Define Benefit Scheme

By Bhudev Chatterjee

1. **FORENOTE**

Whenever there is a meet of Employee Benefit Fund Managers/Trustees, eventually the talk will veer round to Employees Pension Scheme 1995. Someone will say, I hope you are keeping tag of what is appearing about EPS '95 in National Dailies. Apparently, it has running at a loss of 20,000 cr and deficit will increase to any amount between 30,000 and 40,000 crores in 2005. Way back in 2000 the Actuary considered the Fund was **DRIFTING** and suggested certain measures to be taken by Trustees. Trustees wanted to have a second opinion. The new Actuary has come up with conclusion that the fund is **INSOLVENT** and has suggested certain changes in the Scheme to make it viable. I presume that Government would like to take up third Actuary's opinion, possibly by the time his opinion will be available the fund will be completely **BANKRUPT**.

Then somebody said that if this is the position of EPS 1995, then what is the fate of other Defined Benefit Schemes? Whether the Funds have remained solvent as ascertained by Actuarial Valuation?

There was no reply. Then someone asked a friend that **How is your Pension Scheme doing?** Reply was that - Well, it is not doing all that well. Last Actuarial Valuation has shown that the fund is insolvent. Our Actuary said that Rs.13 cr have to be paid in the fund to keep it solvent. We have to pay FBT on this. Thus it comes to about 17 crores. Our Employer has agreed to pay this amount.

Your Employer must be very generous to make additional payment because most Employers have refused to make additional payment; instead they are converting Defined Benefit Scheme to Defined Contribution Scheme by paying fixed Contribution of 15% of salary.

2. **DRAGONS OF DESTABILIZATION**

Then someone said since it is not generally expected that our Employer will behave so generously let us analyze the reasons behind the catastrophe, which is affecting all funds. It emerged that causes will be:

(i) Decrease in Interest Rate

Interest rate has fallen successively over the years; yield on Government Securities has fallen from 12% to 6.75%.
Public Sector Bonds fallen 14% to 7.25%
Special Deposit fallen 12% to 8%.
Further fresh investment in Special Deposit has remained suspended.

Although 5% of portfolio can be invested in Equity, which could improve the yield there are few takers for the same. Thus, based on the approved format of investment for Income Tax approved Fund, a fund is unlikely to earn more than 7% as opposed to 12% only,3 years ago. Lowering of Interest Rate is resulting in lower accumulation of contribution.

(ii) Annuity Rate

Fall in Interest rate has resulted in increase in Annuity rate, which will be apparent from Table 1.

Table 1

	Annuity Rate at age 58	Annuity Rate at age 60
Upto 31.11.79	143.88	133.20
31.11.79 upto 31.12.80	122.26	117.30
31.12.80 upto 01.04.85	111.96	107.52
01.04.85 upto 01.07.91	96.08	93.51
01.07.91 upto 01.07.2000	86.70	84.75
04.07.2000 upto 31.03.2002	100.25	97.87
01.04.2002 upto 31.10.2003	140.32	135.14
01.11.2003 upto 19.12.2004	167.83	161.29
20.12.2004 onwards	149.81	144.93

Drastic rise in Annuity Rate is one of the main reasons for Pension Fund becoming insolvent. As per Income Tax Rules, in the case of Approved Fund, Pension needs to be purchased at the date of exit from an Insurance Company. Therefore, rise in Annuity Value will require higher capital than the accumulated contribution for that individual. Accordingly, there is a Deficit. Aggregate of Deficit leads to Insolvency.
*We notice that Market force however played a significant role at reducing rise of Annuity Rate.

(ii) Lower Salary

Fall in Interest Rate has accompanied fall in Consumer Price Index. DA is based on Consumer Price Index. Based on fall in Consumer Price Index DA has fallen to as low as 3.6%. This has resulted in lower salary growth as well. Companies, who don't pay DA explicitly, but cover DA increase by increment to Basic. In those cases rise in Basic Salary has also fallen. Such lower salary increase has resulted in lower contribution to the fund.

The combined effort of (i), (ii), (iii) will be evident from Table 2

Table 2

Starting Salary - Rs.1000/- : Contribution Rate - 15% of Salary
Age at Entry - 25 : Inflation Increase-Between 4% & 10%
Retirement Age - 60 : Interest Addition - Between 6% & 12%

Rate of Interest	6%	7%	8%	9%	10%	11%	12%
Rate of Inflation	4%	5%	6%	7%	8%	9%	10%
Final Salary	3946	5516	7686	10676	14785	20413	28102
Contribution Paid	132574	162576	200582	248826	310170	388279	487843
Accumulated Contribution	336599	464450	638933	876364	1198538	1634479	2222746
Annuity Rate	144.93	161.29	135.14	135.14	97.87	84.75	84.75
DCS Pension	2322	2879	4727	6484	12246	19285	26227
DBS	3069	4290	5978	8304	11499	15877	21857

From the Table 2 it is noticed that Annuity Rate have played havoc by moving from 84.75 upto 144.93, which has nearly halved the Pension.

(iv) Fringe Benefit Tax

Fringe Benefit Tax has been introduced in this budget, Contribution to Approved Pension Scheme is attracting Fringe Benefit Tax.

Now there are two limitation in Pension Contribution

1. As per IT Rules maximum contribution to pension fund is 27% salary less contribution to Provident Fund.

2. 30% contribution to Pension Fund, will be deducted as Fringe Benefit Tax, before payment to Trustee.

This has acted as last nail to coffin of Employee Benefit. As a result Employers, en-masse are now moving from Defined Benefit Scheme to Defined Contribution Scheme. Let us examine if this conversion is really **'Paradise Lost.'**

3. **COMPARISON OF BENEFITS**

At a given Annuity Rate, the different situation arises due to different quantum of Accumulation of Contribution. It is well known such Accumulation of Contribution is dependent upon the Interest Accrual and Salary Inflation.

Therefore, Net Rate = Interest Rate – Inflation Rate would act as a parameter.
Table 3 below shows how the change in this Net Rate parameter, effects the ratio of DBS to DCS, Pension where

Comparison of Defined Benefit Scheme/Defined Contribution Scheme at (Interest – Inflation) Rate

Defined Benefit Scheme
Retirement Age 60
Contribution received by
Actuarial Valuation
Starting salary is 1000/-
Monthly Pension Fraction 1/45
Pension = Pension Factor x Pensionable
Salary
Salary x pensionable service
Pensionable salary is last drawn salary

Defined Contribution Scheme
Retirement Age 60
Starting salary is Rs.1000/-
Contribution rate 15% of salary
Monthly pension = Pension
Equivalent of accumulation of
Contribution based on Annuity
Rate at the date of Retirement.

Table 3

Starting Age	DBS/DCS Interest Rate – Inflation = 2%	DBS/DCS Interest Rate – Inflation = 3%	DBS/DCS Interest Rate – Inflation = 4%	DBS/DCS Interest Rate – Inflation = 5%	DBS/DCS Interest Rate – Inflation = 6%
25	0.81	0.90	1.20	1.48	1.85
30	0.78	0.91	1.08	1.28	1.55
35	0.74	0.85	0.97	1.12	1.30
40	0.71	0.79	0.88	0.98	1.10
45	0.69	0.74	0.80	0.87	0.95

Table 3 shows that Employees whose salary does not increase faster are better of having Defined Contribution Scheme than Defined Benefit Scheme. It is only the high fliers that will suffer if the Defined Benefit Scheme is changed to Defined Contribution Scheme. In other words, in a Defined Benefit Scheme less paid employees subsidize higher paid employees.

Therefore, if a Defined Benefit Scheme is run for all the Employers, then lower paid Employers subsidizing higher paid Employees will continue. Doubts arise if this is a healthy practice. Of course, it can be argued that, Defined Benefit Scheme is not contributory, it is financed only by the Employers, since therefore, equitability of contribution to benefit cannot be criteria. It is only an Aggregate Scheme; an Employer normally wants certain categories of staff should be rewarded suitably from its Scheme. On such concept Define Benefit Scheme is ideal, although it is not beneficial to all.

NOTE 2

Reference to Table 2 shown that even at the preferred Net Rate of 2% high fliers will be worse off if the Annuity Rate correspond to high Interest Rate, e.g. At Interest – Inflation position as at 12-10, 9-11, 10-8. Defined Contribution Scheme Pension is higher than Defined Benefit Scheme Pension.

4. COMPARISON OF ADVANTAGE / DISADVANTAGE BETWEEN DBS AND DCS

Before we proceed further, we need to look at how the Employers and Employees are placed in Defined Benefit Scheme versus Defined Contribution Scheme in relation to certain Fundamental criteria of Employees Benefit

COMPARISON ON CRITERIA

	Criteria	*D B S*	*D C S*
1.	***Fairness to all classes of employees***	Such pension scheme only pays pension, provided the member has completed a fixed number of years of service and has attained at least minimum years of age. It is therefore unfair to those who leave with short service and / or to younger members.	Under the scheme, every member on exit, provided one has served minimum period notwithstanding age will receive pension. Minimum service is as low as 3 yrs.
2.	***Fairness to carrier***	The scheme's are generally a	The Scheme is well

	progress of employee	final salary scheme and is therefore ill suited to cope with lifetime earnings. In other words if one's carrier progress is above average, he will be better off and those who make less progress, will subsidise those who make better progress.	suited to cope with pattern of life time earning. Therefore average chap will benefit under this scheme. High fliers will loose. Table 3 for illustration.
3.	***Copes with volatile earnings***	For salary increase over and above that adopted in valuation Basis, additional Contribution will be required to keep Fund Solvent.	Employee earnings will tend to be more volatile in the future with salary possibly peaking mid-career. The proposed scheme, being a defined contribution, has no such problems, or normally additional contribution for paid Premium.
4.	***Tax Efficient***	Additional contribution paid to keep the Fund solvent, on larger salary increase, will be tax disallowable, at ITO stage. However, it is allowed at Tribunals.	The tax shield for pension schemes is contribution-based and not benefit-based. Therefore, the defined contribution scheme will always remain tax-efficient.

Criteria		***D B S***	***D C S***
5.	***Easy to Understand***	Rules are generally not easy to understand. There is scope for misinterpretation of Rules.	Members already have a Provident Fund, based upon defined contribution. Therefore, the proposed scheme will be easily understood by members. Consequently the pension benefits provided by the employer will be better appreciated.
6.	***Accrued Benefit***	There will always be employee pressure to pay the entire accrued pension to members leaving early or at least to compensate the member to the extent of Accrued Pension.	Under such Fund, this problem is removed.
7.	***Transference of Investment Risk***	In a Defined benefit scheme, the investment risk is borne by the Bank as the members' benefits are guaranteed regardless of investment performance. If investment rates falls, larger contribution will be required to be	Under such Investment risk is borne entirely by the members.

		paid by Bank.	
8.	***Trustees Performance***	Pension quantum is independent of Trustees Performance. If required, Company pays additional Contribution to offset income loss.	Since pension is pension equivalent of Accumulated Contribution pension quantum will depend upon performance of the Trustees as to the investment of Fund money. If due to bad investment Fund money is lost then Pension will be reduced. There is a chance, of higher pension if the Trustee performs well.

Criteria		***D B S***	***D C S***
9.	***Deferred Salary***	Under DBS the pension is treated as deferred salary such that member may maintain a level standard of life after retirement.	Relationship of pension to salary cannot be maintained
10.	***Death Disablement Benefit***	Different Benefits are paid to members based on Final Salary, which ensures minimum benefit implicitly.	No relation to Final Salary, Since at all contingencies of exit amount. Pension equitability of accumulation contribution payable on earlier exit, accumulation being smaller Pension will be meagre. Considering Re.1/- Monthly Pension will cost Rs.150/-. therefore, if the Defined Contribution Scheme are to be brought to equitable level. Minimum benefit on earlier exit are to be provided.
11.	***Annuity Options***	Purchase price of Scheme pension can be utilized to buy different pension annuity as under.	Accumulated Contribution can be used to buy different Pension Annuity as available.
12.	***Annuity Rate***	Pension is not affected by the	Quantum of Pension

		annuity rate. Cost is borne by Fund.	will depend upon annuity rate. Annuity rate goes up pension will go down and vice versa. From Table 1 you may expect how Pension would move with Annuity Rate
13.	***Time Factor***	Changes in the Interest rate or annuity rate does not effect the solvency immediately. Over a period of time, such adverse effect can be averaged out.	There is no such scope of Accumulation of Contribution/Quantum of Pension affected immediately.
14	***Variable Pension***	Employees retiring at different time with same salary and same years of service would end up with different monthly pension.	Employees retiring at different time with same salary and same years of service would end up with different monthly pension.

5. CONCLUSION

1. **CHANGE REQUIRED**

We conclude as follows:
The need of the hour is to change from the Defined Benefit Scheme
Because of:

1.1 Mobility of labour have increased i.e. not many continues in a Company till retirement Scheme. Long stagnation period for entitlement of Benefit in Defined Benefit Scheme is not helping them.

1.2 Employees are leaving at younger ages more often than at older ages. If younger employees consistently leave the Defined Benefit Scheme, then the Scheme will be in a jeopardy because such Scheme are based on Average Contribution Rate rather than age specific contribution rate. In other words younger employees subsidise older employees.

1.3 Various Saving Scheme have come into existence. The same Pension Scheme contribution, if invested elsewhere i.e. (Unit Linked Investment) maybring bigger Post Retirement Benefit

1.4 Today's Remuneration Package are based on CTC, Younger generation are happy with the size of CTC only not very concerned about inclusion of the safety net like Retirement Benefit etc in it. Accordingly, many employers pay equivalent of contribution to Pension Scheme, in cash basis along with salary instead of payment into Pension Fund. With the advent of FBT. this idea has got further fillip.

1.5 From the foregoing it has been shown that the superiority of Defined Benefit Scheme over Defined Pension Scheme depends upon the difference between Interest Rate and Inflation Rate, Annuity Rate for any Pension Fraction i.e.those with lower career salary increase will benefit from Defined Contribution Scheme, than Defined Benefit Scheme. They form the bulk of working force, High fliers are few and between. From the foregoing, we, then notice that Defined Pension Scheme in the present format is not adequate. Considering the principles that larger benefit to largest beneficiaries, in reality Define Contribution Scheme should be welcome.

2. **MODEL SCHEME**

2.1 We need a high breed Scheme like EPS which will be a Defined Contribution Scheme for Exits at younger ages or exits, with lower service. For example say exits unto 35 yrs of age or 10 yrs of Service, Benefit Payable shall be accumulation of contribution i.e. Defined Contribution Scheme. For later exits/certain categories it would be a Defined Benefit Scheme with a provision that Pension shall not be less than Pension equivalent of certain percentage of accumulated contribution. In extreme cases these could be extended for entire period of service for certain categories of staff.

2.2 This will leave us with high fliers requiring a higher contribution rate for
Defined Benefit Scheme rather than lower paid Employees subsiding them. Since there is every indication that we are moving towards EET, therefore, a burden of paying a higher Pension, than accumulated contribution warrants, should be borne the Company, rather than lower paid staff. Annual

Actuarial Valuation will reflect such additional contribution. This will be disallowed at ITO level, but allowed at Tribunal level.

3 **MODIFICATIONS TO DEFINED CONTRIBUTION SCHEME**

3.1 Defined Contribution Scheme are to be amended such that minimum Pension is Payable on Death or Disablement, in excess of Pension equivalent of accumulated contribution.

3.2 Currently, without Profit Annuities are not sold i.e. there is no future increase in Pension can be given after Pension vests. This is not very helpful because with passage of time, Pension becomes valueless. It is required that Pension Annuity be issued with a provision of annual pension Increase, such that purchasing power parity of Pension is maintained, throughout life of Pensioner.

About the Author:

Bhudev Chatterjee:
Mr. Bhudev Chatterjee's professional career started in 1996 when he joined Government Actuary's Department of U.K. at London as a student Actuary.

He worked there upto 1975. During this time he was exposed to the intricacies of National Insurance Scheme (un-employment Scheme), National Health Service Scheme, (Medical Hospitalization) Friendly Societies (Analogous to Employees State Insurance Corporation in India). Pension Schemes of British Government / Nationalized Institutions and some Schemes in Commonwealth Countries.

He returned to India in 1975 and joined Life Insurance Corporation at its Group Superannuation Department which again deals with Pension and Gratuity.

In 1976 he joined ANZ Grindlays Bank and looked after Banks Pension matters in India and abroad as well as Pension Funds of Banks' clients.

Sine 1992, he has been operating independently from his Actuary's Office. He has designed all major Pension Scheme of India or vetting them for Government of India and had been connected with them in one way or other. He acts as a Consulting Actuary to Government Departments, Public Sector Units as well as distinguished corporate houses and Multinationals. He is looking after the actuarial aspect of Provident Fund / Family Pension / Employees Pension Scheme / E.D.L.I of Employees Provident Fund Organization from 1988.

In the words of Mr. Chatterjee, he has been looking after Pension matter for last forty years spread over three continents. He is the only Actuary, who have qualified by studying in U.K. practicing in India.