as needed, (e) asset management and corporate governance.

43. **Account management requirements.** We understand that the Government is considering an option to entrust the SSHFC with investment management responsibilities. However, all the account management responsibilities would still fall under the Government's direct responsibility and thus adequate provision needs to be made for contribution and arrears recording and compliance management and all other record-keeping, account management, audit and financial reporting.

## **B6. Legal Constitution, Governance and Investment Management**

44. If the scheme is to be made contributory with a stock of reserves attributed to it, then amendments need to be considered which establish the Public Pension scheme as a legal entity replete with a governance structure. Such legal attribution would then create the legal foundation to transfer functions to the SSHFC such as asset management, accounting and record-keeping and disbursement. Finally, a governance framework needs to be devised to manage the outsourcing process to the SSHFC such as performance monitoring, a process to ensure prudent management, and a process for grievance resolution.

### **C. REFORM 2: AUTOMATIC BENEFIT INDEXATION**

45. **Importance.** Without automatic and systematic indexation, public service pension benefits are less than adequate in providing predictable old-age income protection and consumption smoothing. Such indexation is essential to smooth income from one's worklife into retirement and creates a level of security that can be a powerful incentive to recruit and retain

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<sup>19</sup> We do not have detailed information about the existing payment management systems, benefit calculation and validation processes, nor the benefit disbursement process. At this writing, we do not know how these processes work, are managed, nor the level of efficiency realized.

public service workers. Although we believe automatic pension indexation is imperative to pension predictability, at the same time it limits fiscal flexibility by creating an automatic fiscal cost increase that may have to be financed. Fortunately in The Gambia such an automatic fiscal cost is relatively small when compared with total payroll costs.

46. **Modalities.** Automatic indexation can be linked to inflation or to wage growth, to a combination of both or to a minimum of the two.<sup>20</sup> Full indexation of pensions to inflation maintains their real value over time whereas full indexation to wages sustains their level relative to the average wage of those that are still working.

47. **Projected effects of inflation indexation.** Projected costs under the Reform 2 scenario match those for the “price indexation” variant of the base case projection in which the current ad hoc indexation policy is approximated with the assumption that pensions are adjusted annually at the rate of inflation. As shown in Figure 5, the projected effect of price indexation on pensions-in-payment grows over time and is substantial in the long run. Compared to the “no-indexation” variant, the average pension to average wage ratio is projected to increase by up to 10 percentage points, or the level of the average pension in money terms goes up by about 40%. Even compared to a partial price indexation policy (say about 50% inflation), the projected effect is still significant: an increase by around 5 percentage points for the replacement rates and by 20% for the average pension money value. The projected effect varies substantially for different retirees, depending upon when and at what level the ad hoc adjustment would have been made. Also the longer the individual is in retirement the more such an individual would be protected against inflation risk. This measure therefore is essential to making us benefits more predictable.

48. **Projected costs of inflation indexation.** As discussed in Section II and illustrated in Figure 6 and Figure 7, introducing price indexation does come at a cost of about 0.17% of GDP per year in the long run when compared with the projections of the “no-indexation” scenario. When measured in terms of the required contribution rate, price indexation may cost up to 6 percentage points more compared to the “no-indexation” scenario or about 3 percentage points more if compared to a partial indexation scenario (e.g. half of inflation). We believe that this is a reasonable cost to pay for increasing old age income security for public servants and improving incentives for workers to be recruited into the public service. Moreover, as discussed below, these additional costs can be offset by other parametric adjustments.

49. **Wage indexation.** If wages grow faster than prices (which is observed as a common long term trend around the world), some societies believe that retirees should also have their retiree benefits increased by the same increment in solidarity with workers. Wage indexation also tends to be more expensive than price indexation and therefore increases the fiscal costs over time. In addition, wage indexation can also *reduce* old age income security if public sector wages grow less than prices, as has been the case in the Gambian public service for some period of time, although this cannot continue in the long run. Wage indexation is therefore not only more costly, it can also undermine the core objective of smoothing consumption into retirement.

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<sup>20</sup> An example of a mixed indexation formula is the so called Swiss formula linking pension adjustments to 50% of inflation and 50% to nominal wage growth.

#### **D. REFORM 3: MAKING THE COMMUTATION FACTOR ACTUARIALLY FAIR**

50. **Objective.** We suggest that actuarially fair commutation factors should replace the current factor of 12.5 and the should vary by age and possibly gender.<sup>21</sup> The objective of this proposed reform is to equalize the equity of benefits in present value terms between different cohorts and between men and women. Though this reform may result in some cost savings, it should be introduced mainly for equity reasons. If appropriate discount rate and mortality rates are used in commutation factors calculations, individual's pension wealth will be the same regardless of his/her choice with respect to commutation. As a result, incentives for pension commutation would be reduced and such decisions would largely depend on individual preferences. With fewer retirees opting for commuted benefits, the level of average post-retirement annuitized benefits would increase.

51. **Projected cost and benefit effects of actuarially fair commutation factors.** Under an optimistic assumption regarding indexation policy (price indexation) and assuming quite moderate real discount rate (5%), the current commutation factor of 12.5 is close to actuarially fair for middle aged workers opting for early retirement; while the actuarially fair factor would be higher for those retiring at younger ages and lower for older aged new retirees (See Figure 3).<sup>22</sup> If there are no changes in behavior with respect to commutation and retirement patterns, the impact on the system costs is not projected to be significant. The deviation of costs under Reform 3 from the baseline scenario (price indexation variant) is between 2-3% in additional costs or cost savings. This is an estimate of the minimum potential impact. Under more realistic assumptions of partial or no indexation and/or higher discount rates, the effect should be more substantial: the lower the indexation is compared to inflation and the higher is the discount rate, the lower is the fiscal cost. The cost savings would also depend upon the number of individuals who opt for the commutation once the factor is adjusted.

52. Commutation factors are very sensitive to assumptions used in their computation: the discount rate; expected inflation; mortality rates for public servants and their expected evolution and expected indexation policy. Additional data and further exploration will be needed to answer these questions.

#### **E. REFORM 4: MAKING BENEFIT REDUCTIONS FOR EARLY RETIREMENT ACTUARIALLY FAIR**

53. **Objective.** Benefit reduction for early retirement is used in many countries to neutralize incentives for early retirement so that people don't have a special financial incentive to retire before they reach normal retirement age. In order to still give a choice to workers, but make this choice fair and fiscally neutral for the system, actuarially fair reduction factors should be employed. These factors equalize the lifetime benefit between retiring at the normal retirement age and retiring early, so their computation – as in case of actuarially fair commutation factors – is based on assumptions regarding discount rates, inflation, mortality rates, and indexation policy.

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<sup>21</sup>Using unisex versus gender-specific commutation factors is a policy choice. Women tend to live longer, so gender-specific commutation factors favor women and imply hidden redistribution from men to women. In The Gambia the difference is not that significant: the current life expectancy at age 60 is 15.1 for females and 14.0 for males; over time the difference is expected to increase to 3.5 years (22 years versus 18.5 years respectively) still remaining relatively small compared to many countries.

<sup>22</sup> The actuarially fair commutation factor depends substantially whether there is an actuarially fair benefit reduction introduced for those retiring prior to age 60 suggested as Reform 4. The combined scenario (Reform 7 takes into account the interactive effects between these two proposed reform measures. Raising the minimum retirement age and/or minimum vesting period would also affect retirement behavior).

54. **Actuarially fair reductions for early retirement.** Table 8 illustrates actuarially fair reduction coefficients estimated for 2009 assuming benefit price indexation and a 5% real discount rate. Applying these coefficients would materially reduce the benefit received during early retirement and would create an incentive for a number of individuals to work longer. Higher discount rate assumptions or lower indexation parameters will result in higher reduction coefficients, all else being the same.

**Table 8: Actuarially Fair Reduction Factors for Early Retirement<sup>23</sup>**

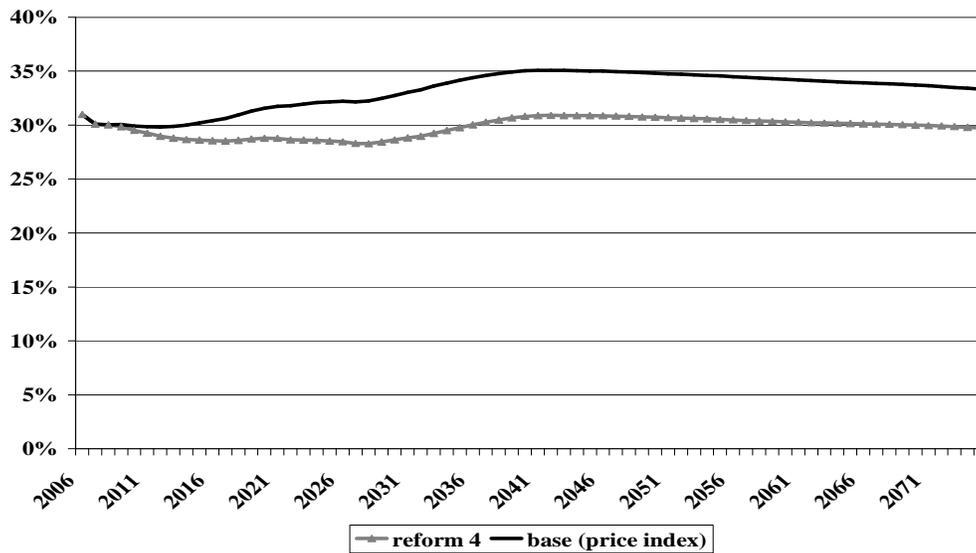
<u>Age</u>	<u>Men</u>	<u>Women</u>
45	73%	70%
46	71%	68%
47	68%	66%
48	66%	63%
49	63%	60%
50	60%	57%
51	57%	54%
52	53%	50%
53	49%	46%
54	44%	42%
55	39%	37%
56	33%	31%
57	26%	25%
58	18%	17%
59	10%	9%
60	0%	0%

Source: World Bank PROST estimates.

55. **Impact on costs and benefits.** The impact of the proposed reduction coefficients suggested in Table 7 on benefits and system costs is plotted in Figure 9, Figure 10 and Figure 11. In order to estimate full potential impact, it is assumed that introduction of benefit reductions for early retirement does not change the existing retirement patterns. As one would expect, the reduction in benefits as a result of penalties imposed on the large number of retirees in The Gambia retiring prior to the normal retirement age of 60 would be to reduce the benefits as a proportion of the wages of employed workers by up to 4 percentage points from the baseline scenario, or by about 11% if individuals' behavior does not change (See Figure 9). Accordingly, lower projected benefits would result in lower fiscal costs which are projected to be reduced by up to 0.08 percentage points of GDP, or by about 11% (See Figure 10), and the required contribution rate could be reduced by 3 percentage points in the long run (Figure 11). These cost reductions could be used to offset the cost increases projected for inflation indexation and, at the same time, materially improve the equity of benefits between those who retire early and those choosing to retire at age 60.

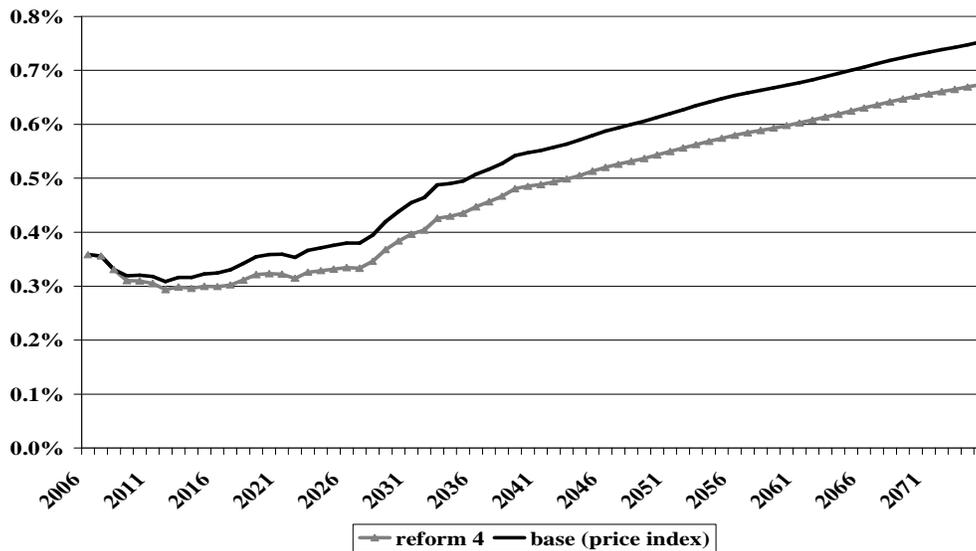
<sup>23</sup> Assuming benefit price indexation and a 5% real discount rate.

**Figure 9: Reform 4 - Benefit Reductions for Early Retirement (Average Rep. Rates for Stock of Retirees)**



Source: World Bank PROST estimates.

**Figure 10: Reform 4 - Benefit Reductions for Early Retirement (Projected Pension Expenditures as % of GDP)**

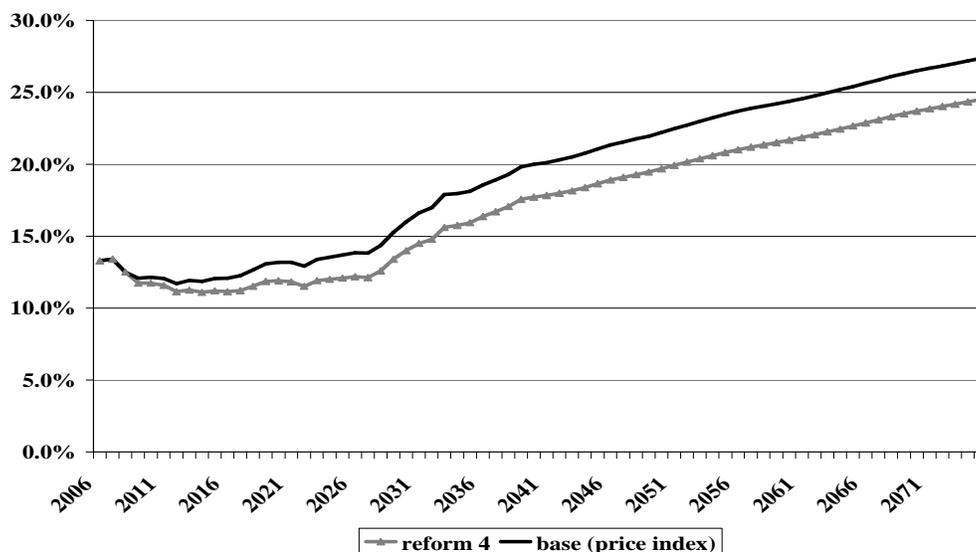


Source: World Bank PROST estimates.

56. **Effects on behavior.** Changes in retirement patterns are very likely to result from the imposition of actuarially fair reduction coefficients as people are discouraged from retiring early. Those people who opt to work longer would receive higher annual pension benefits, albeit for a shorter period of time and, if reduction factors are actuarially fair, the system liabilities in terms of the present value of expected pension payments will be the same as in Reform 4. Costs payable each year would change if more individuals work longer due to changes both in the number of retirees and benefit levels. Complementary measures could be introduced to limit early retirement by raising the minimum retirement age and/or raising the minimum vesting period. More in-depth analysis of the potential impact, taking into account these measures and

anticipated behavior changes require further study. Assumptions used in the computation of actuarially fair reduction coefficients should also be thoroughly explored.

**Figure 11: Reform 4 - Benefit Reductions for Early Retirement (Equil. Contribution Rate)**



Source: World Bank PROST estimates.

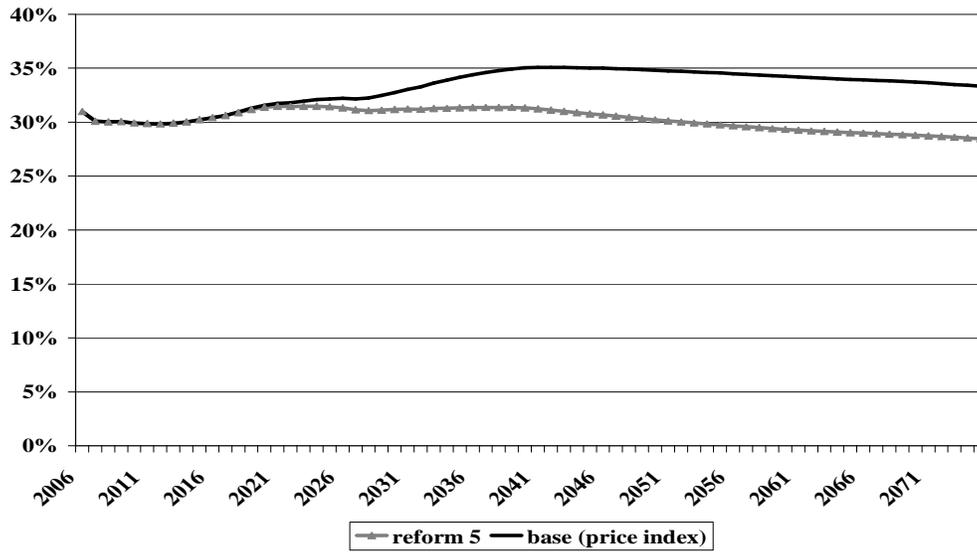
#### F. REFORM 5: INCREASING THE INCOME AVERAGING PERIOD

57. **Objective.** A means of increasing fairness between individuals with different incomes is to gradually increase the income averaging period, albeit still applying the public service wage valorization currently used in the benefit formula. Even with individual wages valorized to total wage growth in reference wage calculations, the longer the income averaging period, the lower is the reference wage, provided that, on average, wages grow with age. This is the case in the PSPS (see Figure 27 in Appendix 3).

58. **Impact on costs and benefits.** The greatest effect of this proposed parametric change would be to align benefits with lifetime income streams regardless of the level and timing of wage escalation through one’s worklife.<sup>24</sup> In this way, on average low-income workers at retirement would have received greater benefits than currently is the case and higher-income workers at retirement would receive a lower benefit. This improved equity may motivate lower income workers to join and remain in the public service. The impact of this proposed change on costs and average benefits is modest and comparable with Reform 4 (See Figure 12, Figure 13 and Figure 14). The maximum projected reduction in the average replacement rate is estimated to be 5 percentage points, in total pension expenditures – 0.21 percentage points of GDP, and in the long-term equilibrium contribution rate 3 percentage points.

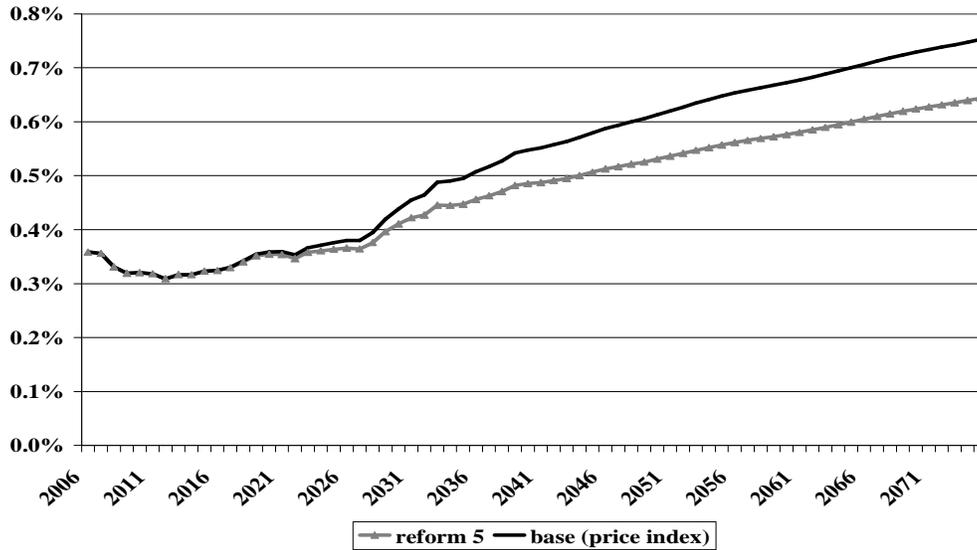
<sup>24</sup> By establishing the data management and recording systems for recording all wage adjustments over a lifetime, the parametric reform would also support the introduction of NDC accounts also.

**Figure 12: Reform 5 - Increasing the Income Averaging Period (Average Repl. Rates for Stock of Retirees)**



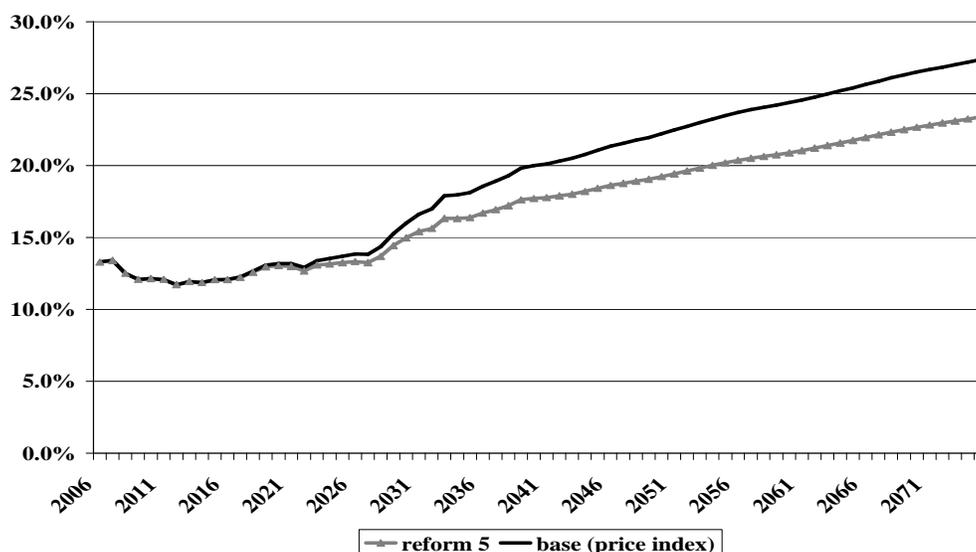
Source: World Bank PROST estimates.

**Figure 13: Reform 5 - Increasing the Income Averaging Period (Pension Expenditures as % of GDP)**



Source: World Bank PROST estimates.

**Figure 14: Reform 5 - Increasing the Income Averaging Period (Equilibrium Contribution Rate)**



Source: World Bank PROST estimates.

### **G. REFORM 6: PERIODICALLY ADJUSTING THE NORMAL RETIREMENT AGE CONSISTENT WITH LIFE EXPECTANCY**

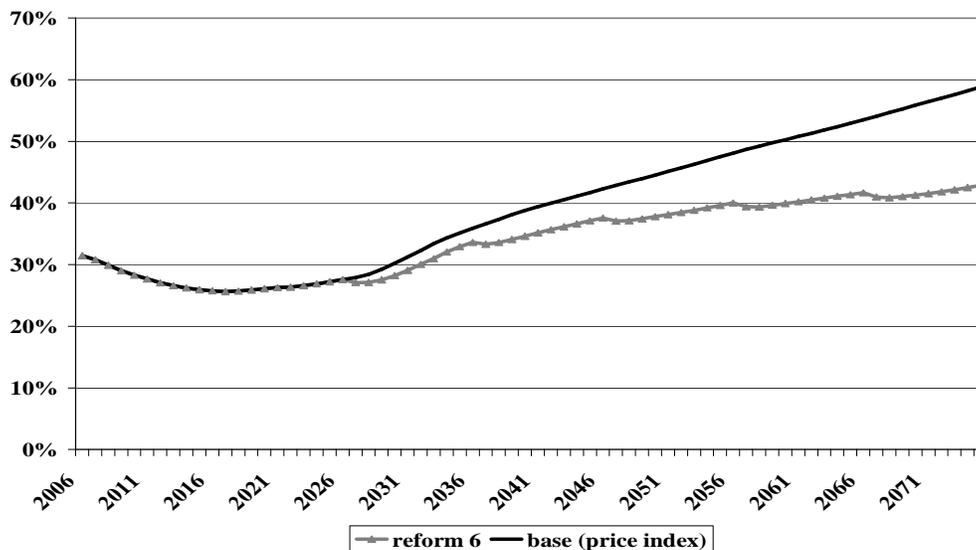
59. **Objective.** If the Government intends to maintain a constant period of retirement over time, then the current retirement age of 60 enacted in 2005 will have to be periodically increased further in order to be consistent with projected growth in life expectancy at the normal retirement age. This is a relatively minor parametric adjustment and could be enacted within a general framework for periodic adjustments which could be embodied in the legislation. Reform 6 suggests that the normal retirement age is increased for both genders by 1 year every 10 years starting from 2027 and reaches 65 by the end of the simulation period.<sup>25</sup> Under the demographic assumptions used in the simulations, these adjustments maintain life expectancy at retirement for men more or less constant – 14-15 years. For women, life expectancy is still projected to increase from the current 15.1 years at age 60 to 17.9 years at age 65 by 2075 due to the assumption that mortality rates decrease faster for women than for men. If a policy choice was to be made to equalize the number of years of life expectancy at retirement, then the retirement age for women should be raised more than for men.

60. **Impact on costs and benefits.** Raising retirement age impacts system costs primarily through changes in the system dependency rate. The later people retire (and the longer they stay in the workforce), the lower is the number of pensioners relative to the number of active members in each year. A lower number of benefit recipients reduces pension expenditures. In a contributory scheme, more employees generate higher revenues, so system finances may substantially improve. Higher retirement ages may also have a counteracting effect if they result in more accumulated years of service and higher wages at retirement, hence higher benefits. However, the latter effect largely depends on system design and is unlikely to fully offset the impact of lower dependency rates.

<sup>25</sup>As a practical matter, although it could be revised every 10 years, any age adjustment can be phased in gradually, over a few years, in order to prevent such disorderly adjustments in incentives to retire.

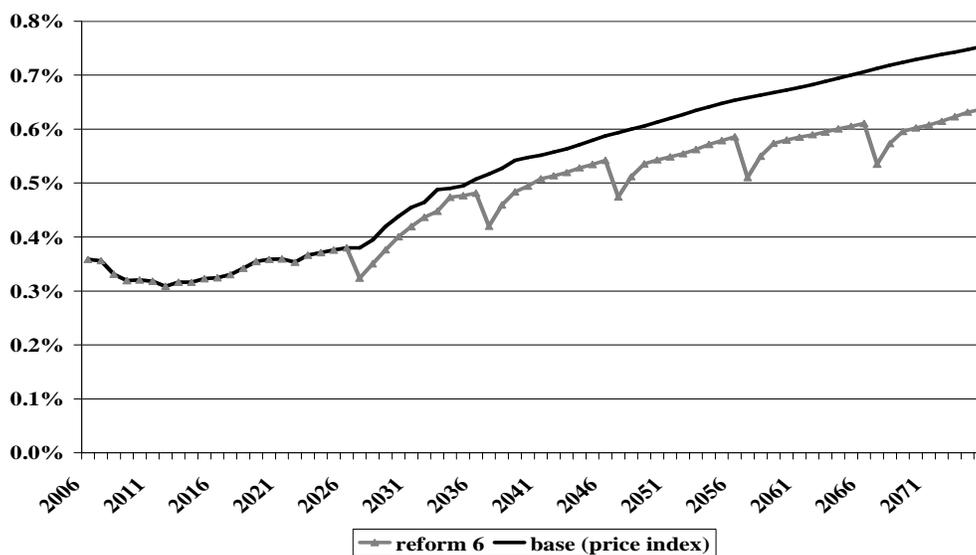
61. Figure 15 compares the projected dependency rate with and without adjustments proposed in Reform 6. Projected periodic increases in retirement age substantially slow down the growth of the dependency ratio, which with Reform 6 is projected to go up to only 43% compared to a much higher 59% in the no-reform scenario. On the other hand, as people retire with more years of service and higher wages, average benefits also increase – by about 17-18% by the end of the simulation period. However, the impact of more favorable system demographics prevails.

**Figure 15: Reform 6 - Adjusting the Normal Retirement Age with Life Expectancy (System Dependency Rate)**



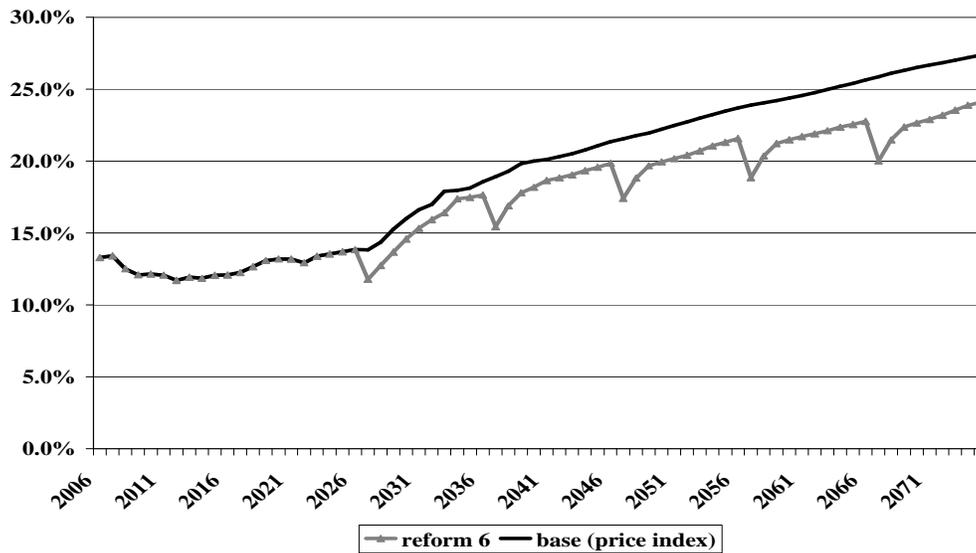
Source: World Bank PROST estimates.

**Figure 16: Reform 6 - Adjusting the Normal Retirement Age with Life Expectancy (Pension Expenditures as % of GDP)**



Source: World Bank PROST estimates.

**Figure 17: Reform 6 - Adjusting the Normal Retirement Age with Life Expectancy (Equilibrium Contribution Rate)**



Source: World Bank PROST estimates.

62. As shown in Figure 16, the gap between pension expenditures in the Reform 6 and baseline scenarios reaches 0.11-0.17% of GDP in the long run. Accordingly, the equilibrium contribution rate is lower compared to the base case by up to 3-6 percentage points towards the end of the simulation period (See Figure 17).

#### H. REFORM 7: A COMBINED REFORM SCENARIO

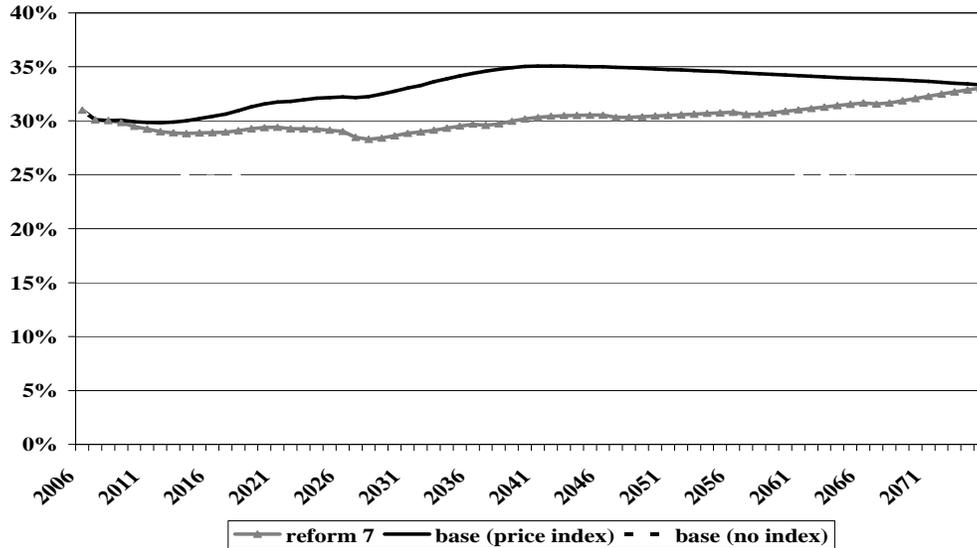
63. **Objective and proposed changes.** Each of the above changes (reforms 1-6) addresses different issues with the existing scheme. To ensure that the PSPS provides adequate, predictable, affordable benefits and is financially sustainable in the long run, we suggest a reform scenario that combines all these adjustments. The proposed parametric reforms include the following changes to the existing system:

- ⌚ Introduction of 15% contribution rate (10% paid by employer and 5% by employees);
- ⌚ Introduction of automatic indexation of post-retirement pensions to inflation;
- ⌚ Replacing the current 12.5 commutation factor with actuarially fair commutation factors linked to age and sex and periodically adjusted;
- ⌚ Introduction of actuarially fair reduction coefficients for those who retire before the statutory retirement age;
- ⌚ Gradual increase of the current 3-year averaging period in reference wage calculations by 1 year every year to lifetime average with wages valorization; and
- ⌚ Introduction of periodic increases of the statutory retirement age in line with life expectancy.

64. **Combined effect on benefits.** Under the combined reform scenario, average pensions are projected to remain within the range projected for the two extreme variants of ad hoc indexation policy in the baseline (no-reform) scenario (see Figure 18). However, reform ensures benefits are substantially more predictable and equitable, providing stronger smoothing of income from pre-

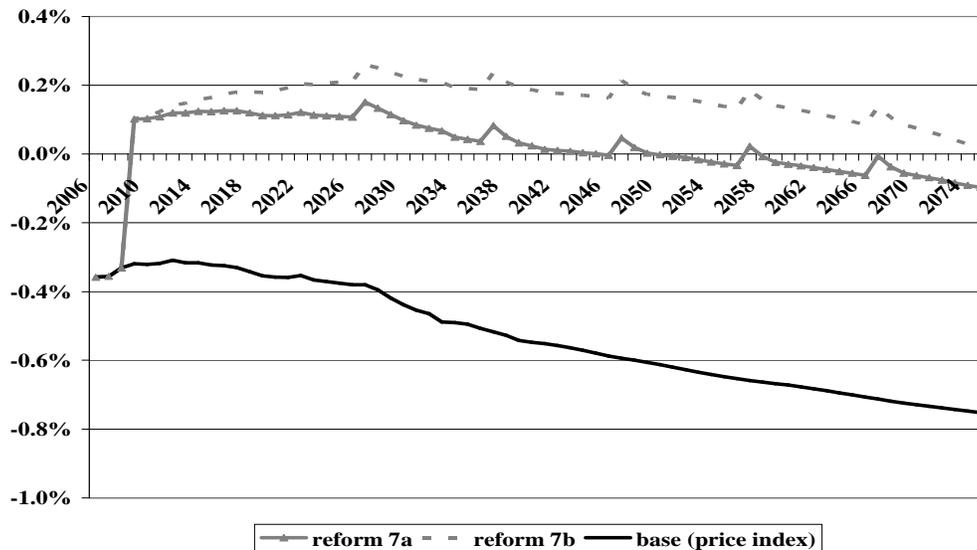
retirement to post-retirement and providing better insurance against poverty in old age for public servants.<sup>26</sup>

**Figure 18: Reform 7 - Combined Scenario (Average Replacement Rates for Retirees)**



Source: World Bank PROST estimates.

**Figure 19: Reform 7 - Combined Scenario Current Balance (% of GDP)**



Source: World Bank PROST estimates.

Note: Variant 7a assumes that reserves are not invested, and variant 7b assumes reserves earn 3% real rate of return.

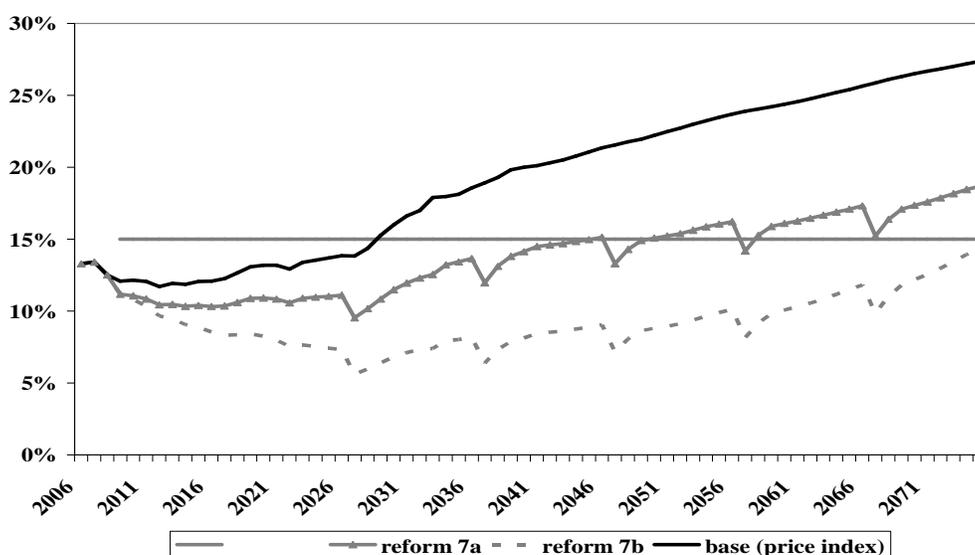
65. **Combined effect on costs and sustainability.** Under Reform 7, the public servants pension scheme is projected to be financially sustainable over the medium-term, not facing a negative current balance until around 2050 and facing fractional deficits thereafter, even

<sup>26</sup> The Reform 7 scenario assumes that no behavioral changes in retirement patterns result in response to the introduction of actuarially fair commutation factors and reduction coefficients for early retirement. If fewer people opt for maximum commutation and fewer people retire early – which is very likely – the average pension should be higher than projected for Reform 7.

assuming reserves yield no returns. If funds were to be invested and yield some positive rate of return, system finances would improve further. Figure 19 compares the dynamics of the current balance under two sets of assumptions: (a) reserves are not invested (Reform 7a); and (b) reserves are invested and earn 3% real rate of return (Reform 7b).<sup>27</sup> As mentioned earlier, investment opportunities and fund management issues should be a separate topic for discussion.

66. **Combined effect on affordability.** The proposed contribution rate of 15% is fairly moderate and affordable, particularly when measured as a percentage of projected public service wages or GDP. If funds are invested and earn a positive rate of return, there would be some room for adopting a lower contribution rate. Figure 20 presents the projected equilibrium contribution rate under the two variants of Reform 7. For instance, with the assumed 3% real rate of return on fund investments, the contribution rate balancing the system finances can be decreased by up to 4-5 percentage points towards the end of the simulation period compared to variant “b.”

**Figure 20: Reform 7 - Combined Scenario Current Balance (Equil. Contribution Rate)**



Source: World Bank PROST estimates.

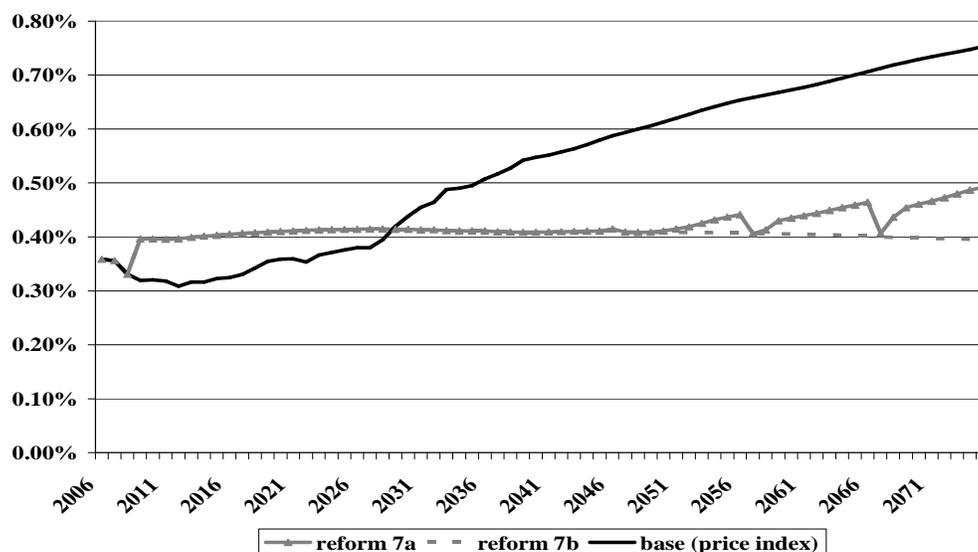
Note: Variant 7a assumes that reserves are not invested, and variant 7b assumes reserves earn 3% real rate of return.

67. **Additional fiscal costs.** The proposed reform does present additional costs for the Government in the short run, as contributions are expected to exceed pension expenses. However, it is possible to adopt a financing strategy which can mitigate that effective cost such as investing the reserves of the scheme in treasury securities. Fiscal costs in the medium- and long run are projected to be lower under the reform scenario than in the base case, with the long-term cost saving of about 0.25-0.30% of GDP (See Figure 21 for the projected Government expenses). In the Reform 7 scenario, the cost to the Government is calculated as total contributions plus the deficit whenever the current balance is negative.<sup>28</sup> In the baseline scenario, the projected cost to the Government simply coincides with the system expenditures.

<sup>27</sup> This is the discount rate approximating the observed long term trend for government bonds in stable economies. It's a rather conservative assumption provided that funds are invested properly.

<sup>28</sup> We assume that wages will have to be increased proportionately to compensate workers for their share of the 15% contribution rate which is equivalent to all contributions being paid by the employer.

**Figure 21: Reform 7 - Combined Scenario Current Balance (Govt. Pension System Costs)**



Source: World Bank PROST estimates.

Note: Variant 7a assumes that reserves are not invested, and variant 7b assumes reserves earn 3% real rate of return.

68. **Recommendation.** Overall, we believe the proposed Reform 7 ensures fiscal sustainability over a long period, substantially improves incentives, equity, adequacy, and provides much stronger old-age security to public service employees therefore satisfying core objectives of a public pension system.

#### I. REFORMS 8-10: MEASURES TO INCREASE THE LEVELS OF PENSION BENEFITS

69. The combination of reforms proposed above do not remedy low benefit levels of the majority of current retirees nor the generally low absolute benefit levels for most future retirees. Measures to increase benefits to current and future retirees should be considered in a broader context of the current and expected budget situation, and as part of the overall public service compensation policy. Addressing it may require a combination of the following measures:

- ⌚ A one-time top-up for current pensioners and beneficiaries followed by automatic price indexation of pensions-in-payment.
- ⌚ Including allowances in pensionable wage.
- ⌚ A one-time increase in public service wages.

70. In principle, Reforms 8, 9 and 10 offer a reasonable approach to address the issue of low benefit levels for both current and future pensioners. However, we would not recommend introducing any of them before the pension system is reformed to ensure its long term financial sustainability. Otherwise, the fiscal burden will increase dramatically and may not be able to be sustained over a long period. Even more important, as discussed below, substantial increases to the pensionable wage create similar increases in benefit promises for older cohorts for the rest of their lives while not providing equivalent increases to those who may have retired even shortly before. Each of these reform options is evaluated in the sections below.

71. **Survivors' and disability benefits.** It is important to note that these simulations do not take into account any changes in the disability and survivorship benefits. Additional data and further study will be needed to discuss possible reform options for these programs.

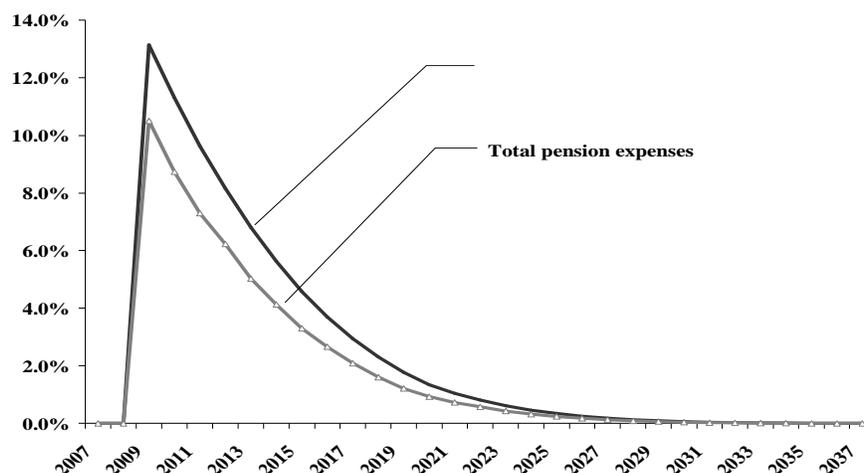
## J. REFORM 8: BENEFIT TOP-UP FOR CURRENT RETIREES AND BENEFICIARIES

72. **Current situation.** As discussed in section II, approximately 70% of current public service pensioners receive benefits at or below the official poverty line. There may be different approaches to deal with this issue. Administratively simplest approach would be setting up a minimum pension benefit level for current retirees and providing an increase or top-up in the monthly benefit to bring such individuals up to such a level. This would not be a minimum pension provision set by law but merely a one-time top-up provision for current retirees. Future retirees would be addressed through the proposed automatic indexation and current retirees getting the top-up would also have their new benefits indexed.

73. **We do not have a view on the appropriate level of benefits** for existing retirees and beneficiaries. The basic principles behind this option, however, are to provide a top-up sufficient to bring such retirees and beneficiaries up to a minimum basic consumption level and to weigh the cost of such a benefit against other pressing development priorities. It should be noted also that the minimum should not be set too high, bearing in mind that some retirees had minimal service in the public sector beyond the 10 year vesting period and thus were never entitled to a large benefit to begin with.

74. **Projected costs of different options.** To illustrate a potential impact of such an approach on pensioners and system expenses, we projected a scenario of a one-time top-up to bring pension to existing retirees up to a minimum level close to the current lower official poverty line (around 5,800 dalasis per year). The top-up is proposed to be introduced in 2009 and these pensions would be fully indexed to consumer price increases thereafter. Since this would be a one-time benefit increase, the fiscal cost is greatest in the first year and then gradually fades away as existing retirees gradually die off. As Figure 22 suggests, the average pension of existing pensioners in 2009 would be increased by 13% and the total pension expenses – by 10.5%. The impact on retirees with the lowest benefits, of course would be much greater and those retirees with benefit levels above the lower official poverty line would not be affected. Almost 50% of pensioners would be entitled to a top-up under this scenario.

**Figure 22: Reform 8 - Estimated Increase in Average Pension and Additional Expenses**  
(% of Base Case with Price Indexation)



Source: World Bank PROST estimates.

75. Another option is to document the amount and date of the initial benefit and then adjust the current benefit to reflect all or part of the cumulative inflation since the date of receipt of the

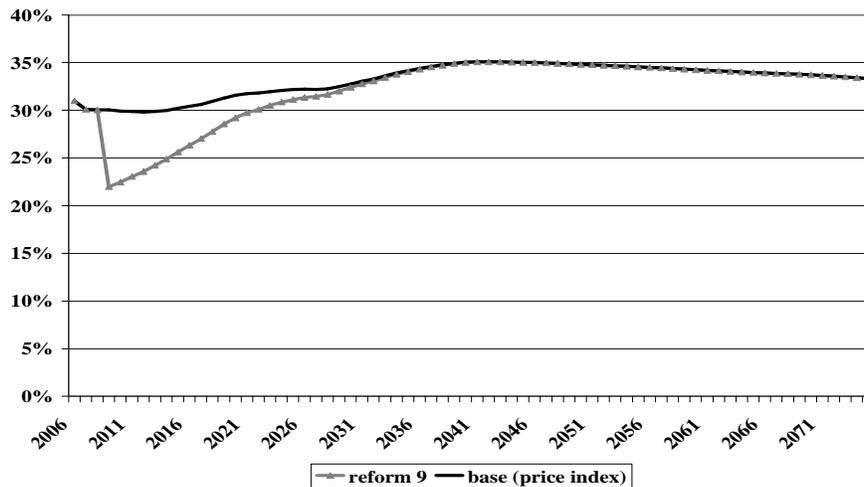
retiree’s first pension benefit. It is likely that the administrative costs of this option would be greater than the first one. Although one could use the expectation of a potential benefit top-up as a basis to encourage individual retirees to gather evidence of their date of retirement and benefit if computerized records are not readily able to compile such data, the realities are that this sort of top-up would be difficult to administer. A one-time increase of pensions to current pensioners requires further analysis of various policy options and costs.

**K. REFORM 9: INCLUDING ALLOWANCES IN THE PENSIONABLE EMOLUMENTS**

76. **Background.** Including non-wage allowances in the pensionable wage base as a means to raise benefit levels was already introduced in the PSPS gratuity formula for contractors in November 2006. It is also being considered by the SSHFC as part of their reform for the Federated Pension Scheme.

77. **Implications.** Including non-wage allowances in the pensionable wage base for public servants would have substantial implications which extend beyond the benefits received by retirees. First, if the public servant pension scheme is made contributory then employer and employee contributions would both increase by 40% on average, yet the increase would depend upon the individual’s compensation by allowances as a proportion of his or her pensionable wage. Second, the fiscal cost would increase for the employer contributions as well as to compensate employees for the increase in their contributions. Third, the question arises whether including non-wage allowances in the pensionable wage base would also subject such allowances to personal income taxes. It is for these reasons that we have simulated the effect of such a measure separate from the other parametric changes suggested. We also suggest that this question be reviewed in the context of the overall compensation for public servants.

**Figure 23: Reform 9 - Including Non-wage allowances in the Pensionable Wage Base**  
(Projected Average Replacement Rates for Stock of Retirees)



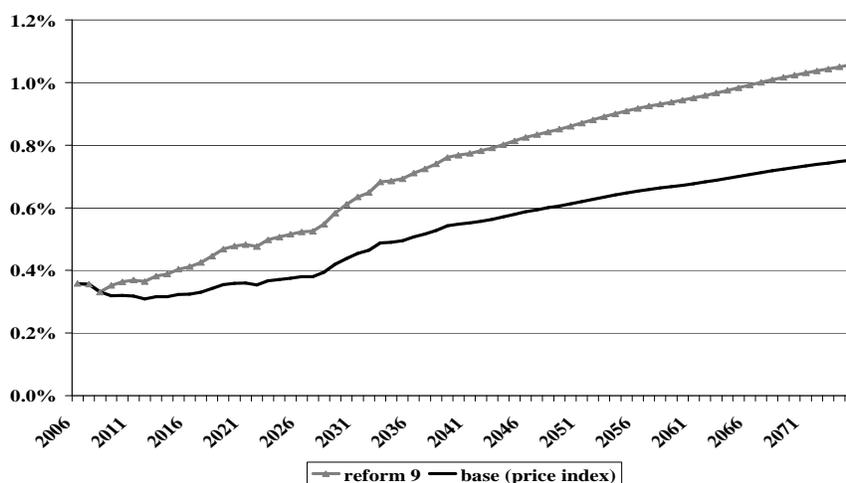
Source: World Bank PROST estimates.

78. **The need for a transition policy.** In the absence of any one-time adjustment of the level of pensions for current retirees, substantially higher reference wages will sharply affect the average level of retirement benefits for new retirees creating a gap between “pre-reform” and “post-reform” pensions. As pensionable wages would be raised immediately whereas the average pension for all pensioners would grow only gradually, the average replacement rate for all retirees drops in the first reform year and then slowly converges to the base line (See Figure 23).

It is for these reasons that consideration is needed of a transition mechanism to avoid dramatically rewarding some cohorts but not others and ultimately with a modest fiscal impact in the short-run. There are a number of different options that can be considered bearing in mind that older workers potentially have the most to gain by substantially increasing the pensionable wage for determining an annuitized pension while such individuals might only be required to contribute for a limited time period if at all.

79. **Fiscal impact.** The projected impact on the costs to the government is substantial. Growing absolute pension levels generates higher pension expenses which build up relatively quickly. Already in the first year of the reform they are estimated to exceed baseline levels by 10%, then the difference increases further until it reaches 40% by around 2031-2033 staying at that level thereafter. As shown in Figure 24, by the end of the simulation period the system is projected to cost more by 0.3 percentage points of GDP compared to the no-reform scenario.

**Figure 24: Reform 9 - Including Non-wage allowances in the Pensionable Wage Base (Pension Expenditures as Percent of GDP)**



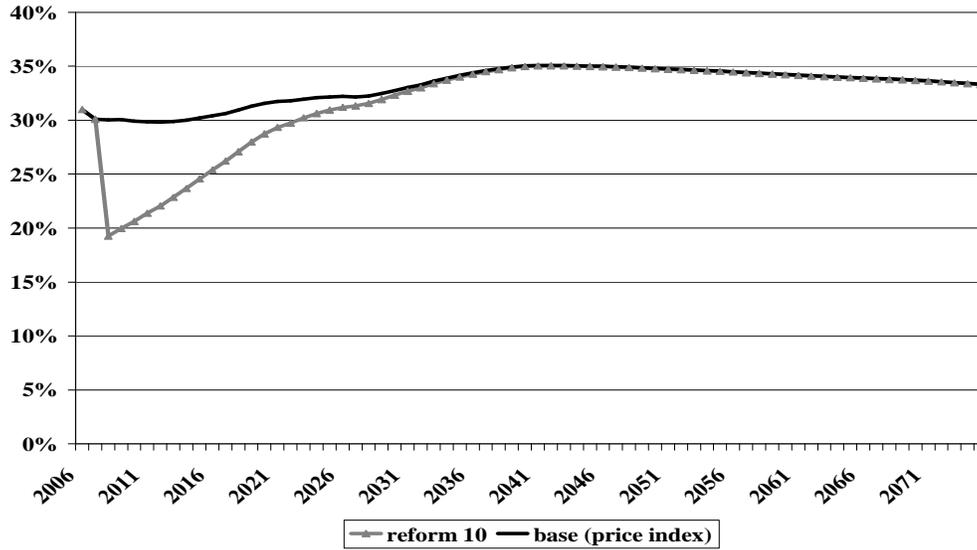
Source: World Bank PROST estimates.

#### L. REFORM 10: ONE-TIME INCREASE IN PUBLIC SERVICE WAGES

80. **Proposed option.** Another option for consideration would be to lift the level of pensionable wages by increasing basic wages. The Government is currently considering a salary increase of between 68% for top grades and 83% for lower grades to be introduced on January 1, 2008. As a result of this proposal, average basic wage would increase by about 75%. Projected replacement rates and pension expenditures are presented in Figure 25 and Figure 26 respectively.

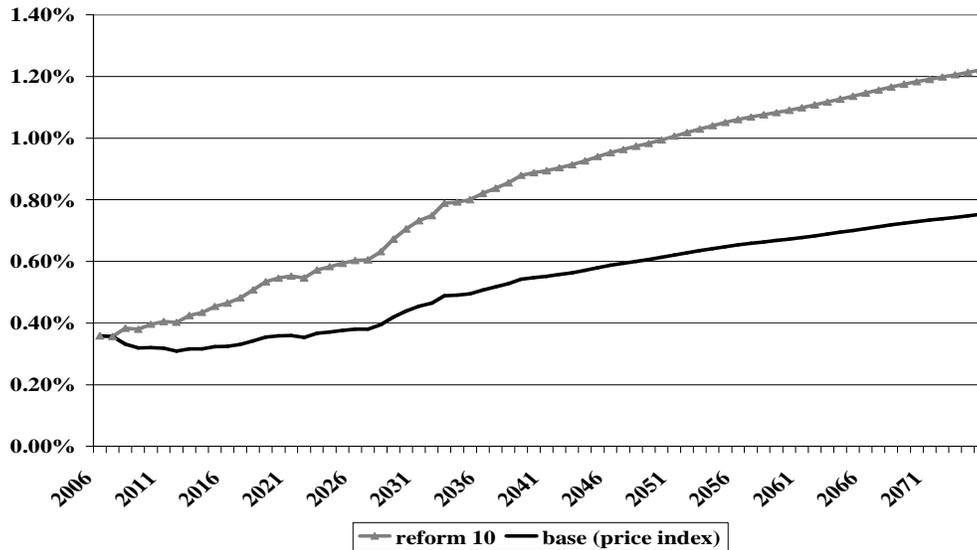
81. **Impact.** The nature of the impact on benefits, expenditures as well as additional cost to the Government in case the system is made contributory is similar to Reform 9 since both cases would result in a big one-time boost to pensionable wages. The difference between the two reforms would only be in the magnitude of the effect, as wages grow faster in Reform 10. Instead of a 40% increase as in Reform 9, the absolute level of the average pension and the total pension expenditures in Reform 10 will eventually increase by 75% relative to the base case. In the first year of Reform 10, pension payments are projected to cost more by 15% compared to baseline cost estimates.

**Figure 25: Reform 10 - One Time Increase in Public Service Wages - Projected Average Replacement Rates for Stock of Retirees**



Source: World Bank PROST estimates.

**Figure 26: Reform 10 - One Time Increase in Public Service Wages - Projected Pension Expenditures as % of GDP**



Source: World Bank PROST estimates.

82. Table 9 on the next page summarizes the impact of all the reform scenarios.

**Table 9: Summary Effects of Proposed Parametric Changes on Costs and Retiree Benefits**

<b>Proposed Parametric Change</b>	<b>Effect on Retiree Benefits</b>	<b>Effect on Long-term Fiscal Costs</b>
Making the scheme contributory	③None unless basic wages are increased to compensate workers for their share of contributions. ③Possible portability of rights accrual for those transferring to National Pension Fund.	Cost reduction if rate of return on reserves exceeds the cost of borrowing or cost increase if rate of return on reserves is less than the cost of borrowing
Price Indexation	Substantial Increase if compared to no indexation	Increase
Increase the Income Averaging period	Reduction, but effect depends upon on the growth of the individual's wages during an entire career.	Decrease
Adjust Retirement Age to Keep Period of Retirement consistent with life expectancy at retirement	Increase, as increase in years of service increases benefit level.	Decrease due to decrease in the system dependency rate
Make commutation factor actuarially fair	Decrease	Decrease
Make benefit reduction for early retirement actuarially fair	Reduction in benefits for those retiring early, no effect for those retiring at retirement age.	Decrease attributed to those retiring early.
Combined changes	(a) Increase compared to no-indexation base case; (b) Decrease compared to price indexation base case	Increase in the short run, significant decrease in the medium- to long run
Benefit top-up for current pensioners	Increase	Increase
Including allowances in wage base	Substantial increase in benefits.	Substantial increase in costs.

## **M. GOVERNANCE, MANAGEMENT AND INSTITUTIONAL ASSESSMENT**

83. **Required functions to make the PSPS contributory.** As discussed above, making the scheme contributory introduces a number of other functions including: (a) contribution and arrears recording and compliance management; (b) record-keeping, account management, audit and financial reporting; (c) investment management; (d) as needed asset custody, clearance and settlement; and, as needed, (e) asset management and corporate governance. Even if the policy option is chosen of having SSHFC undertake all investment management, account management and disbursement, a number of operational responsibilities would still fall under the Government's direct responsibility and thus adequate provision needs to be made for contribution and arrears recording and compliance management and all other record-keeping, account management, audit and financial reporting.

84. **Legal attribution and governance framework.** We also believe that amendments should be considered which establish the Public Pension schemes each as legal entities replete with a governance structure. Such legal attribution would then create the legal foundation to transfer functions to the SSHFC such as asset management, accounting and record-keeping and disbursement. Finally, a governance framework needs to be devised to manage the outsourcing process to the SSHFC such as performance monitoring, a process to ensure prudent management, and a process for grievance resolution.

85. **Investment management policy options.** There are a number of policy options for the investment of reserve accumulations which will be generated if the Government takes the

decision to make the public service schemes contributory. Here we present three options and then indicate the rationale behind our suggested option:

- (iv) entrust the SSHFC with investment management responsibilities through an agency agreement. In this case, it will be important to establish an investment policy framework including the investment policy, investment strategy, asset allocation guidelines and processes for revising them, and incentives to ensure appropriate fiduciary management of funds;
- (v) establish a similar agreement with a private investment manager either locally or from abroad. Just as in the first option, an infrastructure for investment management governance would still need to be established; and
- (vi) deposit all positive cash balances in the consolidated fund yet maintain a separate fund which receives a remuneration of a market reference rate such as the weighted average observed rate on 91 day treasury securities.

86. The last option we suggest has the advantage that no investment, governance or transfer risks are created; implicit pension debts are made explicit; and almost all management and transaction costs are eliminated. Although the disadvantage of this option is that no potential returns in excess of the market reference would be yielded on such funds, we believe that the long-term risk of underperforming such a benchmark is substantial and therefore this option is the most attractive.

87. **Pension portability.** Establishing pensions portability poses both policy and institutional requirements. The policy issues are: (i) to agree on a common contribution and benefit framework both between the public service schemes and the Federal Pension Fund; and (ii) to agree on a framework for acquired rights recognition (both for vesting and for total benefits) and totalization; and (iii) agree on a framework for the transfer of fund accumulations associated with contributions and returns on investment assets. The institutional requirements are: (a) each of the schemes has to have accurate data on service histories, wages, contributions and attributable returns; (b) and processes and procedures need to be established to affect the transfer of rights when a member shifts from one scheme to another.

## **IV. CONCLUSIONS AND NEXT STEPS - MOVING FORWARD WITH A REFORM AGENDA**

### **A. CONCLUSIONS**

88. This report has evaluated the Public Service Pension Scheme in The Gambia. Pension benefits are a key part of the remuneration package for public servants in The Gambia and aim to smooth consumption from workers' worklife into retirement. Such deferred compensation is an essential part of the incentives to recruit, retain, motivate and reward public servants.

89. Our diagnostic findings from our review of the existing system and baseline projections suggests that: (i) low and unpredictable benefits provide insufficient smoothing of consumption for full term workers in retirement and insufficient protection against the risk of poverty; (ii) the bulk of pension benefits are assured shortly after retirement but with limited support for the duration of the retirement period; (iii) the benefit formula and qualifying conditions create weak incentives and inequities between different workers; (iv) the disability program does not cover workers prior to vesting and provides very limited benefits for younger, vested workers and the survivor program is practically non-existent; and (v) although the pension system seems to currently be affordable, it's cost and sustainability in the long-term are projected to escalated due to a deterioration of system demographics.

90. In response to these diagnostic findings as well as the Government's interest in moving from a non-contributory to a contributory scheme, we reviewed the following reform options employing the use of the Pension Reform Options Simulation Toolkit in order to systematically evaluate the following parametric reforms: (i) the introduction of contributions; (ii) automatic price indexation of benefits; (iii) establishing actuarially fair commutation factors for lump-sum distributions at retirement; (iv) establishing actuarially fair reductions to benefits claimed prior to the retirement age of 60; (v) gradually increasing the averaging period for reference wage calculations from the current 3 years to lifetime average (by 1 year every year) with wages are valorized to wage growth; (vi) periodically increasing the retirement age in line with increases in life expectancy; and (vii) a combination of these measures.

91. The results of applying the combination of these measures is a pension for public servants that is much more predictable through inflation indexation. Further, the proposed measures remove a series of weak incentives and inequities between workers, including some regressiveness in the benefit calculation. Finally, the combination of measures is likely to be both fiscally affordable and financially sustainable over a 70 year timeframe.

92. We also reviewed options and costs for increasing the benefit levels for current retirees as well as two options for increasing benefit levels for future retirees. The first option considered was to increase the pension benefit for all current retirees to at least the lower poverty line in an effort to ensure a minimal subsistence for these retired public servants. The second option was to include non-wage allowances in the wage base for the calculation of both pension contributions and benefits; and the third option was a one-time substantial increase in basic (pensionable) wages for public servants which would also have the effect of increasing pension contributions and benefits. With respect to these latter two options, we found that the short and medium-term pension costs of these options were substantial and that without careful

consideration of transition measures, some cohorts would enjoy much higher pension benefits than others.

93. Finally, we suggested that the above parametric reforms be considered in the context of a strategy to harmonize the pensions for public servants first with employees in public enterprises covered by the Federal Pension Fund in an effort to create labor mobility through pension portability. Further, we suggested in the medium term a process to also create a unified framework between the Public Service Pension Scheme, Federal Pension Fund and Federal Provident Fund so that ultimately all workers in The Gambia could fall under a unified framework and then enjoy the benefits of mobility between the public and private sectors.

## B. NEXT STEPS

94. **Four processes.** Finalization and implementation of a reform of the pension provisions for public servants includes four processes: (i) additional diagnostic assessment; (ii) review of policy options and taking of decisions; (iii) drafting legislation, guidelines; and (iv) developing implementation plans, including, as necessary, institutional development plans. We have summarized these in Table 10 below.

**Table 10: Summary of Proposed Next Steps**

<u>Policies</u>	<u>Diagnostic Work Required</u>	<u>Decision making</u>
Provide a one-time top-up for existing retirees	Analysis of possible policy and adjustment levels. Survey of retirees to determine when retired, amount of initial benefit upon retirement.	
Establish legal character and governance structures for the PSPS		Decision on the level of legal and institutional autonomy for the schemes.
Make the PSPS contributory	<ul style="list-style-type: none"> <li>③ Development of a program for the eventual alignment of these schemes with the Federal Pension Scheme in order to provide comparability, portability and labor mobility.</li> <li>③ Establishment of the payment, record-keeping and account management systems as needed.</li> </ul>	Decision to make the schemes contributory, set the contribution rate, set the wage base for contributions, decide on the payment, record-keeping and account management systems
Establish the investment policy and strategy for the PSPS		Through a contractual relationship, agree to SSHFC investment and account management and disbursement.
Undertake parametric reforms to the Federated Pension Scheme to conform with those of PSPS	Contract an actuarial review by a qualified external actuary.	Draft conforming amendments.
Establish provisions of portability including rights recognition, totalization and apportionment with the Federal Pension Scheme	Undertake a reconciliation of those provisions which require conforming amendments.	Draft conforming amendments and operating procedures.
Review the medium-term strategy for harmonization and potential merger of pension provisions for both the public and private sectors.	Contract an actuary, legal counsel and pensions expert to advise on medium-term policy options.	

95. **Medium-term reform strategy.** Consideration of a more comprehensive reform strategy in the medium term would require also contemplating: (i) reforms of the National Provident Fund in order to align parameters with the Public Service Pension Schemes and the Federated Pension Scheme; (ii) reforms to strengthen enabling framework for small-scale retirement savings schemes which enable families to safely save for retirement and other needs; (iii) potential strengthening of the legal and regulatory framework for occupational schemes and for individual savings schemes; and (iv) if warranted and fiscally justified, consideration of a demogrant or social pensions which could provide basic income support for the elderly poor.

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## APPENDIX 2: GLOSSARY

- Accrual rate.* The rate at which pension entitlement is built up relative to earnings per year of service in earnings-related schemes—for example, one-sixtieth of final salary.
- Accrued pension.* The value of the pension to a member at any point prior to retirement, which can be calculated on the basis of current earnings or also include projections of future increases in earnings.
- Actuarial fairness.* A method of setting insurance premiums according to the true risks involved.
- Annuity.* A stream of payments at a specified rate, which may have some provision for inflation proofing, payable until some contingency occurs, usually the death of the beneficiary or a surviving dependent.
- Annuity factor.* The net present value of a stream of pension or annuity benefits.
- Annuity rate.* The value of the annuity payment relative to its lump-sum cost.
- Average effective retirement age.* The actual average retirement age, taking into account early retirement and special regimes.
- Benefit rate.* The ratio of the average pension to the average wage, which could be expressed as relative to the economy wide average wage or to the individual's specific average or final wage.
- Ceiling.* A limit on the amount of earnings subject to contributions
- Commutation.* Exchange of part of the annuity component of a pension for an immediate lump sum.
- Comprehensive income tax.* A tax on all incomes, whether from earnings or investments and whether used for savings or consumption. A pure comprehensive income tax allows the component of investment returns compensating for inflation and so only taxes real returns.
- Contracting out.* The right of employers or employees to use private pension fund managers instead of participating in the publicly managed scheme.
- Contracting-out rebate.* The amount by which employers' and employees' national insurance contributions are reduced for contracting out of the state earnings-related pension scheme and the minimum contribution to a personal pension plan.
- Deferred annuity.* A stream of benefits commencing at some future date.
- Defined benefit.* A pension plan with a guarantee by the insurer or pension agency that a benefit based on a prescribed formula will be paid. Can be fully funded or unfunded and notional.
- Defined contribution.* A pension plan in which the periodic contribution is prescribed and the benefit depends on the contribution plus the investment return. Can be fully funded or notional and nonfinancial.
- Demogrant.* Same as a universal flat benefit, where individuals receive an amount of money based solely on age and residency.
- Demographic transition.* The historical process of changing demographic structure that takes place as fertility and mortality rates decline, resulting in an increasing ratio of older to younger persons.
- Disclosure.* Statutory regulations requiring the communication of information regarding pension schemes, funds, and benefits to pensioners and employees.
- Discretionary increase.* An increase in a pension payment not specified by the pension scheme rules.
- Early leaver.* A person who leaves an occupational pension scheme without receiving an immediate benefit.
- Early retirement.* Retirement before reaching an occupational scheme's normal retirement age or, in the state scheme, before reaching the state's pensionable age.

*Earnings cap (ceiling).* A limit on the amount of earnings subject to contributions.

*Full funding.* The accumulation of pension reserves that total 100 percent of the present value of all pension liabilities owed to current members.

*Funding.* Accumulation of assets in advance to meet future pension liabilities.

*Implicit pension debt (net).* The value of outstanding pension claims on the public sector minus accumulated pension reserves.

*Indexation (uprating).* Increases in benefits by reference to an index, usually of prices, although in some cases of average earnings.

*Intergenerational distribution.* Income transfers between different age cohorts of persons.

*Intragenerational distribution.* Income transfers within a certain age cohort of persons.

*Legal retirement age.* The normal retirement age written into pension statutes.

*Marginal pension.* The change in the accrued pension between two periods.

*Means-tested benefit.* A benefit that is paid only if the recipient's income falls below a certain level.

*Minimum pension guarantee.* A guarantee provided by the government to bring pensions to some minimum level, possibly by "topping up" the capital accumulation needed to fund the pensions.

*Moral hazard.* A situation in which insured people do not protect themselves from risk as much as they would have if they were not insured. For example, in the case of old-age risk, people might not save sufficiently for themselves if they expect the public system to come to their aid.

*Nonfinancial (or notional) defined-benefit (plan).* A defined-benefit pension plan that is unfunded (except for a potential reserve fund).

*Nonfinancial (or notional) defined-contribution (plan).* A defined-benefit pension plan that mimics the structure of (funded) defined-contribution plans but remains unfunded (except for a potential reserve fund).

*Normal retirement age.* The usual age at which employees become eligible for occupational pension benefits, excluding early-retirement provisions.

*Notional (or nonfinancial) accounts.* Individual accounts where the notional contributions plus interest rates accrued are credited and determine the notional capital (that is, the liability to society).

*Notional (or nonfinancial) capital.* The value of an individual account at a given moment that determines the value of annuity at retirement or the transfer value in case of mobility to another scheme or country.

*Notional or nonfinancial interest rate.* The rate at which the notional accounts of notional defined-contribution plans are annually credited. It should be consistent with the financial sustainability of the unfunded scheme (potentially the growth rate of the contribution base).

*Occupational pension scheme.* An arrangement by which an employer provides retirement benefits to employees.

*Old-age dependency ratio.* The ratio of older persons to working-age individuals. The old-age dependency ratio may refer to the number of persons over 60 divided by, for example, the number of persons ages 15–59, the number of persons over 60 divided by the number of persons ages 20–59, and so forth.

*Overannuitization.* A situation in which a compulsory pension forces an individual to save more in pension than he or she would in the absence of the compulsory provision.

*Pay-as-you-go.* In its strictest sense, a method of financing whereby current outlays on pension benefits are paid out of current revenues from an earmarked tax, often a payroll tax.

*Pension coverage rate.* The number of workers actively contributing to a publicly mandated contributory or retirement scheme, divided by the estimated labor force or by the working-age population.

*Pension lump sum.* A cash withdrawal from a pension plan, which in the case of some occupational pension schemes is provided in addition to an annuity. Also available from personal pension plans.

*Pension spending.* Usually defined as old-age retirement, survivor, death, and invalidity-disability payments based on past contribution records plus noncontributory, flat universal, or means-tested programs specifically targeting the old.

*Pensionable earnings.* The portion of remuneration on which pension benefits and contributions are calculated.

*Portability.* The ability to transfer accrued pension rights between plans.

*Provident fund.* A fully funded, defined-contribution scheme in which funds are managed by the public sector.

*Replacement rate.* The value of a pension as a proportion of a worker's wage during a base period, such as the last year or two before retirement or the entire lifetime average wage. Also denotes the average pension of a group of pensioners as a proportion of the average wage of the group.

*Supplementary pensions.* Pension provision beyond the basic state pension on a voluntary basis.

*Support ratio.* The opposite of the system dependency ratio: the number of workers required to support each pensioner.

*System dependency ratio.* The ratio of persons receiving pensions from a certain pension scheme divided by the number of workers contributing to the same scheme in the same period.

*System maturation.* The process by which a pension system moves from being immature, with young workers contributing to the system, but with few benefits being paid out since the initial elderly have not contributed and thus are not eligible for benefits, to being mature, with the proportion of elderly receiving pensions relatively equivalent to their proportion of the population.

*Universal flat benefit.* Pensions paid solely on the basis of age and citizenship, without regard to work or contribution records.

*Valorization of earnings.* A method of revaluing earnings by predetermined factors such as total or average wage growth to adjust for changes in prices, wage levels, or economic growth. In pay-as-you-go systems, pensions are usually based on some percentage of average wage. This average wage is calculated over some period of time, ranging from full-career average to last salary. If the period for which earnings history enters into the benefit formula is longer than the last salary, the actual wages earned are usually revalued to adjust for these types of changes.

*Vesting period.* The minimum amount of time required to qualify for full and irrevocable ownership of pension benefits.

### APPENDIX 3: PROJECTION METHODOLOGY AND KEY ASSUMPTIONS

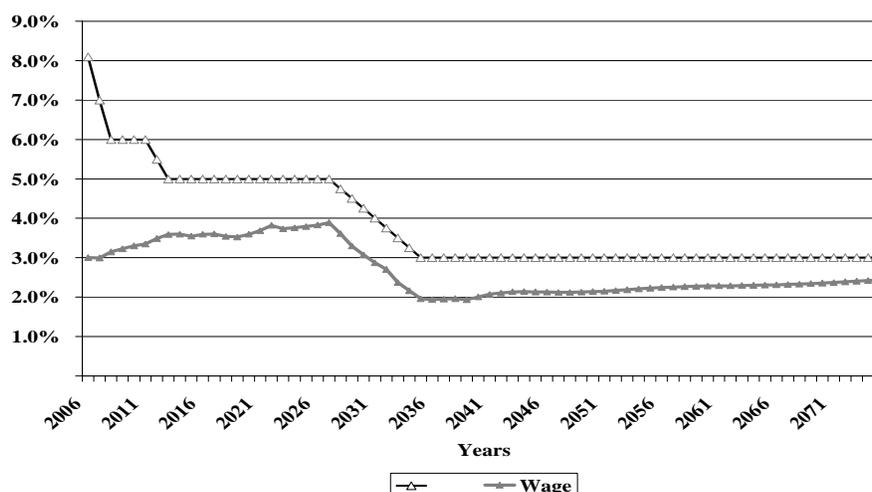
We utilized the computer-based actuarial model, the World Bank Pension Reform Options Simulation Toolkit (PROST) model, version 2006 to project both baseline and reform scenarios for the Public Service Pension. The model is designed to simulate the financial flows associated with public and private pension systems and assess their financial sustainability under different economic and demographic assumptions over a long time frame. The model has been adapted to a wide range of country circumstances throughout the world.

The base year for the simulation is 2006 and the projection period extends to 2075. The reform scenarios assume that a reform is enacted in 2008 and implemented by the beginning of 2009. Data on employees and retirees was provided by the Personnel Management Office and the Treasury. The Treasury also provided extensive data on financial flows associated with the provision of benefits.

Three main groups of assumptions are important in PROST modeling: (1) macroeconomic; (2) demographic; and (3) pension system related variables. The key assumptions used in the projections for the PSPS are presented below.

**Macroeconomic assumptions.** In the short- to medium term, IMF macroeconomic projections for The Gambia were used for assumptions regarding GDP growth and the inflation rate. In the long run, it is assumed that the Gambian economy reaches a steady state with real GDP growing at about 3.0% and inflation stabilizing at 3.5%. Average wage in the public service is assumed to increase roughly in line with per capita GDP. That means – taking into account that the public service workforce is assumed to grow in line with population – that the share of the public service wage bill in GDP remains stable at the current level of about 2.7% of GDP throughout the projection period. Figure 25 presents the assumed GDP and average wage growth rates; other macroeconomic assumptions are summarized in Table 9. Further sensitivity analysis of these assumptions may be useful.

**Figure 27: Assumed Real GDP and Real Average Basic Wage Growth Rates**



**Table 11. Macroeconomic Assumptions**

	2007	2008	2009	2013	2027	2035	2075
<b>Real GDP growth rate</b>	7.0%	6.0%	6.0%	5.0%	5.0%	3.0%	3.0%
<b>Real wage growth rate</b>	3.2%	3.7%	3.8%	3.8%	3.8%	2.0%	2.4%
<b>Inflation</b>	5.0%	4.5%	3.5%	3.5%	3.5%	3.5%	3.5%
<b>Real discount rate</b>	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%

**Population Projections.** Population projections for the overall population used in the simulations were provided by the World Bank’s Population Unit based on UNDP projections. In line with the observed international trends, fertility and mortality rates are assumed to decrease over time. The total fertility rate – currently about 438% – is projected to gradually decrease over time reaching the reproduction level of about 207% by 2075. Assumed reduction in mortality results in an increase in life expectancy as shown in Table 10. Based on these assumptions, the Gambia population is projected to grow from the current estimated 1.5 million to about 2.1 million in 2025 and 3.2 million by the end of the simulation period.

**Table 12. Projected Life Expectancy**

	2006	2020	2040	2060	2075
<b>Male</b>					
Life Expectancy: At Birth	51.1	54.6	61.0	67.4	73.0
At Age 20	41.3	42.0	46.3	50.7	54.6
At Age 60	14.0	14.2	15.6	17.1	18.5
At Age 65	11.1	11.3	12.4	13.7	14.9
<b>Female</b>					
Life Expectancy: At Birth	54.4	58.3	65.1	72.1	78.4
At Age 20	43.9	44.9	49.8	54.9	59.5
At Age 60	15.1	15.5	17.5	19.8	22.0
At Age 65	12.0	12.4	14.1	16.0	17.9

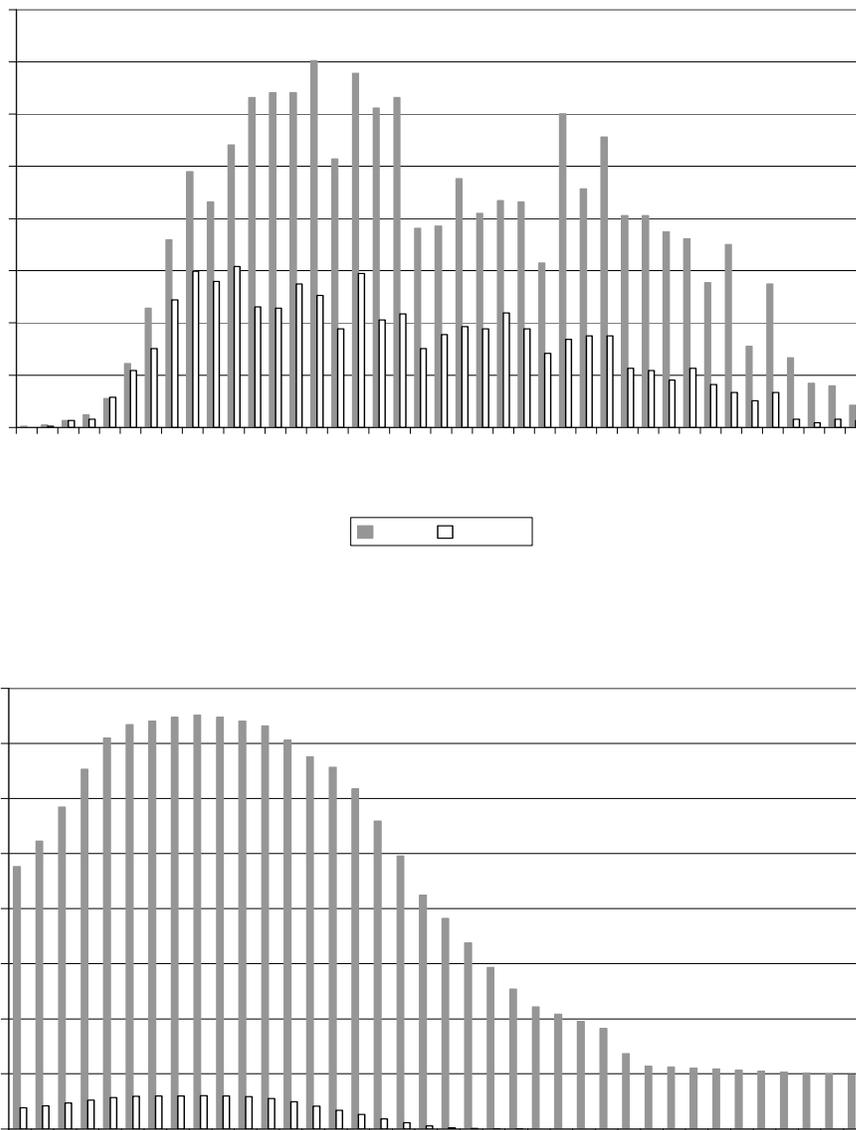
Projected changes in life expectancy are very important as they impact how long retirees will receive their pensions and thus the amount and timing of pension costs. Mortality data and assumptions for the general Gambian population are used in this round of simulations. However, as a closed group, the public service very likely has greater life expectancy than that of the general population. This is often the case in developing countries where living conditions for civil servants are notably better than for the majority of the population. If that is also the case in The Gambia, the projected system costs may be underestimated.

**System-Specific Assumptions.** Active employees and old age pensioners are modeled by tracking each age and gender cohort over time, using the initial distributions of system participants by age and gender, the assumed hiring policy for active members, retirement probabilities and mortality rates.

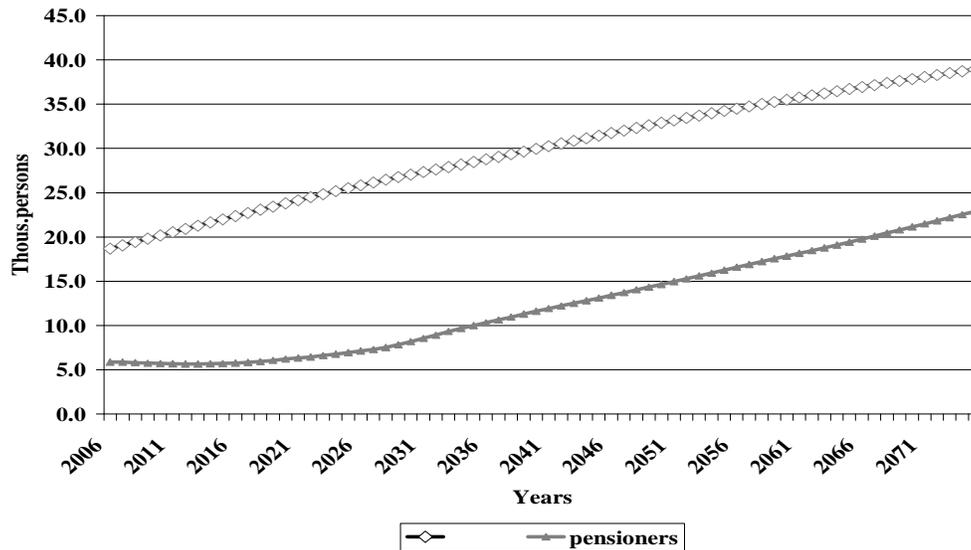
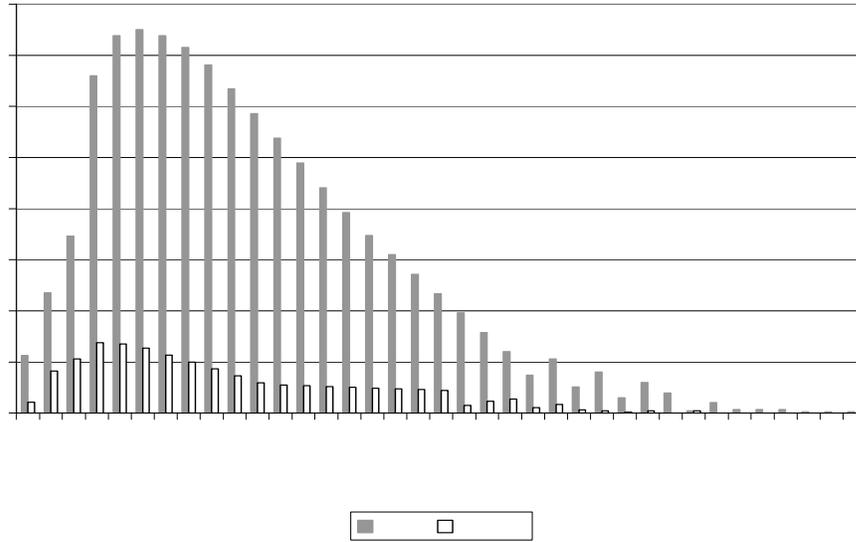
The number of employed with the public service is assumed to grow in line with population growth, so the size of public service remains stable at 1.2% of population. Other hiring policy variants – short- as well as long-term – can be examined in further simulations. The current age

distribution of civil servants is derived from the PMO database (Figure 26). Age and gender composition of uniformed services had to be assumed (Figure 27) because the PMO database does not capture that part of public service and the Treasure database which covers all employees does not have information on age and gender. Assumptions were made based on our discussions with the Multi-Sectoral Task Force.

**Figure 28: Number of Civil Service Employees by Age and Gender, 2006**



**Figure 30: Estimated Number of Pensioners by Age and Gender for 2006**



Source: World Bank PROST estimates.

Benefits are calculated each year by applying assumed indexation policy to post-retirement pensions and adding entry pensions of new retirees. As mentioned in Section II, two extreme sets of assumptions are used with respect to indexation policy in the base case to estimate a possible range for benefits fluctuations if the existing unpredictable discretionary policy continues: (a) no indexation, and (b) full indexation to prices. Entry pensions for new retirees are modeled by applying the benefit formula currently set by law (in the baseline scenario) or adjusted (in the proposed reform scenarios) to projected individuals' wages and years of service at retirement. Everybody is assumed to choose maximum commutation and a reduced pension. The projected average replacement rates are presented and discussed in Section II (baseline projections) and Section III (reforms).

Benefits other than old-age retirement are modeled in an aggregated way as other expenses. These include (i) gratuities to members with a length of service less than 10 years; (ii) gratuities to contractors; (iii) gratuities to survivors; (iv) pensions paid to teachers in non-government schools whose salaries are paid by NGOs themselves (not from the Government budget), but pensions are paid by the Government. Together, these benefits amount to about 10% of total pension disbursements and are projected to remain at the same level through the projection period. No administrative costs are assumed to be borne by the system. Since the current system is non-contributory (the liabilities uniquely financed by the central budget), no revenues are modeled in the baseline scenario.

## APPENDIX 4: OVERVIEW OF PROST 2006<sup>30</sup>

The model consists of an input workbook and five output modules. On the input side, the user provides country specific data on demographic, economic and pension system related parameters and assumptions about their behavior in the future. This information is entered in the **input file** with six embedded worksheets:

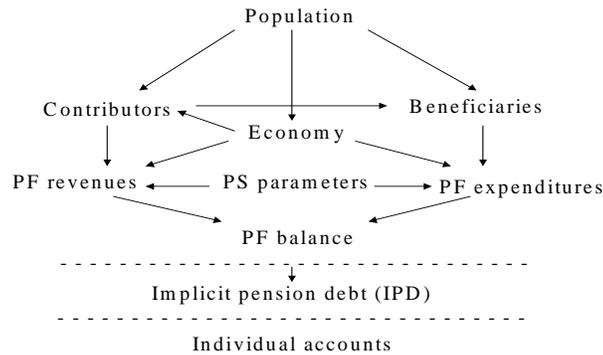
<i>General</i>	Economic variables (GDP and wage growth, inflation, interest rate), non age-specific pension system parameters (pension fund balance and benefit expenditure in the base year, retirement age, contribution rate, pension indexation rules, etc.) and some demographic variables;
<i>Population</i>	Base year population by age and gender along with age-specific fertility and mortality rates and immigration information.
<i>Labor</i>	Age and gender specific labor force participation and unemployment rates as well as distribution of wages and old age pensions across age and gender cohorts.
<i>Pension</i>	Age and gender specific information about pension system contributors, beneficiaries, coverage and retirement rates, average years of service at retirement and replacement rates for new beneficiaries.
<i>Profiles</i>	Information on representative individuals, such as gender, career path, individual wages, life expectancy, etc.
<i>Reform</i>	Parameters relevant to systemic reforms to be simulated (any combination of conventional PAYG, fully funded DC and notional DC pillars), including switching pattern, how the acquired rights will be paid, contribution rates, rules for annuitization and pension payout under DC schemes and replacement rates/benefit formula in a PAYG pillar, indexation, etc.

In the most simplified way the **general calculation scheme** can be summarized as follows:

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<sup>30</sup> This appendix has been taken and adopted with permission from Impavido, Bogomolova and Miralles-Pallares, An Assessment Of Reform Options For The Public Service Pension Fund In Uganda, Social Protection Discussion Paper, 2007.

## General Calculation Scheme



PROST follows single age/gender cohorts over time and generates population projections, which, combined with labor market assumptions, are used to forecast future numbers of contributors and beneficiaries. These in turn generate flows of revenues and expenditure. The model then projects fiscal balances and calculates the implicit pension debt. The required contribution rates and affordable replacement rates for zero pension fund balance in each year of the simulation period are also calculated. Finally, PROST produces outputs related to individuals – what an individual would contribute to the system and what he/she obtain under PAYG DB and multipillar schemes. This allows both intra- and intergenerational analysis.

Depending on the characteristics of the pension system and data availability, the user can choose the method for calculation of some of the variables. In particular, the number of contributors and beneficiaries can be computed in either “Stock” or “Flow” method. With the “Stock” method, for each year the stocks of contributors/beneficiaries are calculated first and then inflows (new contributors/beneficiaries) are derived as the changes of the stocks:

$$Inflow(a,t,g) = stock(a,t,g) - stock(a-1,t-1,g) + outflow(a,t,g)$$

With the “Flow” method, inflows are calculated first and then stocks are derived as previous year’s stocks in each age/gender cohort adjusted for the net inflow (inflow-outflow):

$$Stock(a,t,g) = stock(a-1,t-1,g) - outflow(a,t,g) + inflow(a,t,g)$$

where a = age, t = year, g = gender

As PROST keeps track of contribution years of service accrued by each cohort, the calculated number of new retirees – whatever method is used – is then adjusted so that the total length of service accrued by the cohort is equal to the total length of service claimed by the cohort at the time of retirement. After the number of new retirees is adjusted, the stock is recalculated using the “Flow” method.

The user can also choose how the benefit of new beneficiaries is specified - via benefit formula or via age and gender specific replacement rates.

As mentioned above, output produced by PROST is organized in five **output modules**. Each of the modules contains a number of Excel worksheets and a graphical summary on key output indicators:

<i>Population Projection</i>	Population projections and pyramids, life tables, life expectancy changes, population dependency rates, etc.
<i>Demographic Structure</i>	Labor force and employment projections, projections of contributors and beneficiaries, demographic structure of the pension system, and system dependency rates.
<i>Finances of Monopillar PAYG</i>	Macroeconomic trends, wage projections, pension benefit projections for the existing and new pensioners, revenue and expenditure of the pension system, required adjustments to contribution rates and replacement rates for zero current balance, and the implicit pension debt.
<i>Finances of Multipillar System</i>	Pension benefit projections for new and existing pensioners under each of the three pillars (conventional PAYG, notional PAYG, and funded DC), revenues and expenditure of both PAYG and funded pillars, implicit pension debt of the PAYG system after the reform, and results of the reform (compares benefit projections and financial standing under the monopillar PAYG and multipillar scenarios).
<i>Individual accounts</i>	Lifetime contributions and benefits and individual related summary statistics for up to six different individuals specified in the “Profiles” input sheet under PAYG system (statutory, with adjusted contribution rates and with adjusted benefits) and multipillar system (for those who switched to the multipillar system and those who remained in the PAYG system).

## APPENDIX 5: BENEFITS AND QUALIFYING CONDITIONS

	<u>Public Service Scheme</u>	<u>Federated Pension Scheme</u>	<u>National Provident Fund</u>
<b>Contributions</b>	none	19% of covered wages (basic wages)	③10% of wages by the Employer ③5% of covered wages by the Employee
Old Age	③ Accrual Rate: 2%/year for statutory staff, 1.5%/year for non-statutory staff ③ Indexation: Discretionary ③ Wage base for benefit determination: final 3 years salary. ③ Maximum pension = 2/3 of final wage base	③ Accrual Rate: 2%/year ③ Indexation: Discretionary ③ Wage base: final basic salary, excluding allowances. ③ Maximum pension = 2/3 of final wage base	Lump-sum distribution of account accumulation
	Commutation (gratuity): 25% of benefit—12.5 * annual pension emolument received up front.	Commutation: up to 25% of benefit—12.5 * annual pension emolument received up front	
	Early retirement provisions: No penalty applied for early retirement.		
Qualifying Conditions	10 years vesting Normal Retirement age: 60 (men and women) Minimum age for receiving early retirement benefits: 45	10 years vesting Retirement age: 60 (men and women)	
Permanent Disability Benefits	Same vesting period and accrued pension as for old-age		
Survivorship from death in discharge of duty	③ Benefit for spouse: 10/60 of annual pensionable emoluments at data of injury ③ Benefit for children: 1/8 of annual pensionable emoluments at data of injury		
Voluntary Widows' and Orphans' Pensions Scheme	Contributory (4.5% of basic wage), only for men. Balance is paid to survivors or withdrawn as a lumpsum at retirement (whichever happens first)		
Benefit		Lump sum = 5* the calculated amount of a full pension.	
Qualifying Conditions		For those with 5 years contributions.	

