

Role Of Actuaries In The Emerging DC Pension Environment In India

By

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[The views expressed in this paper are strictly those of the author]

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1. Background

1.1 When Peter Drucker was asked the biggest challenges facing the world in the twentieth first century, he answered: “The first is to adjust our society, especially in the developed countries, to the greatest change the twentieth century has wrought, which is the change in demographics.” The reforms in social insurance and pensions initiated by the Governments world over have been necessitated by the demographic changes referred to by Peter Drucker. The reforms in India’s pension system initiated by the Government of India have been a part of this process.

1.2 In India, because of social structure, social psyche and economic situation, pension had never been a critical issue for an average Indian worker. It was only when the Ministry of Social Justice and Empowerment constituted the Project Old Age Social and Income Security (OASIS) that this issue came to the fore. The Ministry of Social Justice and Empowerment constituted an expert committee under its project OASIS, which later came to be known as the OASIS Committee, to review the existing system for building up assets for old age income and recommended a new pension system for India. This set in motion debate on reforming India’s pension system and created awareness about the need to self finance the old age income. The committee submitted two reports, first in January 1999 reviewing the existing system for building up assets for old age income and the second in February 2000 recommending the defined contribution fully funded individual retirement account pension. Following the success of the defined contribution fully funded individual retirement account pension in the eastern Europe and Latin American countries, the World Bank, in its solution for pension reforms, advocated this model for complementary pension (Pillar II). Later, many countries reforming their pension system took recourse to this model. The recommendations of the OASIS Committee have to be viewed in this perspective. The government accepted the recommendation of the Committee to set up the defined contribution fully funded individual retirement account pension with universal access and on 30th December 2004 promulgated an ordinance to set up the Pension Fund Regulatory and Development Authority (PFRDA) to regulate and supervise the New Pension System and any other pension scheme not regulated by any other enactment. The Ordinance will be placed before both the Houses of the Parliamentary at its budget session and the ordinance would then be converted into an Act. The new pension scheme is proposed to be introduced in a phased manner – first for the Central Government employees joining service from 1st January 2004, then to the new employees of state governments opting for it, employees of public sector units and local bodies, private sector units and finally to the general public.

1.3 The major driving force behind the government initiative in reforming the pension system seems to be the increasing burden of the government employees’ unfunded pension liability and the proposed pension model for the new government employees would help in containing the pension liability of the government employees’ pension. The Government of India initiatives will pave the way for defined contribution pension environment in India as also bring under purview of the PFRDA the pension

schemes not regulated by any other enactment. This paper attempts to outline the role of actuaries in the context of these developments.

1.4 The Part I of the paper deals with regulation and supervision of pension schemes in the context of the promulgation of the PFRDA Ordinance, 2004.

1.5 Defined contribution pensions are segregated into two phases, the accumulation (asset management) phase and the decumulation (pay out) phase. The actuaries have a well defined role in the DB pensions but the role and responsibilities of actuaries in DC pension have yet to evolve fully. There are issues during the accumulation phase in DC pension that can effectively be dealt with by application of actuarial techniques. The Part II of this paper attempts to deal with the possible role and responsibilities of actuaries during the accumulation phase in DC pensions.

1.6 The Part III of the paper deals with the pay out phase. Over the years, greater focus was on accumulation phase and very little attention was given to the pay out phase. However, with ever improving mortality leading to longer pay out phase, and consequential changing customer expectations about product flexibility, and economic volatility, has made it necessary to focus equal attention on the pay out phase as well. Though not markedly evident in India as yet, the change in customer expectations in India currently being limited to having liquidity in pay out phase, it is being increasingly recognized in other jurisdictions that the pay out structure of the future will have to be capable of accommodating much greater variation in life span, asset allocation and customer attitudes / requirements in retirement. With the expectation of life at age 60, as per Census 2001, being around 17 years and as per LIC Occupational Pensioners' Mortality (1996-98) at 60 being around 22 years, the pay out phase issues, mentioned above, would come to the fore sooner than later in India also. The process would get hastened as the pension reforms initiatives taken by the government take roots.

1.7 Because of pension reforms measures initiated world over and the compulsory annuitization, the pay out phase is also the focus of discussion currently. In his recent paper – “Annuities and alternative ways of providing retirement income” - Chris Daykin, Government Actuary, United Kingdom, has said that “In the design of pension reforms, a mandatory requirement to annuitise accumulated pensions savings in individual accounts seems an obvious way to provide protection against longevity risk and a steady source of income in retirement. Economic theory suggests that annuities provide an optimal route to managing wealth over the personal life cycle, and that, in the absence of a strong bequest motive, individuals should annuitise all their wealth at retirement. However, in practice annuities are not popular and, if they are not mandatory, most people avoid annuitising their wealth as much as possible. Annuity markets worldwide are still mostly quite undeveloped, with only a few exceptions”. This excerpt, puts in proper perspective the importance and complex nature of pay out phase.

2. Part I – PFRDA Ordinance, 2004 – Regulation and Supervision of Pension Schemes

2.1 It would be useful at this stage to discuss the provisions of the PFRDA Ordinance, 2004 and how it would specifically impact the actuarial profession.

2.2 The Ordinance defines “New Pension System” to mean ‘the contributory pension system whereby contributions from a subscriber are collected in an individual pension account using points of presence and central recordkeeping agency and accumulated by pension funds for pay offs as specified by regulations’. For the purpose of discussing extent and application of the Ordinance, Sub-sections (1), (2) and (3) of section 13 are reproduced herein.

Sub-section (1) stipulates that “The Ordinance shall apply to –

- (a) the New Pension System;
- (b) any other pension scheme not regulated by any other enactment.

Sub-section (2) stipulates that “Every pension scheme referred to in clause (b) shall conform to the regulations made by the Authority within such time as may be specified in the regulations”. Sub-section (3) stipulates that “Notwithstanding anything contained in sub-section (1), the provisions of the ordinance shall not apply to –

- (a) the schemes or funds under -
 - (i) the Employees' Provident Funds and Miscellaneous Provisions Act, 1952;
 - (ii) the Coal Mines Provident Fund and Miscellaneous Provisions Act, 1948;

- (iii) the Assam Tea plantations Provident Fund and Pension Fund Scheme Act, 1955;
- (iv) the Jammu and Kashmir Employees' Provident Funds Act, 1961; and
- (v) the Seamens' Provident Fund Act, 1966;
- (b) contracts referred to in sub-section (11) of section 2 of the Insurance Act, 1938;
- (c) any other pension scheme, which the Central Government may, by notification, exempt from the application of this Ordinance;

.....”
 It will be seen from the above that the word “pension” is used in the wider context to refer to any vehicle that builds up assets for old age income.

2.3 In terms of clause (b) of sub-section 13(3), the Ordinance shall not apply to contracts that are covered by sub-section (11) of section 2 of the Insurance Act, 1938. This essentially means that the provisions of the Ordinance shall not apply to products that are regulated and supervised by the IRDA. It is pertinent to mention here that in respect of gratuity and superannuation funding, the IRDA regulates and supervises the gratuity and superannuation products that are offered by the life insurers but the IRDA does not regulate and supervise the gratuity and superannuation funds and other associated aspects. In terms of the provisions of clause (b) of sub-section 13 (1) read with sub-section 13 (2), these gratuity and superannuation funds are envisaged to be regulated and supervised by the PFRDA.

2.4 Sub-section 14 (1) stipulates that “Subject to the provisions of this Ordinance and any other law for the time being in force, the Authority shall have duty to regulate, promote and ensure orderly growth of the New Pension System and pension schemes to which this Ordinance applies.....”. Sub-section 14 (2) lays down the powers and functions of the Authority and the provisions of clause (a) of sub-section 14 (2) stipulates that the powers and functions of the Authority shall include “regulating the New Pension System and the pension schemes to which this Ordinance applies”. This supports the interpretation, mentioned in 2.3 that the PFRDA would regulate and supervise the gratuity and superannuation funds.

2.5 The regulations to be framed by the PFRDA for supervision of pension schemes specified in clause (b) of sub-section 13(1) would have to cover aspects such as :

- pension promise;
- funding;
- interests in pension fund and surpluses;
- pension fund trustees;
- amendment and winding up;
- early leaving;
- scheme administration;
- safeguarding the assets of pension fund;
- protection against the insolvency of employer;
- information for scheme members;
- dispute resolution,

particularly in respect of the defined benefit pension funds, and gratuity funds. This paper will, however, not go into the details of these aspects as these aspects have been extensively discussed in the paper titled “Pension Regulatory Environment in India” presented by the author at the 6th Global Conference of Actuaries in February 2004..

2.6 Currently, the work of actuaries in the area of retirement benefits is more of a self regulatory nature with the Actuarial Society of India (ASI) acting as an SRO. When the PFRDA frames regulations in this behalf, it will provide framework for the work of actuaries. The IRDA has introduced the Appointed Actuary system both for life insurance and general insurance. It is possible that the PFRDA may think in terms of introducing the system of Scheme Actuary.

2.7 The basic approach to supervision of pension schemes widely differ from that in respect of other financial entities. This is because, the financial entities like banks, insurance companies and mutual funds are more homogeneous in nature and are relatively few in number, whereas pension schemes are very diverse in nature and large in number. In this context, the approach of the pension regulatory authorities is generally more reactive than proactive. This has been the reason for much of criticism of the

Occupational Pension Regulatory Authority (OPRA) in the UK, but post enactment of Pensions Act, 2004, this is changing and supervision of pensions is more proactive in seeking compliance from the pension schemes. We will have to wait and watch the PFRDA approach in this behalf.

3. Part II – Accumulation Phase :

3.1 In 1889, when Bismark invented state pension, expectation of life at birth was 45 years and retirement age was 65. Over the years, with improving mortality this situation has changed, yet the focus has remained on accumulation phase as it was much longer than the pay out phase. Further, motivating people to make contribution during their working life time to build up assets for their old age income is a daunting challenge as most people would have reluctance to save keeping in view the long term horizon. This mind-set of focusing on the accumulation stage is so strong that regulations of most pensions, providing universal access, of the type of DC pension proposed to be introduced in India, do not provide for pay out phase, e.g. the Stakeholder Pension in the UK.

3.2 In India, occupational pensions have essentially been a British legacy as this benefit was available to the government employees and employees of MNCs. The two retirement benefits that are statutorily required to be provided are : Provident Fund (DC benefit) and Gratuity (DB benefit). The government, feeling the need to provide a vehicle to non-salaried section of the population for building up assets for old age income, set up provident fund, a DC benefit, called Public Provident Fund in 1968. In late eighties, the employee unions of public sector banks and public sector insurers raised a demand for getting retirement benefits similar to those being provided to the government employees. After protracted negotiations, in 1994, the government conceded the demand of the employee unions and agreed to provide final salary index linked pension financed by the employer's contribution to the provident fund. While the Pension Funds set up for public sector insurance entities are required to buy annuities from LIC, the Pension Fund set up for bank employees has been exempted from the provisions of Rule 89 of the Income Tax Rules, 1962, requiring the Trustees of pension funds to buy annuities from life insurers, and the bank employee pension fund was allowed to pay annuities. Immediately thereafter, the government also provided final salary index linked pension to the subscribers of Employee Provident Fund (EPF) by diverting 8 1/3 % of the employers' contribution to EPF to the pension scheme set up by the Employee Provident Fund Organization (EPFO), called Employee Pension Scheme 95 (EPS 95). EPS 95 is also not required to buy annuities from the life insurers. Thus, the major part of the salaried section of the population came to be covered under the final salary index linked pension.

3.3 In the emerging environment, the actuaries would have to play a significant role in ensuring that the whole process of limiting the employers' pension liability remains on track and the desired objective is achieved. Though the pace and extent of change from DB to DC may be debated, it has become clear that the direction of change and that it is happening are both undeniable. It is therefore necessary to outline the possible role the actuaries could play in this environment. While the role of actuaries in DB pensions is well established, an attempt has been made herein to broadly outline the role actuaries can play in the emerging DC pension environment. It broadly covers ::

- defined benefit to defined contribution conversion process;
- defined contribution projections;
- defined contribution investments;
- range of options;
- defined contribution - role and responsibilities in general; and
- possible statutory role in defined contribution environment

3.3.1 Defined benefit to defined contribution conversion process: The main purpose of switch from DB to DC is the transfer of risk of the volatility of the standard of living that each employee can maintain in retirement from employer to employee and reduction in pension cost. In India, currently the focus is on changing the pension benefit of new employees from DB to DC, but sooner than later the issue of existing employees' pension will also have to be addressed. This would be particularly significant in respect of government employees as the government employees' pension is unfunded and after introduction of the contributory DC pension for the new employees, the government burden would go up considerably for

number of years as the government will have to pay the pension of pre 1st January 2004 employees on PAYG basis as also make contribution to the DC pension in respect of the employees that have joined service on and after 1st January 2004. It is important for the employers to be clear on their objectives in making the switch, and that they put the advantages and disadvantages fairly to the employees. The actuaries would also have to help the employers in finding appropriate solution to the issue of cost reduction and transfer of risk. In this process, the actuaries will have to provide answer to the question “Is DB to DC, the only solution for cost reduction or could there be alternate designs ?”.

3.3.1.1 The major thought process behind the DB pension was that the employers often felt a responsibility to reward long-service employees by maintaining a defined proportion of their standard of living into retirement. Any change in the pension design of existing employees is more of an employee relations issue than an actuarial issue. The actuaries will have to work closely with HR people to find solution to this issue acceptable from both the HR and actuarial perspective. The theoretical actuarial options for existing employees would be:

- move the existing employees to DC pension in respect of their future service while retaining the accrued benefits under the DB design. Here also one could freeze the accrued DB pension with salary as on date of change or could allow the accrued DB pension on terminal salary;
- convert the accrued DB pension also into equivalent of ‘Transfer Value’ and credit the amounts to the individual retirement accounts of the employees. This is essentially an HR issue because it is the expectation of the employees that the accrued benefits would be protected and paid when due as per the rules of the scheme.

3.3.2 DC projections: The actuaries could carry out projections for different purposes such as to verify the maintenance of earlier expectations or to predict the emerging benefits in terms of the final salary. The projection assumptions would vary with the purpose of the projections and it is important that the projection assumptions are consistent with the purpose. In a DC arrangement, an actuary could develop a different form of projection, whose primary purpose is not to compare one product provider with another, but to advise clients on the range of pensions which could be expected from a given contribution rate, taking into account inflation, and the fund/s opted for.

3.3.3 DC Investment : In a DB pension arrangement, the benefits are funded on aggregate basis and as such investments of DB pension are structured collectively. The investments of DC pension are structured individually and as such the investments of DC pensions could vary from member to member allowing for the member’s age, risk appetite, individual circumstances and other individual preferences. In DC pensions members need advice on asset allocation looking to their circumstances. The actuaries in their advisory capacity can ensure that the asset allocation is not too risk averse as too risk averse asset allocation is likely to result in lower returns and consequently inadequate corpus at retirement. As it is said, “Not taking risk is by itself a big risk”.

3.3.4 Range of options : The transition from the DB to DC environment and the situation thereafter would pose many challenges of design and communication which the actuarial profession will have to respond to. When there is a change from DB to DC, two changes take place, one is transfer of investment risk to subscriber and change over so to say from final salary related benefit to career average salary related contributions, the contributions being related to salary at the time the contributions are due. In fact it could be seen as a design challenge by the actuarial profession for evolving acceptable pension designs. One could think of a design which is DC in the initial years, when employee mobility is higher, and DB later. The career average DC design could provide for option of career average DB design with option to the employees to make good the difference over his service period. These instances have been just given as examples, because it is possible in the emerging environment to structure such hybrid plans that are not pure final salary.

3.3.5 Defined contribution – role and responsibilities: While in a DC pension there is no defined benefit that has to be achieved in terms of the scheme rules, there is an implicit issue of ensuring that the scheme meets its objectives, typically to provide the scheme members with appropriate benefits at an acceptable cost. It is important that actuaries use their experience, knowledge and insight to add value to the communication to the subscribers. The areas where this is possible are:

- how different scheme designs can meet different objectives. They can work out tiered contribution structures, provision of death and ill health benefits and also advise on the effect of future conditions on these benefits and hence help in assessing the risk;
- targeting the benefit on normal retirement as this would have implications on the benefits payable in other contingencies;
- review of the continued ability of the scheme to meet the targeted benefits in the light of changing economic circumstances and changing scheme age profile;
- the provision of illustration to members of the possible benefits. It is critical from the members' perspective that the expectations remain realistic and the members understand the risks in a DC pension design;
- advice on asset allocation and methods of minimizing the various risks. They could give generic advice to the trustees for communicating to the members as individual advice could be costly; and
- the possible options at the pay out phase. These are dealt with in Part III of the paper.

3.3.5.1 A part of the section titled "Target Funding DC Arrangement" from the paper "The Role and Responsibilities of Actuaries in the Defined Contribution Environment in the United Kingdom" by M A Stocker and others is reproduced herein to provide better insight into the aspect of Target Funding: –

"Target funding in DC arrangements covers a whole spectrum of design types. At one extreme, this would be a one-off comparison of the proceeds of the DC scheme benefits against a given accrual rate in a DB scheme, with the results determining the contribution rate for each age or age range, possibly rounded to the nearer 1% , say. At the other extreme, there could be an individually calculated rate for each member, reviewed annually or triennially, with advice on investment options, and careful consideration, as retirement approaches, of lifestyling options, in order to minimize the risk of changes in annuity rates not delivering the expected pension.

Target funding only becomes a DB arrangement if the pension to be provided, as a percentage of final pay, is actually provided for in the rules of the scheme. More commonly it is merely an expectation, and indeed that expectation may become less defined, the longer the time goes on from the point at which conversion was made from the DB arrangement".

3.3.6 Possible statutory role in defined contribution environment : While in India currently there is no structure to regulate and supervise the occupational pension arrangements, sooner than later the authorities are certain to create a legislative framework for regulation and supervision of occupational pension arrangements. The setting up of the PFRDA would hasten this. In a DB scheme, the actuary is required to certify that the proposed contribution rates are appropriate for the promised benefits, similarly it is possible that the legislation may require a certification that the benefits as envisaged in the projection are consistent with the intended contribution level. In a DC environment it may be made mandatory to provide illustration of the range of benefits likely to emerge from a DC arrangement incorporating in the projections the state of the investment climate at the time of projections. As DC pension arrangements become the main source of retirement income for majority of the population, the ability to plan with reasonable degree of certainty will become more important.

3.4 It is difficult for an average subscriber to a DC pension arrangement to judge the level of contributions required to secure an adequate retirement income. It has been the experience that subscribers to the DC pension arrangements have little understanding of the cost of providing adequate pensions or of its implications of different investment choices on the likely level of benefits in real terms.

3.5 Control of the professionals involved in the selling and administration of savings products is required to avoid miss-selling . The actuary's training in financial projections, demographics and, specifically, in risk issues make him well suited to taking on many of the statutory roles. It is in this context that the statutory role for actuaries in the DC environment should, and is likely to, grow from small beginning.

3.6 Serving the Cause of Public Interest: "Serving the cause of Public Interest" is the logo of the Actuarial Society of India. The Indian actuarial profession has to play a significant role in the emerging pension environment to serve the cause of the common man. Building up assets for old age income and planning for retirement are concepts alien to Indian mind. A common man often underestimates the amounts needed to provide for a decent pension in retirement. It is in this context that the actuarial profession has an important

role to play in making people understand pension issues. The actuaries should be seen to champion the public interest by providing clarity and simplification. If the actuaries do not do that, others will seek to take this role from the actuaries.

3.7 The actuarial profession in India, as a whole, needs to identify effective ways of influencing government views and public discussion of pension issues, so as to ensure that the shift away from DB to DC is the subject of informed debate.

3.8 Communication and Investment Advice : Communication with the subscribers will assume great importance in the DC environment.. The input provided by an actuary will be valued by the clients depending on the actuary's communication skills. The actuary may also be called upon to give individual advice to the subscribers to the DC arrangement, particularly with regard to investment choices, switching and lifestyle arrangements. Investment advice to the trustees would also be of different nature from that in respect of DB arrangement, with emphasis on investment choices which enable the subscriber to have better chance of meeting his/her reasonable expectations, as opposed to the main focus being on asset / liability matching and overall investment performance.

3.9 While the new employees of the Central Government joining service on and after 1st January 2004 have been moved to DC individual retirement account pension and the five states – Rajasthan, Tamilnadu, Chattisgarh, Himachal Pradesh and Andhra Pradesh - are also reported to have opted for this scheme for their new employees, the contributions, both employers' and employees', currently are being credited to the public account of the government allowing interest at the rate of 8 % on accumulation of the Central Government employees. The decision in respect of interest to be allowed on the accumulation of state government employees will be taken by the respective state governments. This ,it appears, would continue till the PFRDA is established by an Act of parliament, relevant legislation is put in place, the Central Record Keeping Agency (CRA) is selected and the Pension Fund Managers (PFM) are licensed. Once this happens, the subscribers would have choice, presumably from amongst the licensed PFMs and the three funds, debt, balanced and equity with debt as the default option. Looking to the general financial awareness of the subscribers, it would perhaps be unrealistic to expect them to make choice of the funds.

3.10 In other jurisdictions where such DC arrangements have been introduced, the actuaries have started giving attention to the portfolio selection issues. In such schemes, normally, a set of investment options are established and each subscriber is given right to chose the option and to decide on the apportionment of his/her share of the fund between those options. In such cases the investment allocation is devolved on the subscribers. Otherwise, the trustees decide on appropriate investment allocation for the subscribers and in some such cases the investment allocations may vary by age; typically, as a subscriber approaches retirement age, his / her share of the fund is gradually shifted from risky assets to risk-free or matched assets. In DC arrangements there are thus two types of asset allocation problems: the first arises where a subscriber exercises a right to chose investment option; and the second arises where the trustees of a fund decide on appropriate asset allocation for various groups of members. In the case of the proposed DC individual retirement account pension it would be the subscribers or the PFMs who would have to do this. When a subscriber exercises the option, attention needs to be given to the individual subscriber's attitude to risk and when the trustees / PFM exercises the option, reasonable assumptions must be made about the attitudes to risk of subscribers of various categories.

3.11 The paper "The Use of Utility Functions for Investment Channels Choice in Defined Contribution Retirement Funds " by R J Thompson, BAJ Vol.9 Part III No. 42, relates to the first type, i.e. a subscriber being required to exercise the option. According to this paper the subscribers may feel that they do not have sufficient knowledge to be able to make decisions about the apportionment of their fund balances and the trustees may consider it their obligation to provide individual members with advice, but the cost of employing professional advisers to do so may be prohibitive. In this context, the paper has proposed a design of an interactive computer-based system that would elicit the members' attitude towards risk and use that information, together with the model of the investment options available, to recommend to the members an apportionment between the available options of the members' share of the fund. It would be interesting to try this model as an experiment for the proposed DC pensions in India.. In the proposed scheme, three investment options are envisaged, viz. Safe Income, Balanced and Growth with Safe Income

as the Default option. In this type of scheme, even in the USA, 45 % go by Default option and in the OECD countries more than 80 % go by Default option. In India, the proportion going for Default option could be higher. In this context, an exercise of the type advocated by R. J. Thopson, referred to above, could be very useful with Pension Fund Managers (PFMs) deciding on the asset allocation for the subscribers based on such model. Choice of PMF by the subscribers is not an issue because it is reported that the public sector PFM would be the PFM for those subscribers who do not chose the PFM.

3.12 Another area in which the actuaries can extend their skills is to develop software for advising the subscribers about the contributions required to secure pension that would relate to specified percentages of final salary. This could also allow for different assets allocation during the accumulation phase.

3.13 Pension Information : The issue of consumer education on pension is of critical importance in the Indian context as the felt need for old age income is of recent origin in the Indian society. Indian economy is essentially an agriculture economy and people engaged in agriculture pursuits really do not retire at a specified age but withdraw from it in a phased manner. This, and the joint family structure, till recently, did not encourage any thinking on building up assets for old age income. In this background, considerable developmental work will be required to be done in India to create awareness about self financing of old age income. In this context, while we in India do not have state pension, it may be useful to understand the thinking behind the UK Government's Green Paper – *A New Contract for Welfare : Partnership in Pensions* - , published in December 1998. This contains reference to:

- education issues;
- proposals to provide integrated annual benefit statements; and
- requirements for illustrations of benefits from DC schemes.

The relevant sections of the Green Paper are reproduced herein:

“ Education

We believe it is necessary to bring about a radical improvement in the quality and availability of information on pensions, both in general and in the information people are given about their own pension position. We will work closely with the Financial Services authority (FSA) to improve the general quality and comparability of pension information. We will take immediate action to improve of the state pension forecasting system and work with employers and private pension providers to find the best ways to provide everyone with a personalized forecast of their complete pension position, state and non state, which they can use in planning and savings and investments they wish to make.

The Government and the financial regulators have the central role to play in developing the long term framework and for driving forward the specific initiatives needed to improve pensions information. In turn, we believe that the private sector can provide expertise, ideas and enthusiasm to make significant contribution in many areas. In partnership, we can press ahead with a dynamic and effective programme of action to counter lack of awareness, interest and understanding of pensions.”

Benefit Statements

We want to develop integrated personal pension statements, combining state and private pension rights. We can only achieve this outcome in partnership with the private sector. it will require changes to the way both the state and private schemes provide information at present. But we are certain that we should work together towards this outcome.

DC Scheme Illustrations

We are proposing immediate improvements to help people understand their private pension position. At the moment, members of money purchase pension schemes (both occupational and personal) must be given a benefit statement every year, but schemes are not required to give members a projection of their likely future level of pension. Some give illustrative projections, but this is not widespread . In contrast, members of salary related schemes can have statements which show how much pension has been accrued to date and forecast how much members can expect to accrue by the time they reach pension age if thy continue in the same job.

We are proposing that:

- *all money purchase schemes should be required to provide annual statements showing the projected value of the individual's fund at retirement age and the amount of pension it might buy at today's prices;*
- *the statement must be as simple and straightforward as possible. It must also be clear that it is only an estimate which depends on unknown variables that will inevitably change over time; and*
- *there will also have to be clear and evident warnings about the actuarial and economic assumptions used in the projections."*

After four years of public debate and consultations with the actuarial profession on this issue, with effect from 1st April 2003, the Department for Work and Pension, Government of the UK, has introduced pension forecasts for all those who request it. This will give an indication of the State benefits which an individual can get when he retires. To make the pension picture more complete, the department has also specified that those with occupational, personal or stakeholder pensions can expect to receive an annual illustration of the value of their future benefits. The legislation has – for the first time- placed a legal requirement on trustees and managers of defined contribution pension arrangements to illustrate future benefits. Illustrations have to conform to the guidelines drawn up by the actuarial profession, in consultation with the Government. Since the illustrations are given annually, the subscriber expectations are managed on ongoing basis.

3.14 The PFRDA may have to consider making such periodical illustrations mandatory for providers of defined contribution pension. The Actuarial Society of India has prepared a due process draft of Guidance Note (GN 14) – Illustration of Defined Contribution Pension Scheme Benefits . After the due process is completed the Guidance Note would be issued. Once the PFRDA is set up and relevant legislation is enacted, the Guidance Note may perhaps have to be reviewed and the revised Guidance Note issued in concurrence with the PFRDA.

4. Part III - Pay Out Phase

4.1 All through the years the accumulation phase was much longer than the pay out phase and as such all the attention was always focused on the accumulation phase. However, with the increasing longevity, the pay out phase is lengthening fast as mentioned in para 1.6. The increase in post retirement life is making it necessary to rethink in terms of accommodating changes in the customer expectations during the pay out phase such as lesser rigidity in pay out phase design to allow for facilities like some liquidity, variation in asset allocation post retirement or changes in pay out based on the changing economic environment. In this context, the pay out structure of the future will have to be capable of accommodating much greater variation in life span, asset allocation and customer attitudes/requirements in retirement and to adopt to changes in these over the period for which income is payable and the actuaries will have to play a significant role in designing suitable pay out structures.

4.2 In India, till recently, the annuity market was mostly confined to the annuities purchased by the trustees of the superannuation funds. Interest to personal pensions is of recent origin. It is expected that the operationalization of the defined contribution individual retirement account pension proposed to be introduced as a part of pension reforms initiative would give push to the annuity business. This, in its wake, would bring in focus the deficiencies in the current annuity model. It may be recalled that when the immediate annuity plan of LIC – Jeevam Akshay – picked up there was a customer demand for providing some liquidity in the design of the product and also when the government subsidized immediate annuity for senior citizen was introduced there was demand for liquidity. Consumer demands of this type will increase in the future as the life span increases.

4.3 With the longer pay out phase, the consumers are increasingly considering the conventional annuities as inflexible providing poor value for money, mainly because of the aim to have fixed interest oriented investments during the pay out phase. In other jurisdictions the questions are increasingly being asked that if equity investment is preferred pre-retirement, then why not post retirement ? It is also now felt that the adverse asset allocation is made worse through lifestyle funds pre-retirement through which switch to bonds occurs well before the annuity purchase. Compared to “income draw down”, the conventional annuities offer the customer hardly any scope to tailor asset allocation or income to suit changing economic or individual situation.

4.4 Even internationally, until recently, those not desiring to buy conventional annuities had very limited choice. However, now there are increased number of options on offer. Even though in India, currently the options on offer are limited, the expected growth in the annuity business would provide Indian consumers also the options that are available internationally. A small beginning has already taken place on opening up of the insurance industry as couple of life insurers are offering revisable / reviewable annuities.

4.5 Currently, the conventional non-profit annuity options available are: annuity payable for life – with or without return of purchase price, annuity payable for life with annuity payment guaranteed for specified number of years, joint life annuity payable till the death of last survivor with or without return of purchase price and joint life annuity payable till the death of last survivor with annuity payments guaranteed for specified number of years. There are annuities on offer with predetermined increases in payments at fixed periodicity. In a defined benefit pension arrangement, the trustees would like to buy annuities that would meet their liability. However, in a defined contribution pension arrangement design of the pay out structure assumes critical importance.

4.6 In the context of the inability of the current annuity designs on offer to meet the consumer expectations, what could be the desirable features of the design of alternate annuity model from the consumer perspective. The desirable features from the consumer perspective could include:

- flexibility in asset allocation during retirement to facilitate increase in potential lifetime income through choice of optimally performing assets;
- variation in choice of assets during retirement to reflect changes in attitude to risk and reward; and
- providing protection against longevity, which income drawdown does not provide, but with flexibility not provided by conventional annuity model..

4.7 It would be useful to consider the alternate annuity models that are on offer in the other jurisdictions and analyses their feasibility / usefulness in the Indian context. The alternate annuity models now on offer in the other jurisdictions are:

- with profits annuity
- index linked annuity
- variable or unit linked annuity
- revisable annuity
- income drawdown
- “Annuitised Fund”

4.7.1 With profits annuity: In the current context, the major weaknesses of the with profits annuity are that generally the income level is defined by life insurer and there is no flexibility and the purchaser has no investment choice. However, it is possible to choose starting income level, within limits, by selecting an anticipated bonus rate. The bonuses are financed by the life insurer by achieving investment returns higher than those required to finance the guaranteed level of annuity, and possibly from other experience profits. Besides this, the inherent weakness in a with profit annuity as compared to with profit assurances is that in with profit assurances the surplus is on increasing reserves, whereas in with profit annuities, surplus is on decreasing reserves and this is a major constraining factor. Further, with profits annuities suffer from a lack of transparency, in common with most other with profits products.

4.7.2 Index linked annuity: In some countries with mandatory defined contribution pension systems (e.g. Chile and Mexico) there is a statutory requirement for the annuities to be price-indexed and these are in practice the only annuities available in those markets. In index linked annuity, the purchaser has no investment choice as is the case of with profit annuity. For offering index linked annuity, life insurance industry would need matching assets in the form of bonds linked to corresponding index and such bonds are not available in India. Though it may theoretically be possible to structure a suitable matching portfolio by purchasing index-linked bonds in another market and using currency swaps to hedge the cash-flows back into the local currency, in practice it may be difficult to find index-linked bonds that would be suitable for the Indian environment.

4.7.3 Variable / Unit linked annuity: In variable annuity, as it is called in the USA, and unit linked annuity as it is called in the UK, the annuity payment is defined in terms of number of units of the chosen fund/s. Under this design, the annuitant has direct exposure to the investment risk, but the mortality risk is shared and the insurer carries the risk of improvements in mortality. The annuity payment in money terms depends on the net assets value of the units of the fund/s on the due date of payment of annuity. The purchaser can decide on the asset allocation by selecting the fund/s in which the purchase price can be invested. The number of units so purchased is divided by the annuity factor at zero rate of interest, i.e. by the expectation of life for a person of that age at the commencement date, to arrive at the annuity installments in unit terms. The major problem with this design is that the annuitant is not certain of the amount of annuity payment in money terms. It is because of this deficiency that the variable annuity or the unit linked annuity has not picked up.

4.7.3.1 One could choose unitized with profits fund also and choose starting income level, within limits, by selecting anticipated bonus rate.

4.7.4 Revisable annuity: The revisable annuity design could be useful in the Indian context. This annuity could be in money terms or in terms of units and would be revisable periodically, generally once in five years. Typically in this design annuity is purchased in five year tranches with balance fund remaining invested in one or more funds. Balance fund remaining could be invested in non linked funds or linked fund of combination of the two. This limits the guarantees of the insurer to shorter period and the purchaser could also benefit if annuity rates improve. Only when the annuitant reaches age of 80 or 85, as may be decided by the life insurer, a conventional life annuity is given. This is a sort of win-win situation for both the life insurers and the purchasers.

4.7.5 Income drawdown: Income drawdown is another useful design for the pay out phase. This is strictly not an annuity in the strict sense of the term but is similar to systematic withdrawal plan offered by mutual funds. Given the public concern to ensure that pensioners' savings are not used up too quickly, and the unpopularity of forced annuitisation of the whole or part of the accumulated amount in a defined contribution plan, many countries permit some form of controlled withdrawal of money from the pension fund. It is common to prescribe a ceiling on the amount which can be withdrawn in each period. This might be equivalent to the amount of level life immediate annuity which the remaining fund would be sufficient to purchase at that point of time. In Chile, the maximum amount which can be drawn down each year under what is known as "programmed withdrawal" is calculated by dividing the fund balance at the start of the year by the expectation of life for an individual at that age. In this plan, individuals have to self-insure the longevity risk. The major problem with this design is that persons may outlive their assets, and die in poverty, or restrict their living standards needlessly and die excessively asset rich. One design could be to suitably divide the purchase price in two parts to buy :

- income drawdown for say $\frac{3}{4}$ th of the expectation of life at age 60 ; and
- buy deferred annuity at age 60 vesting on cessation of income drawdown with open market option to limit the guarantees.

The attraction of this design is its greater flexibility of keeping the pension fund invested in a wider range of assets from those which back conventional annuities.

4.7.6 "Annuitised Fund": The recent innovation is the "Annuitised Fund". In an annuity product, the concept is that forfeited benefits for those who die gear up the benefits of survivors. In the case of "Annuitised Fund", this cross subsidy is made explicit and is expressed in the form of "survival credits". When an annuity is purchased, annuitant gets "lifetime tenancy" of the annuity fund, receives survival credits while alive and tenancy is forfeited on death. Making the annuity mechanics transparent, makes it look complex. The purchaser has a choice of deciding the rate, within the specified limits, at which he could get income. Supportable income levels over the remaining life time is assessed using annuity factor based on economic and demographic factors at the commencement of the contract. The limits are reviewed periodically to allow for economic and demographic changes. At advanced ages, say 85 or so, the balance funds are utilized to provide conventional annuity.

4.8 The life insurance industry and the actuarial profession has a challenge on hand to evolve a solution for old age income in the form of annuity payments that would be viable from the risk management perspective of the life insurance industry as also from the individual perspective of managing the risk of living long. In evolving suitable alternate annuity models for India, the major challenges are the lack of suitable investment instruments, inadequate annuitant mortality data and the pace of improvement in the annuitant mortality. This is a challenging task and the actuarial profession in India will have to meet this challenge. This challenge is aptly summed up by Chris Daykin in his recent paper referred to in para 1.4 , saying that “Annuities are not popular with the consumer because they are perceived as poor value for money and because they are inflexible regarding the payment streams and limiting regarding investment opportunities. Insurers, on the other hand, are wary about taking on too much annuity business, since it represents a high concentration of systemic longevity risk and usually also exposes the insurer to significant asset / liability mismatch risk. In those countries where annuitisation is mandatory, the annuity business runs the risk of becoming an extremely dominant insurance product, which could in the end put the whole insurance market at risk.

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The future probably lies in the development of different forms of risk-sharing between pensioners and annuity providers. These could offer both greater flexibility to the pensioners (at the expense of some greater level of risk) and some moderation of the risks underwritten by the providers. Developing new products and new mechanisms for risk- sharing will be the challenge of the next decade.”

5. Conclusion

5.1 Currently, apart from the EPF and MP Act, 1952 which regulates EPF and other associated schemes, there is no legislation to regulate and supervise other retirement benefit arrangements like pension and gratuity. The PFRDA Ordinance, 2004 provides for regulation and supervision of such schemes.

5.1 In a defined contribution pension arrangement, the investment risks are switched from the employer/provider to the members/ subscriber and in this context there is a greater need for advice to be communicated to the members/subscribers and much of this advice is financial and actuarial in nature, which an actuary is well equipped to give. However, other professionals are also equipped to advice on many of the needs associated with defined contribution pension. The challenges to the actuarial profession would be to demonstrate the unique value addition that the actuaries can make to the whole process. The role of actuaries during the pay out stage is, however, undisputed.

5.2 In future, the pensioners and the annuity providers will have to share risks for evolving pay out designs that meet the customer aspirations and do not burden the annuity providers with undue risks. In the words of Chris Daykin, “Developing new products and new mechanisms for risk- sharing will be the challenge of the next decade”.

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