

**Potential Areas of Development for  
Advisory Group on Pension, Employee Benefits and  
Social Security Schemes**

**A.D. Gupta  
Consulting Actuary**

**Seminar on Current Issues in Retirement Benefits  
Mumbai  
18 September 2014**

# Agenda

Potential areas of development for AG:

- **Existing Guidance Notes / Actuarial Practice Standards**
- New areas requiring Guidance Notes / Practice Standards or new research areas
- New practice areas – who will develop these?

# Existing GNs / APSs

## Actuarial Practice Standard 26:

- Include **detailed methodology for valuation** of certain benefits such **cap on gratuity benefit, earned leave, etc** to bring consistency amongst reports issued by various actuaries.
- Clarify whether full disclosures are required for leave valuation and if yes, how should certain items be calculated (e.g. Service cost, actuarial gain / (loss))
- Clarify the position on (financial as well as deterministic) **assumptions** and support assumption determination process (e.g. by publishing yield curve at end of each quarter).
- Need to have more prescriptions on the methodology and assumptions used in **valuation of government / PSU pensions**.

## GN of valuation of exempt PF trust:

- Deterministic Approach (most commonly used) has many technical flaws that were highlighted in a presentation in CIRB last year.
- AG needs to address those to bring consistency in the practices followed in the market.

# Modeling approach – can it vary? (An example)

## *Approach to modelling – can it vary?*

- Mostly, modelling approaches are standard and do not vary. In some cases though, ***modelling approaches can make significant difference to ultimate valuation results.***
- Approach to modelling limit on gratuity benefit is one such example.

## *Modeling cap on Gratuity benefit*

Gratuity = Minimum (10,00,000,  $15/26 * \text{No of Completed Years} * \text{Salary}$ )

**When projecting , should limit be applicable only on past service or total service?**

- Joining Age **28 Years**, Current Age **40 years** Retirement Age **60 years**, Salary **Rs. 20,000** per month
- Assume - **Discount Rate 8%, Salary Growth Rate 5%**, Attrition 0%, No Deaths
- **Salary at age 60 =  $20,000 * 1.05^{32} = 95,299$**

# Modeling approach – can it vary? (An example)

### Approach A

$$\frac{\text{Min} (1000000, 13 \times \frac{15}{26} \times 95299)}{1.08^{19}} = \frac{\text{Min} (1000000, 714741)}{1.08^{19}}$$

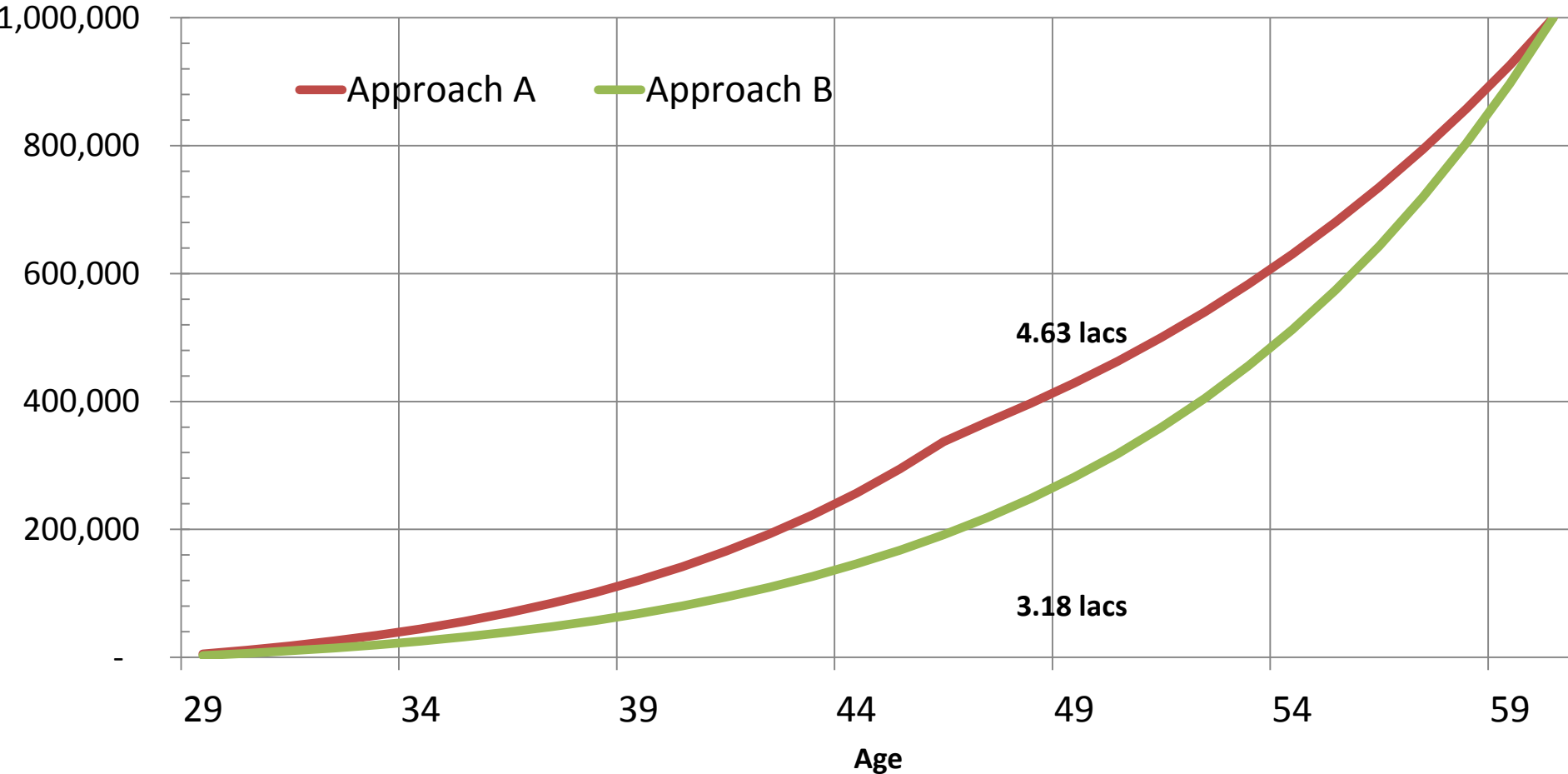
### Approach B

$$\frac{\text{Min} (1000000, 32 \times \frac{15}{26} \times 95299) * \frac{13}{32}}{1.08^{19}} = \frac{\text{Min} (1000000, 1759363) * \frac{13}{32}}{1.08^{19}}$$

***Approach B projects total services and pro-rates benefit for past service.***

# Modeling approach – can it vary? (An example)

**Build up of liability under both approaches**



# Agenda

Potential areas of development for AG:

- Existing Guidance Notes / Actuarial Practice Standards
- **New areas requiring Guidance Notes / Practice Standards**
- New practice areas – who will develop these?

# New areas of research / development

## **Longevity**

- Most of the pension schemes and post retirement medical schemes are getting under valued due to non availability of latest annuitants tables.
- Till new tables are published, we can use mortality improvement factors available from advanced markets to reduce the amount of under valuation.

## **Asset Liability Management**

- Employee benefits are long term fair value liabilities exposing entities to certain risks.
- To assist clients in better management of these liabilities and to develop new market for actuaries, AG can consider issuing guidance note on approach to ALM for such liabilities.



# Agenda

Potential areas of development for AG:

- Existing Guidance Notes / Actuarial Practice Standards
- New areas requiring Guidance Notes / Practice Standards

- **New practice areas – who will develop these?**

# New practice areas

- There is dire need to ***develop new practice areas for actuaries.***
- It will be easiest if it is supported by Advisory Group through research and publications and issuance of Guidance Notes / Practice Standards.
- Some of the new areas can be (which advisory group should take these?) :
  - ***Calculation of warranty / guarantee costs***
  - ***ESOP valuations***
  - ***Risk management***
  - ***Mergers and Acquisitions***

***Thank you***