

**AN ASSESSMENT OF  
GOVERNMENT OF INDIA'S  
PENSIONARY LIABILITY**

**MINISTRY OF FINANCE  
GOVERNMENT OF INDIA**

June, 2001

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Government of India,  
North Block,  
New Delhi.

Dated : 25<sup>th</sup> June, 2001

Subject: Submission of the Report of the Working Group on  
Assessment of Pensionary Liability of the Government of India.

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Dear Sir,

I have great pleasure in submitting Report of the Working Group set up to assess the pensionary liability of the Government over short and medium terms.

2. On behalf of the Working Group, I would like to place on record my sincere thanks to the individual departments represented in the Group for the cooperation extended by them in the preparation and finalisation of this Report. I also take this opportunity to acknowledge the invaluable efforts put in by Shri Siddharth Sharma and Shri Saugata Bhattacharya in completing this work.

Yours faithfully,

**(A.M. Sehgal)**  
Chairman

## TABLE OF CONTENTS

	<u>PAGE</u>
I TERMS OF REFERENCE	1
II EXECUTIVE SUMMARY	3
III INTRODUCTION	5
IV PRESENT-DAY EXPENDITURE TRENDS	8
V ESTIMATION OF PENSIONARY LIABILITY OVER THE SHORT AND MEDIUM TERM	13
VI FISCAL STRESSES OF THE CURRENT PENSION SYSTEM	16
VII TRANSITION FROM AN UNFUNDED TO A FUNDED SYSTEM	19
VIII PROJECTIONS : AN INFORMED CRITIQUE	21
IX INFORMATION REQUIREMENTS RELATING TO ESTABLISHMENT OF A PREDICTIVE MODEL OF PENSION EXPENDITURE	26
X CONCLUSION AND RECOMMENDATIONS	30
XI APPENDICES	33
XII EXCERPTS OF DATA RECEIVED FROM VARIOUS DEPARTMENTS	50

## I. TERMS OF REFERENCE

1.1 A Working Group on Pension Liabilities was constituted by the Union Government vide O.M. dated 21 October, 1999 ( placed at annexure ) with the following composition :

- |   |          |
|---|----------|
| ( a ) Shri A.M. Sehgal,<br>Controller General of Accounts.  | Chairman |
| ( b ) Shri Savadi,<br>Chief Controller of Defence<br>Accounts (Pensions).<br><i>(Later replaced by Shri V.K. Misra)</i>   | Member   |
| ( c ) Shri S.W. Oak,<br>Chief Controller (Pensions).  | Member   |
| ( d ) Smt. Deepali Khanna, Executive Director<br>(Budget), Railway Board.<br><i>(Later replaced by Smt Meena Agarwal)</i> | Member   |
| ( e ) Shri K.S. Menon, Financial<br>Adviser (Posts).  | Member   |
| ( f ) Smt. Annie Moraes, Deputy Director,<br>General (Budget), Department of Telecom.                                     | Member   |
| ( g ) Smt. Ganga Murthy, Director (Pensions),<br>Department of Pension.   | Member   |
| ( h ) Shri S.C.Pandey, Director (Budget),<br>Department of Economic Affairs.  | Member   |
| ( i ) Dr. Urjit Patel, Consultant,<br>Department of Economic Affairs.   | Convenor |

1.2 The Working Group was to make a scientific and comprehensive assessment of the Government's liability arising from pension payments to current and future retirees. The terms of reference of the Working Group were as under:-

- (a) to estimate likely expenditure on the disbursement of pensionary benefits of government servants in the short/medium term; and
- (b) recommend appropriate formats/information system to facilitate accurate assessment of the pensionary liability in future.

1.3 Since a system analogous to Pay-as-you-go (PAYG) is presently used for making budget estimation of the pension payments, prediction of future payments becomes critical for facilitating fiscal planning, especially in the short and medium term. The need for such a study is underscored by the slippages which have been occurring between Budget Estimates (B.E.) and Revised Estimates (R.E.) of pension outgoes of various Departments in recent years. This exercise is also important for determining the total outstanding (stock) liability (funded and unfunded) of the government arising from pensionary liability in respect of retirees. In sum, the Working Group was set up to make a comprehensive assessment of the pension liability of the union government.

## II. EXECUTIVE SUMMARY

- 2.1 Despite vigorous and repeated attempts by the concerned Ministries / Departments to procure and collate as much relevant data as possible, a consensus opinion ultimately emerged that the existing databases were extremely limited and had large gaps in relation to both existing pensioners and the new retirees.
- 2.2 After extensive debates on the suitability of various options for implementing the first part of the ToR, the WG decided that a simple extrapolation was the best option in the face of the mentioned inadequacies and unreliability of data. Computations based on pension outlays estimated for Fiscal Year (FY) 2000-01 yielded three streams of pension outlays for the period FY 2000-01 to 2009-10 based on assumed annual inflation rates of 6, 8 and 10 percent, respectively.
- 2.3 In the light of these findings, the future medium-term impact of the GOI's pension liability, in the context of the overall macroeconomic and fiscal situation, may not be as significant as is generally supposed. The impact on some of the commercial Departments, especially Railways, will, however, be large, given their limited resources and operating margins. **It is important to note, moreover, that the projections are merely a base scenario and have the potential of significant enhancement with the incorporation of factors like the impact of a future Central Pay Commission.**
- 2.4 The WG is of the opinion that modern methods of estimating pension liabilities based on actuarial techniques need to be used for accurate estimates in the future. With this objective in mind, implementing the second part of the ToR became even more critical. The WG has appended a questionnaire format to be used in upgrading the databases and information systems on pensioners and employees. This is a task of significant magnitude and its completion is likely to require a long time frame.
- 2.5 As an interim measure, the WG recommends the immediate institution of a sample survey of existing pensioners and employees with a view to acquiring more reliable and accurate information of the profiles of pensioners and their pension payments.

**2.6**            **The WG also recommends a transition to a funded system of pension payments for new employees, as well as the provision of appropriate incentives for encouraging existing employees to move to a (partial) Defined Contribution system.** It may need to be stressed, though, that transitioning to a funded system for new employees will not *per se* reduce the GOI's existing pension liability. The incremental liability of new entrants to the civil services can be mitigated by migrating these employees to a Defined Contribution (DC) mechanism (either full or partial) and there is not full neutralization of this through a salary increase. The advantage of a funded system for pension is to make transparent and explicit the GOI's pension liability, thereby enabling better fiscal planning.

**2.7**            The WG feels that one of the strengths of this Report is to clarify and elaborate on many of the current pension systems and mechanisms for disbursements, with the associated definitional and computational complexities, as well as the inclusion of a detailed historical profile of the GOI's pension outlays.

### **III. INTRODUCTION**

The attention of the Government in recent years has focused on fiscal consolidation, both at the Centre and States, through a variety of measures aimed at both the revenue and expenditure sides, so as to bring about a reduction in the fiscal and revenue deficits. It is also acknowledged that progress in fiscal consolidation involves not only rationalization of government expenditure but also a shift in its focus away from the non-plan, non-developmental activities to growth inducing, asset creating activities. The budget for 1999-2000 charted out a path of fiscal correction over the medium term with an aim of reducing the fiscal deficit to below 2% of GDP over a period of next four years and eventually eliminating the revenue deficit altogether.

The entire gamut of the government's non-plan, non-developmental expenditure has accordingly come under close scrutiny. It is in this context that pension reforms of government employees acquire great significance. Wages and salaries, health benefits and pension payments comprise major components of revenue expenditure of the government. Of these, health care and pension benefits are both unfunded, and worse, involve continuing expenditures even after the employee retires from service or dies. Ideally, reforms in these benefit schemes should proceed alongside civil service reform. However, given the complexities of the latter and the urgency of fiscal consolidation, it may be necessary to tackle the former, especially pension reforms, first.

#### Overview of the labour market

3.1 As per 1991 census, approximately 75% of India's population lives in rural areas. The per capita income of the populace stood at Rs.13193 (at 1997-98 price levels).

The 1991 census estimated the Indian labour force to comprise of 314 million workers. Of these, 15.2% were regular salaried employees, 53% were self-employed and another 31% were casual /contract labour.

The Central Government departments (including P&T, Defence and Railways), States and UT Governments employed a total work force of approximately 11.13 million thus accounting for 23% of the total salaried employees in India. They are eligible for the full range of government's

pensionary benefits including a non-contributory, indexed, defined benefit pension scheme.

Another 49% of the total salaried workers are covered by a mandatory Employees' Provident Fund (EPF) and Employees' Pension Scheme (EPS).

### 3.2. The present pensionary structure for Government employees.

There are three main components of retirement benefits currently provided to Central Government employees:-

(a) **a lump-sum Gratuity**, based upon number of years of service. This is governed by the Payment of Gratuity Act 1972. The gratuity is based upon the length of service rendered by an employee and the last pay drawn ; and is paid as a lump-sum amount on retirement/death, subject to a ceiling (the present ceiling being Rs.3.5 lakhs).

(b) **a General Provident Fund**, to which employees contribute, also provides for a lump-sum payment on retirement. This is a Defined Contribution (DC) scheme. Each government employee is required to contribute a minimum of 6% of basic pay to the General Provident Fund (GPF), with no matching contributions from the government. The amounts contributed by the employees are retained in government's cash balance and carry a rate of interest, which is fixed by the government from time to time.

(c) **An unfunded Defined Benefit pension**, which is paid from current revenues. This is the most significant retirement benefit. The maximum "Replacement Rate" (the ratio of income from retirement benefits to pre-retirement income, after mandatory deductions) is 50% of the average salary during last ten months of service. There is also a maximum limit on the absolute amount of pension, which is 50% of highest pay in government. The pension benefits are paid out of current revenues, in the case of the non-commercial departments. As per present Government policy, pensions are indexed not only to inflation but also to changes in the salary structure of serving employees. In the recent past,

substantial pay increases (without corresponding reductions in number of employees or enhancement of productivity) have sharply increased the fiscal burden of pensions payments at all levels of government. This benefit, moreover, is shifted to a family pension after the death of a retiree.

3.3 An important point to note is that the government pension system in India is not a true Pay-As-You-Go (PAYG) system, as conventionally defined. In a true PAYG system, benefits to retirees are (at least partially) funded through contributions by existing employees and/or payroll taxes on those working. Government employees in India do not contribute to the fund of their basic pension benefits, which are met solely from government's current revenues, even for Railways and Telecom which are commercial enterprises.

#### IV PRESENT-DAY EXPENDITURE TRENDS:

4.1 There are five major sub-categories of Central Government pensions relating to (i) Civil, (ii) Defence, (iii) Postal, (iv) Railways and (v) Telecom.

4.2 Over 50 per cent of pension payments of central government pertain to Defence employees, which represents the single most important sub-category. Being commercial departments, Railways and Telecom are required to establish their own dedicated Pension Funds for meeting their respective liabilities. However, it appears from the information furnished to the Working Group that Railways alone have established such a Fund; and even that fund is financed largely from current revenues and does not fully meet the burden of future pensions.

4.3 The pensionary expenditure of these two departments (i.e., Railways and Telecom) is *not* met from the Consolidated Fund of India. However, it would be appropriate to factor in the pension liabilities of these two departments for the purpose of arriving at a more reliable picture of GOI's pension liability, as employees of these departments are also government servants (even though the Department of Telecom has been corporatised, pay and pension of its employees has been fully protected by the government) and their pension liability is ultimately a sovereign obligation.

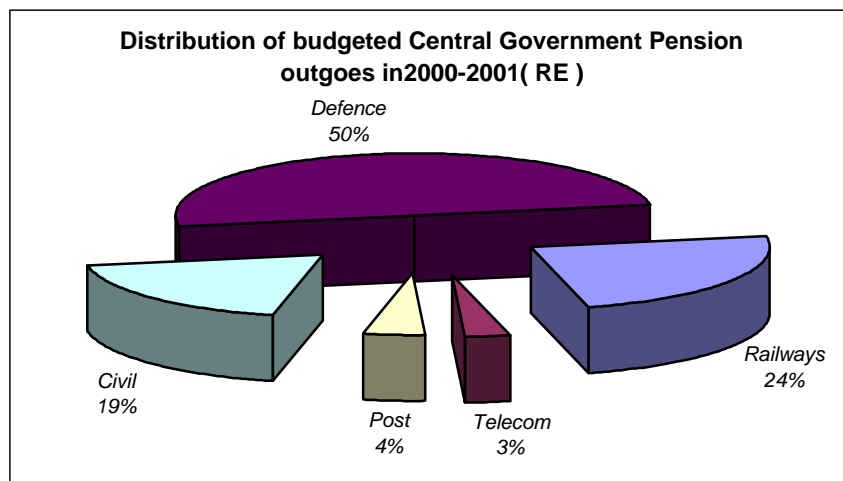


Figure 1

4.4 To illustrate the magnitude of pension payments of Central Government, it would be pertinent to mention that as at the end of March, 1998, the total number of Central Government employees was 5.2 million while the number of pensioners was 3.54 million thus giving us an overall dependency ratio of approximately 67%. Central Government pension payments for the financial

year 2000-01 (excluding Railways and Telecom) were Rs.15375 crores (0.70% of GDP)<sup>1</sup>, compared to expenditure of Rs.66387 crores on economic, general and social services. If the allocation for the Railways and Department of Telecom were also taken into account, total budgeted pension liability of the GOI for 2000-01 would increase to Rs.21117 crores or 0.96% of GDP<sup>2</sup> (See Figure 2 below ). As would be apparent, these pension outgoes are an enormous drain on Central Government revenues and will only keep increasing over a period of time, as these are indexed not only to (i) inflation but also (ii) to revision of salary structure of serving employees. Increases in longevity of the general population will further compound the problem in years to come.

**Central Government Pension as a Percentage of GDP**

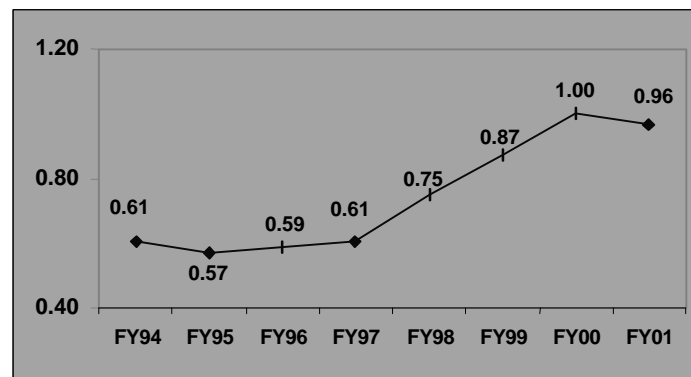


Figure 2

- 4.5. It would be seen from Table-1, that the pension expenditure of the GOI (including Telecom and Railways) has gone up by approximately six times over a 10-year period i.e., from Rs.3272 crores in F.Y.1990-91 to Rs.19446 crores in F.Y. 1999-2000. For the financial year 2000-01, pension liability of the above departments is likely to be Rs21117 crores (i.e., an increase of approximately Rs.1700 crores in one year).

<sup>1</sup> GDP at Market prices for 2000-01 ( RE Figures ) imputed from latest budget documents.

<sup>2</sup> Dip in share of pensions as a percentage of GDP in Fiscal Year 2000-2001 is due to a substantial downward revision in estimates of pension outgo by the Department of Defence.

Table 1

<b>Pension Expenditure over the Years</b>			
MINISTRIES	1990-91	1996-97	1999-00
Posts	150	384	681
Civil	481	1425	3286
Defence	1670	3683	11024
Railways	886	2509	4018
Telecom	85	252	437
<b>TOTAL</b>	<b>3272</b>	<b>8253</b>	<b>19446</b>

#### **4.6. Impact of Fifth Central Pay Commission (FCPC)**

Generous recommendations of the FCPC have significantly contributed to the sharp rise in pension payments. The increases were implemented retrospective from 1996-97, and the effects became manifest from 1997-98 onwards.

The FCPC recommendations changed the pension structure of the civil service. It was a wide ranging restructuring, much more radical than the recommendations of the Fourth CPC. The following were the major changes:

- a. **Pension levels were linked to salaries of serving employees thus, in effect, ushering in a 'one-rank, one-pension' regime.**
- b. These linkages were extended to all existing pensioners, irrespective of date of retirement.
- c. The basic pension amounts were given full indexation to inflation.
- d. **Commutable amounts were increased from the existing 33 percent to 40 percent.**

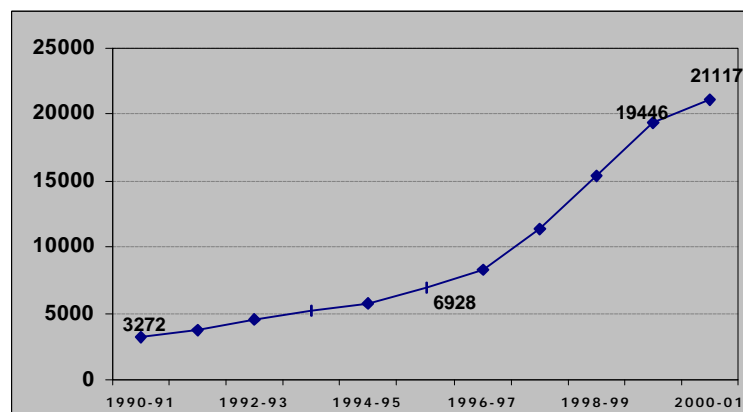
4.7. As a result of these changes, the Central Government's budgetary expenditure on pensions for all the departments has increased from Rs. 11,375 crores in the FY 1997-98 to Rs. 21,117 crores (RE) in FY 2000-01, i.e., an increase of almost 86 percent over three years. **The arrears arising from implementation of the FCPC recommendations are still being paid in FY 2000-01.** Table 2 below gives a department-wise view of the massive increased pension outlays in the four years following the FCPC decision.

**Table 2 Pension Expenditure post- FCPC implementation**  
(In crores of Rupees)

	1997-98	1998-99	1999-00	2000-01	2001-02
	Actuals	Actuals	Actuals	R.E.	B.E
Posts	558	677	681	815	835
Civil	1948	2803	3286	4021	4320
Defence	4947	7270	11024	10539	10770
Railways	3509	4144	4018	5167	5800
Telecom	413	452	437	575	685
<b>TOTAL</b>	<b>11375</b>	<b>15346</b>	<b>19446</b>	<b>21117</b>	<b>22410</b>

4.8. Figure 3 below shows the sharp rise in absolute pension outlays post FCPC implementation as compared to the trend increase over 1990-91 to 1996-97.

**Figure 3. Pension outlay of the central Govt. (In Crores of Rupees)**



4.9. It would be instructive to note that **the FCPC had assessed the financial implication of its recommendations on pension and family pension to be of the order of Rs. 1,170 crores per annum**, which corresponds to an increase of Rs 3,510 crores over the three years FY 1997-98 to 2000-01. **Pension outlays over this period actually increased from Rs 11,375 crores to Rs 21,117 crores (RE FY 2000-01).** The increase in Dearness Relief over the corresponding years has been of the order of only 22 percent. Factoring this increase on the 1997-98 pension outlay level, **the presumed actual payment of arrears is of the order of Rs 7,239 crores.** The point of this exercise, imprecise as the estimates may be, is to highlight the sheer uncertainty about estimates, even by a body as august as the FCPC.

4.10 Post- FCPC recommendation implementation, if the income flows to a pensioner from various sources such as General Provident Fund, Gratuity and pensions are combined together, it is estimated **that the Replacement Rate (ratio of pre-retirement income to post retirement income) for Government employees may be close to or even over 100 percent, a high figure even by international standards.**

## V. ESTIMATION OF PENSIONARY LIABILITY OVER THE SHORT AND MEDIUM TERM.

5.1 A proper estimation of the pensionary liability of Government over the medium term is constrained by extremely limited pensionary data, currently available in all the five accounting formations of the GOI.

### 5.2 METHODOLOGY OF ESTIMATION OF PENSIONARY LIABILITY

Mortality tables of L.I.C can be used for estimating number of likely casualties in a year. This would enable determining the number of cases where pension would get converted to family pension or there would be discontinuance of family pension altogether.

As the government is presently neutralizing full impact of inflation, it is possible to work out incremental expenditure by linking it to inflation rates. The increments to the average pension payments indexed to inflation can be estimated through an acceptable forecast of inflation rates and are likely to be the least problematic of all the given parameters necessary for setting up a predictive model.

### 5.3 Constraints in Projecting Pension Outlays

#### 5.3.1 Inadequacy and unreliability of data

The quality of forecasts are only as good as the underlying data. As must be evident from the preceding sections and descriptions of the quality and procedures of pensionary data collection and collation, there exist many inadequacies in the data sets which were used by the WG to forecast liabilities. Chapter-VIII contains a more detailed critique of the inadequacies of data.

5.3.2 **The inadequacy and incompleteness of data is further underlined by the slippages evidenced between the Budgeted and Revised Estimates of pension outgoes of the various Departments** (Table 3 below and Annexure – II). The WG feels that these discrepancies were underscored by the frequent, and often large, changes in the Revised Estimates for FY 2000-01 over the course of the year. Although these discrepancies have increased sharply since 1997-98, and may have arisen, in part, due to the impact of recommendations of the Fifth Pay Commission, proper records and data of pensioners and employees due to retire would have facilitated more accurate

forecasting of pension outgoes. These, combined with the uncertainty over the FCPC arrears, make the estimated base of projections in 2000-01 less than robust.

**TABLE 3 Divergence between Budget Estimates and Actuals (in Crores of Rupees)**

	Defence		Civil		Railways		Post		Telecom	
	BE	Actuals	BE	Actuals	BE	Actuals	BE	Actuals	BE	Actuals
1990-91	1500	1670	503	480	835	886	115	150	150	85
1991-92	1750	1840	552	583	963	1040	135	182	110	103
1992-93	1780	2313	602	701	1144	1251	177	204	130	117
1993-94	2379	2531	745	818	1516	1488	204	227	145	142
1994-95	2706	2704	910	934	1700	1686	240	253	165	156
1995-96	3082	3197	998	1103	1970	2117	260	312	185	199
1996-97	3300	3683	1220	1425	2350	2509	318	384	215	252
1997-98	3715	4947	1550	1948	2500	3509	407	558	310	413
1998-99	5923	7270	1432	2803	2300	4144	364	677	260	452
1999-00	7349	11024	2800	3286	3300	4018	514	681	350	437
2000-01	12,000	10,539*	3,865	4,021*	5,314	5,167*	850	815*	570	575*

**Note:** \* denotes Revised Estimates available for FY 2000-01.

### 5.3.2 Sub-optimal Estimation Techniques

If reliable estimates are to be formulated, actuarial calculations would have to be made after taking into account the above factors. Non-availability of age-cohort wise data made the use of actuarial techniques unsuitable for the present forecasting exercise<sup>3</sup>. However, the WG would like to stress that estimation exercises should move rapidly towards these techniques in order to increase the accuracy of future projections of pension liabilities. The likely availability of more accurate mortality tables following the entry of insurance companies in India, together with the improvement in the government's pension statistics, will make the implementation of these techniques a fruitful exercise.

5.4 To obviate these shortcomings, the Working Group decided to base its estimation of pensionary liability for future years on a set of assumptions, which are listed below:-

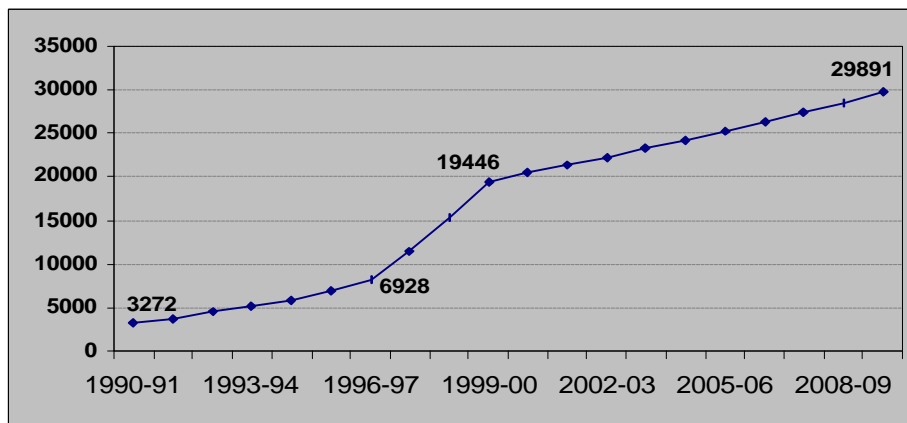
- (a) basic pension of a retiree would not change. In other words, **impact of any future revision of salary structure has been ignored.**

<sup>3</sup> The current mortality tables available are also considered to be fairly unreflective of Indian mortality

- (b) the departments were asked to estimate their pensionary liabilities at inflation rates of 6%, 8% and 10%.
- (c) in the absence of any reliable data, the departments were asked to assume an attrition rate of 5% p.a. amongst retirees and 10% p.a. amongst family pensioners. In other words, it is assumed that on an average, Pension liability of the government would continue for 30 years after retirement (of which 20 years would be on account of superannuation pension, and the remaining 10 years on account of family pension)<sup>4</sup>.
- (d) full neutralization of inflation.
- (e) **provisions relating to GPF, DCRG, leave encashment etc will remain unchanged over the medium term.**
- (f) the departments were also asked to make suitable adjustments on account of the one-time effect of arrear payments, which are included in their current outlays.

**5.5 It is estimated that the pensionary liability of the GOI would rise to Rs.29,891 crores (for all departments, including Telecom and Railways) in the FY 2009-10 given an annual inflation rate of 6% and subject to the other assumptions outlined above ( See Figure 4 below ). At an inflation rate of 10% p.a. the liability would increase to Rs.33,558 crores.**

Figure 4  
Trends of Pension Outlays\*



\*Including Projections FY 2000-01 to FY 2009-10 at an inflation rate of 6% per annum (In Crores of Rupees)

**5.6 Detailed Projections for all departments for the financial year 2000-01 to 2009-10 are placed at Annexure I.**

<sup>4</sup> The department of Defence, however, assumes an attrition rate of 2.5% per annum for its service and family pensioners.

## VI. FISCAL STRESSES OF THE CURRENT PENSION SYSTEM

6.1 The rate of increase in the pensionary liability of the Government over the years clearly points to an element of fiscal stress. This is mainly on account of two reasons:-

- a) Firstly, the current ratio of pensioners to employees is extremely high. This is true even for Central Government employees. However, an important point to note here is that the government pension system in India is not a true PAYG system, as conventionally defined. In a true PAYG system, benefits to retirees are (at least partially) funded through contributions by existing employees and/or payroll taxes on those working. Government employees in India do not contribute in any way to the funding of their retirement benefits which are met solely from government's current revenues excepting for (i) Railways and (ii) Telecom, which are commercial enterprises. Even in respect of Railways and Telecom pension payments of their staff are a sovereign obligation, as they continue to be Government servants. As such, these have also to be taken into account to convey a realistic representation of the full magnitude of government's pension liability. It would be pertinent to note that pension expenditure expressed as a percentage of tax revenues of the Centre has constantly been on the rise and stood at 14.6% of the net tax revenues accruing to the Central Government during 2000-01 (Figures - 5 and 6 refer).

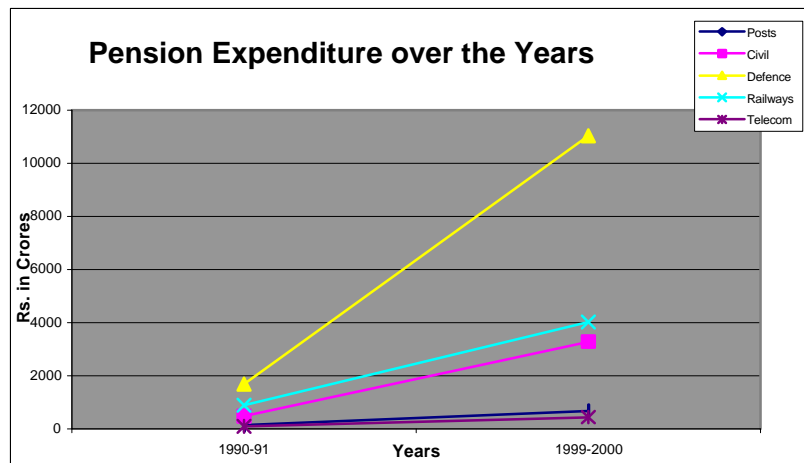


Figure 5

## Pension Payments as percent of Tax Revenues

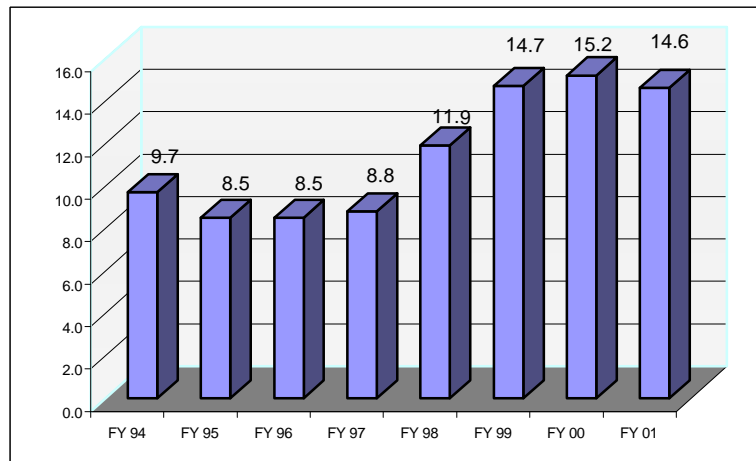


Figure 6

- b) Secondly, attention of the Working Group was also drawn to the Project OASIS Report which clearly stated that there is a potential contingent liability that the Central Government may incur as a result of the Employees' Pension Scheme (EPS) introduced in 1995 as part of the Employees' Provident Fund Scheme (EPFS) for the private sector employees. The EPFS was introduced in 1952 and had 23.18 million Members (7.38 percent of the labour force) in March 1997. EPFS is a Defined Contribution (DC) scheme (total contributions range from 20 to 24 percent of wages upto Rs.5000 per month depending on the industry, with employees paying between 10 and 12 percent). The 1995 modification has, however, made it a mixed Defined Contribution (DC)– Defined Benefits (DB) Scheme. The EPS has a maximum Replacement Rate of 50 percent. The benefits are not inflation or wage indexed. However, the contributions and returns on investments of the EPS are likely to be inadequate to meet the Defined Benefit obligations of the government in the future. Patel (1997)<sup>5</sup> provides evidence that would seem to indicate that the EPS is underfunded, and is likely to become a significant liability for the government in the long run. Therefore, while there is a strong case for reforming the whole EPFS scheme, mainly in areas of investment policies and performance and its administration, the

main concern here is with the EPS component of the scheme.

**6.2 Further evidence of the fiscal stress of the present system is to be had from the rising trend of pension expenditure of GOI which stood at Rs.3272 crores in 1990-91 and has, in a span of 10 years, gone up by approximately six times standing at Rs.19,446 crores in 1999-2000.**

**6.3 As evident from the projections for financial years 2000-01 to 2009-10, this would go up further primarily on account of:**

- a. Increased life expectancy;
- b. Indexation of pension to the wage of serving employees;
- c. Full neutralization of inflation linked to cost of living index.
- d. Higher rate of retirement in the next 10 years because of a fifty-seven percent increase in employment over the period 1957-71<sup>6</sup>;
- e. Decrease in spread of salaries by successive Pay Commissions resulting in increase in average pension;
- f. Increase in promotional avenues leading to increase in final salaries and hence in pensions;
- g. Revision of pension of past pensioners in line with successive Pay Commission recommendations.

**6.4. Of all the factors enumerated above, the one factor that would possibly impact hardest on future increases in the pensionary liability of the Union Government, and consequently on the validity of these projections, would be the constitution of a fresh Pay Commission.** As of now, the historical trend has been that successive Pay Commissions are set up once every 10 years – were this to hold true for future years then there would definitely be a Pay Commission award during the time horizon covered by the working group in the formulation of its projections.

**6.5 The financial implications of such award cannot obviously be estimated at the moment but if past experience is any indicator, and specially in the light of the financial after-shocks of the Fifth Pay**

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<sup>5</sup> Patel U.R. 1997, "Aspects of Pension Fund Reform; Lessons for India", Economic and Political Weekly, September 20, pp 2395-2402

<sup>6</sup> Fifth Pay Commission Report, III<sup>rd</sup> Volume, Page 1788

**Commission award, the impact may well be sizeable and result in a substantial upward revision of the pension projections being currently made.**

## **VII. TRANSITION FROM AN UNFUNDED TO A FUNDED SYSTEM**

7.1 It is essential to ensure that a country's social security system is consistent with macro-economic stability in general and fiscal sustainability in particular. The evidence against the fiscal sustainability of the current retirement benefits for government employees is prima-facie strong. Internationally, the trend is towards unification of systems, i.e., government employees being integrated into the system for the rest of the population as the US has done. The experience with reform in several countries involves introducing significant pre-funded elements in provision of pensions for the general population (as well as government employees in some) in a move away from PAYG systems. There is also a simultaneous use of modern investment management techniques to obtain a reasonable real rate of return (net of investment management fees) on accumulated balances. The practice of guaranteeing returns on provident funds or pension balances is being abandoned as being inconsistent with market determined returns.

7.2 A critical question is the transition to a funded, professionally managed pension system. In a true PAYG system, taxpayers, during the transition period, are taxed twice: once to provide for their own retirement, and again to finance pensions of those who worked all their lives in the PAYG regime. But international experience in pension reform shows that transition, even in a PAYG system, can be managed in different ways. Its pace can be varied by setting cut-off ages for workers' participation; at one extreme, only new entrants to the workforce are allowed to opt out of the state (PAYG) system. Or a PAYG pension could be combined with a funded one. Considerations such as these determine the cost of the transition. Then that cost, small or large, can be financed in different ways-out of taxes (in which case the burden falls on today's workers) or out of extra government borrowing (which spreads the burden to more distant generations, albeit at the cost of eroding the added-saving benefit). In any event, the transition is not insuperable.

7.3 There are three distinct set of issues that need to be addressed to successfully transition to funded pension systems. The first set of issues is about fostering a climate for change - public information and the public's financial acumen, the political economy and the necessary initial conditions for reform such as the state of the capital markets. These also cover analysis of the macroeconomics of transition to a funded pension system, and the drafting of pension reform legislation. The second set of issues concern the design of the pension system, including coverage of reform and to what extent it should be mandatory or voluntary, the structure of the various components of the pension system like disability benefits, family pensions, premature withdrawals, and the structure of annuities. Taxation of funded pensions is also a crucial issue. The third set of issues concerns administrative, regulatory and supervisory aspects. Arguments for and against restricting portfolio options of pension funds and options for managing public-sector funds are part of this set of issues.

7.4. A detailed examination of the issues highlighted above is, of course, beyond the purview of the Working Group. **It is, however, felt that the government should be encouraged to switch from the existing PAYG-like system to a funded scheme of pension payments for new employees, as well as encourage the migration of existing employees to partial Defined Contribution (DC) schemes through suitable incentives.** It should be stressed, however, that pre-funding pension liabilities from the general budget does not *per se* reduce the quantum of the liability. *Prima facie*, there will be an adverse impact on the government's fiscal position in the short term in the process of establishing the pension fund. This fiscal impact can only be mitigated for the incremental liability of new employees with the introduction of a Defined Contribution (DC) component from these employees (partial or total). The greater the magnitude of the DC component in the pension package of the new employees, the lower will be the incremental impact. There should also be no corresponding increases in employees' salary levels to compensate them for this contribution. For purposes of illustration, the international experience of pension reform spread over several countries is placed at Annexure-IV.

## VIII. PROJECTIONS : AN INFORMED CRITIQUE

8.1 Given the enumeration of problems in the previous sub-sections, the WG has serious reservations that the projections of pension outlays in this Report are extremely unreliable. It is the intention of this section and the next to make explicit the nature and causes of these shortcomings, and assess the credibility of each of the assumptions that drive the projections. In order to separate the cause and effects of changes in pension outlays, the following aspects of pension payments are addressed:

1. To assess the congruence of pension projections provided by the individual departments with the trends observed during the two previous decades, 1980-81 to 2000-01.
2. To understand the dynamics and causes of these observed movements.
3. To assess the impact of alternative scenarios that are likely to arise in the pension liabilities of the government (conduct a sensitivity analysis).

8.2 The inter-decadal comparison of key trends through the decades of the eighties and nineties and the projections over 2000-01 to 2009-10 (summarised in Tables 4a and b below) serves to highlight many of the unrealistic aspects of the pension projections provided by many of the five Departments. These can be grouped into two separate (and sequential) sets of concerns.

8.3. The first set relate to the obvious dissimilarities in the observed trend growth of pension outlays in the two decades of the eighties and nineties, compared to the projected growth rates in the decade of 2000-09. Columns 4 and 5 in Table 4a below show an observed average increase of around 15 percent per annum for all five departments in the nineteen nineties (not taking into account the abnormally high increases in the post FCPC years). In stark contrast, the increase in pension outlays projected for the current decade is four percent per annum on average. The increases in the defence and civil components, which together accounts for about three quarters of total pension outlays are even smaller at around 2 percent (Column 8 in Table 4a).

8.4. One explanation could be a tapering off of the number of pensioners. Even this hypothesis is problematic on comparing Columns 5 and 10, and 8

and 9, respectively. Although the increases between the number of pensioners and pension outlays are compatible and consistent in the early years of the projections, this gradually diminishes over the period of the projection. The initial credibility is because of the small base of the basic pension on which Dearness Relief is calculated. By the end of the decade, however, the DR component is 107 percent of the basic pension and the six percent rate of adjustment to inflation should be mirrored in the projections themselves.

**TABLE 4a Comparative decadal Nominal growth rates (in percentages)**

Year	Budget Revisions (For Civil & Defence)		Pension Outlays (For all Depts.)		Pension Outlays (For Civil & Defence only)			Number of Pensioners		
	BE / Actuals				Actuals			Defence + Civil	All Depts.	
	1980s	1990s	1990s	2000s Projns.	1980s	1990s	2000s Projns.	2000s Projns.	1990s	2000s Projns.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
0/1	27.9%	7.7%	N.A.	5.3%	N.A.	-3.1%	-3.6%	3.1%	N.A.	3.7%
1/2	18.8%	5.4%	14.5%	4.4%	19.9%	12.7%	2.1%	2.0%	2.5%	2.8%
2/3	2.7%	26.5%	22.3%	4.4%	18.3%	24.4%	2.1%	1.5%	2.8%	2.5%
3/4	-63.6%*	7.2%	13.5%	4.2%	24.8%	11.1%	2.1%	2.0%	2.8%	2.8%
4/5	5.7%	0.6%	10.1%	4.1%	4.0%	8.6%	2.0%	1.9%	2.6%	2.5%
5/6	6.3%	5.4%	20.8%	4.2%	15.8%	18.2%	2.0%	0.4%	2.5%	1.5%
6/7	<b>19.7%</b>	<b>13.0%</b>	19.1%	4.3%	26.5%	18.8%	2.0%	1.6%	2.3%	2.3%
7/8	<b>34.2%</b>	<b>31.0%</b>	37.8%	4.3%	72.4%	35.0%	2.1%	1.6%	3.1%	2.3%
8/9	<b>26.4%</b>	<b>37.0%</b>	34.9%	4.3%	27.0%	46.1%	2.0%	1.8%	5.3%	2.5%
9/0	<b>18.1%</b>	<b>41.0%</b>	26.7%	4.5%	10.2%	42.1%	2.1%	1.8%	1.8%	2.4%

**Note:** N.A. is Not Available. \* denotes that the revision for 1983-84 in Col (2) is evidently an outlier, the cause of which is inadequately explained. The numbers in bold in Cols. 2 and 3 pertain to the post-Pay Commission years.

**Legend:** the years denoted 0/1, 1/2, etc. in Column 1 refer to the Fiscal Years in the corresponding decade, e.g., 1980-81, 1991-92 and so on (See Table 5b below as well).

8.5 It can also be observed from Columns 10 and 11 in Table 4a above that the observed increases in the numbers of pensioners in the nineties are not qualitatively different from the projected increases in this decade. This makes the dramatically different rates of growth of pension outlays all the more surprising and inexplicable.

8.6 The lower rates of increase in the magnitudes of the projected pension outlays over 2001-02 to 2009-10, as compared to the actual increases in the decades of the eighties and nineties, might be sought to be explained in terms of the larger pension outlays in the latter years – the smaller the base, the higher the associated rate of growth of a given absolute increase (Columns 18 and 19 of Table 4b below). However, even this explanation of similar levels of projected pension outlay increases (relative to actual increases in the nineties)

would not stand scrutiny if once compares the corresponding rates of growth of the number of pensioners (see Cols. 9, 10 and 11 of Table 4a above).

8.7 Given the assumptions underlying the projections of pension outlays, especially the suitable adjustment of the base for 2000-01, the WG found it surprising that the base should be higher for all Departments, except Defence<sup>7</sup> (See Table 4b below). An explanation proffered was the increase in the retiree pool in 2000-01 after the increase in the retirement age of central civil service employees from 58 to 60 years of age in 1998-99, who would be joining the pensioners pool from May 2000 onwards.

8.8 This explanation was deemed to be inadequate, given the discrepancy in the estimated number of retirees entering the pool and the increase in the base in 2000-01 compared to the actuals of 1999-2000. Moreover, the continuing increases for the year 2001-02 would also not be sufficiently explained by this one-time surge in retirements.

**TABLE 4b Absolute pension outlays (in Crores of Rupees)**

Year	Pension Outlays (For Civil & Defence only)			Changes in Pension Outlays (For Civil & Defence only)			Changes in Pension Outlays (For all Departments)	
	1980s	1990s	2000s Projns.	1980s	1990s	2000s Projns.	1990s	2000s Projns.
	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)
0/1	341	2151	13798	N.A.	-68	-512	N.A.	1025
1/2	409	2423	14093	68	272	295	476	897
2/3	484	3013	14387	75	590	294	838	936
3/4	604	3349	14692	120	335	305	621	930
4/5	628	3638	14991	24	289	299	527	955
5/6	727	4300	15291	99	662	299	1194	1011
6/7	920	5108	15596	193	808	306	1325	1073
7/8	1586	6896	15920	666	1788	324	3123	1132
8/9	2014	10073	16244	428	3178	323	3970	1191
9/0	2219	14310	16584	205	4236	340	4101	1295

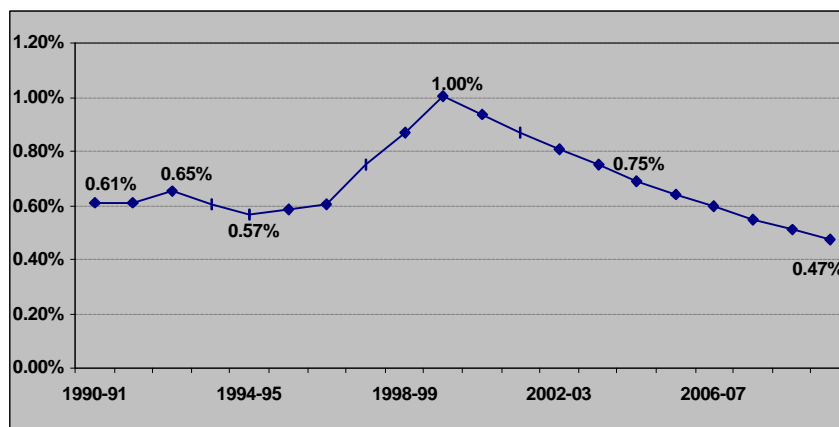
<sup>7</sup> The CCAD, Ministry of Defence, revised downwards its base figure in 2000-01 from an initial level of Rs 12,720 crores to Rs 10,238 crores to reflect the one-time arrears of Rs 2707 crores in 1999-2000.

## FISCAL IMPLICATIONS OF PROJECTIONS

8.9. Once the problems and the non-robustness of the projections have been made clear, the implications of the base-line projections on the fiscal position of the government and in terms of the impact on the overall economy need to be determined. The projection of the government's pension outlay in 2009-10, assuming a six percent rate of inflation is Rs. 29,891 crores. While the amount, by itself in absolute terms, is staggering, its impact needs to be assessed in relation to other macroeconomic and fiscal aggregates.

8.10 Figure 7 below demonstrates that the share of pensions in GDP, after peaking at 1.0 percent in 1999-2000, falls steadily thereafter to about half a percentage of GDP by 2009-10. It can also be surmised, that even if tax elasticities to GDP were to remain at current levels, as well as collection rates remain static, the ratio of pensions to tax revenues would also be progressively falling.

**Trends of Pension Outlays, including projections (2000-01 to 2009-10) (As percentage of GDP)**



Note : Assuming GDP growth rate of 6.5% p.a. and inflation at 6% p.a.

**Figure 7**

8.11 In the context of any eventual transition to funding of pension liabilities, calculations of Net Present Value (NPV) of the pension liabilities is important, since this aids in estimating the size of a pension fund that is eventually set up to meet future liabilities. The total pension liability is the discounted present value of the stream of pension payments arising in future.

8.12 The NPV in 2000-01 of the Government's pension liabilities over 2000-01 to 2009-10, using the projections provided by the accounting formations and a discount rate of 11 percent, is Rs. 1,41,477 crores, which is 6.4 percent of GDP in 2000-01.

## **IX INFORMATION REQUIREMENTS RELATING TO ESTABLISHMENT OF A PREDICTIVE MODEL OF PENSION EXPENDITURE-**

9.1 The other term of reference of the Working Group was to recommend appropriate formats/information system to facilitate accurate assessment of pensionary liability in future. During the course of finalisation of estimates of pensionary liabilities of the GOI over the short and medium term, the Working Group noticed the following data gaps in the information presently available with Government departments as regards pensions:-

- (a) Non-availability of data relating to age profile of both serving employees and pensioners (excepting Defence where data on pensioners' age profile is available).
- (b) Distribution of pensioners over Groups "A" to "D".
- (c) Distribution of pensioners on the basis of pay last drawn.
- (d) Data in respect of pensioners is not being updated either for changes in status of pension drawn i.e., switch over from superannuation pension to family pension or for discontinuance of pension altogether.

9.2 Apart from this, it was also noticed that excepting in case of Civil Ministries and the Department of Defence there was no provision for centralized data collection, which renders generation of Control reports virtually impossible, as on each occasion information has to be collected and compiled with reference to the field units as in the case of the Departments of (i) Telecom and (ii) Posts. This, apart from being a time consuming process, is also prone to a wide array of errors.

9.3 The Central Civil Departments, the Ministry of Defence. and the Railways have moved towards the process of computerization of various aspects of pension payment functions. Surprisingly, however, there are no clear estimates of the total number of pensioners or their break-up between superannuation pensioners and family pensioners either at CPAO, which is the nodal agency for Central Civil Ministries, or with the

Ministry of Defence. Both these accounting formations have submitted data to the Working Group based on estimates of pensioners arrived at by undertaking a headcount from the pension payment scrolls received by them. The Departments of (i) Telecom and (ii) Posts, on the other hand, have not computerized their pension payments and do not have an IT plan in this regard as of date.

9.4 The Working Group would like to emphasise that proper estimation of pensionary outgoes and also planning for funding of future payments requires an accurate estimation of (i) number of existing pensioners, (ii) number of serving employees, (iii) agewise break up of pensioners/ serving employees; (iv) statistical data regarding conversions from superannuation to family pension; and (v) projections of pensioners/family pensioners finally exiting the pool by way of death.

9.5 If reliable estimates are to be formulated, actuarial calculations would have to be made after taking into account the above factors. **The urgency of this exercise is underlined by the slippages evidenced between the Budgeted and Revised Estimates of pension outgoes of the various Departments** (Table 3 & Annexure – II). Although these discrepancies have increased sharply since 1997-98, and may have arisen, in part, due to the impact of recommendations of the Fifth Pay Commission, proper records and data of pensioners and employees due to retire would have facilitated more accurate forecasting of pension outgoes.

## **Methodology of estimation of pensionary liability**

- 9.6 The total pension liability is the discounted present value of the stream of pension payments arising in future. There are five important elements in making future projections:-
- (a) total number and age distribution of existing pensioners along with their age wise break up.
  - (b) estimated number of retirements in coming year, i.e, the number entering the pension pool.
  - (c) statistical data of conversions from pension to family pension cases.
  - (d) average annual pension for relevant sub-categories.
  - (e) Number of pensioners exiting the pool through death.
- 9.7 There are no firm estimates of either the number of existing pensioners (including family pensioners) or the total pension liabilities of the government. In the absence of authentic information available in departments, estimates of the number of existing pensioners can be made on the basis of surveys to be conducted at disbursement points (i.e, bank branches etc), and through Pension Payment Orders. Such surveys should enumerate both ordinary as well as family pensioners, i.e, the surviving dependants of government pensioners to get estimates of continuing liabilities even after the death of the existing pensioners. **Needless to emphasis that the more disaggregated the data collected the more reliable and accurate would be the estimates.**
- 9.8 Mortality tables of L.I.C can be used for estimating number of likely casualties in a year. This would enable determining the number of cases where pension would get converted to family pension or there would be discontinuance of family pension altogether.
- 9.9 As the government is presently neutralizing full impact of inflation, it is possible to work out incremental expenditure by linking it to inflation rates. The increments to the average pension payments indexed to inflation can be estimated through an acceptable forecast of inflation rates and are likely to be the least problematic of all the given parameters necessary for setting up a predictive model.
- 9.10 **Keeping in mind the above requirements, the Working Group have arrived at a standardized format, incorporating various information requirements necessary for an accurate projection of pensionary liabilities (See Annexure-III). It is suggested that**

**this format may be uniformly extended to all accounting formations.** However, software development should be undertaken in consultation with nodal departments such as NIC/RBI/Public Sector Banks.

9.11 The Working Group is hopeful that the creation of a centralized data resource through effective application of technology would help in making available accurate, reliable and timely data on pensionary liability. It would also help in improving the quality of government accounting. Given the present day volume of pension payments (approximately Rs.21,200 crores p.a.) and the scale over which delivery services are distributed (over 35,000 bank branches, besides Post Offices/ Treasuries), it is imperative that information technology be used in increasing measure.

## X. CONCLUSION AND RECOMMENDATIONS

- 10.1 The Working Group was severely constrained in accomplishing the first part of its Terms of Reference. Despite repeated attempts by the concerned Departments to refine and expand the database of pension statistics, the irreversible (and consensus) conclusion that emerged was that meaningful, substantive and accurate projections of pension outgoes in the short and medium term was not currently feasible. The WG has included a set of projections of future pensionary outgoes of the Union Government essentially for the sake of closure of the Report. **It cautions explicitly that the projections are merely an indicative base level and need to be interpreted with extreme caution in any exercise of fiscal planning.**
- 10.2 Within the caveat of these limitations, the WG would like to draw attention to the progressive reduction of the burden of pension liabilities in the context of their shares of various macroeconomic indicators. This reduction is due to the much larger magnitude of projected nominal GDP growth in comparison to the pension outlays. On the basis of the base-level projections that the WG has made the share of pension outlays as a percentage of GDP falls to approximately half-a-percent by FY 2009-2010 compared to the 0.96 percent in the FY 2000-01.
- 10.3 **It should be pointed out, however, even at the risk of repetition, that these projections are only base-level, and might conceivably increase significantly if the factors enumerated at page 18 earlier are factored in. The impact of the recommendations of a future CPC is potentially the gravest.** Of these, the impact of potential salary increases of a future Central Pay Commission would be the most significant given that as per present Government policy pensions are indexed to wage levels of serving employees. Commercial departments, like the Railways and Telecom, moreover, are also concerned that given the increasing pressures on their revenues and operating profits, their pension liability will be an increasing strain. **Since pensions in the government are a deferred wage component, it has been suggested that the gravity of the burden of**

**compensation to labour can be better judged by considering the wage and pension burdens together, as a whole.**

10.4 The WG, by way of addressing this shortcoming, has taken the second objective of the Terms of Reference to be the more critical part of its Report. It seeks to make a contribution to a future fiduciary exercise of credible pension estimation by laying a foundation of the existing data and explanations of the processes of pension planning, information collation and actual payouts. The WG has sought to make the Report rich in data that policy makers can then use in their independent judgement to create their own inferences.

10.5 **As a first step towards such an exercise, the WG feels that a sample survey of selected parameters of the existing pensioners and employees needs to be instituted immediately. The Report has devised and arranged the layout of a questionnaire format for wide dissemination amongst pensioners and employees, so that the basic information can be collated rapidly.** The WG has not suggested the modalities of conducting such a survey, as it feels that this is a subject best decided by the individual departments under the coordination of the Department of Pensions.

10.6 **With the eventual availability of more reliable information on pensioners and employees, the accounting formations need to transition to a more scientific method of forecasting pension liabilities. Projections based on methods that are not actuarial may lead to substantial revisions in estimates of the government's pension liabilities if and when the new methods are incorporated.** It is precisely such large revisions that are sought to be avoided through the output of the Working Group in the interest of overall medium- and long-term fiscal stability.

10.7 **The WG recommends a transition to a funded system of pension payments for new government employees and a system of incentives to encourage migration of existing employees to funded systems.** The most important effect of such a fund is to make explicit and transparent the pensionary liability of the Government of India. It should be stressed,

however, that pre-funding pension liabilities from the general budget does not reduce the quantum of the liability. If anything, there will be an adverse impact on the Government's fiscal position in the short term in the process of establishing the pension fund. This fiscal impact can only be mitigated for the incremental liability of new employees with the introduction of a Defined Contribution (DC) component from these employees, whether partial or total. The greater the magnitude of the DC component in the pension package of the new employees, the lower will be the incremental impact. There should also be no corresponding (one-for-one) increases in employees' salary levels to compensate them for this contribution.

# APPENDICES