

# 6th Capacity Building Retirement Seminar

**Gurgaon - 14 March 2019**



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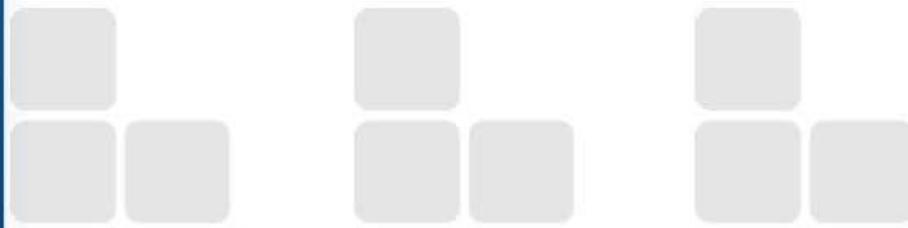
## New mortality tables - Implementation

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# Agenda – keeping proportionality in mind

- Brief Overview
- Limited comparison insight
- Implementation?
- My personal point of view

# Brief Overview

- Indian Assured Lives Mortality Report
- Published by IAI and prepared by Insurance Information Bureau of India

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Appendices with all the detailed tables

# New Mortality Tables- Indian Assured Lives Mortality (2012-14)

- This tables replaces the earlier IALM- 2006-08 Ult. Mortality rates.
- Derived based on data collected from 24 life insurance companies.
- Period of investigation - 1 April 2012 to 31 March 2014
- Standard table – Male medically underwritten insured lives -  
Graduated ultimate mortality rates of duration 2 & over
- Separate graduated rates for below categories is also available-
  - Females
  - Rural/ urban
  - Linked/ Non-Linked
  - Term assurance product categories

# Data overview

## 2.4 Categories included/Not included in the Investigation

No	Category	Remarks
1	Inforce	Included
2	All Exits in Record Year	Included
3	Fully paid-up	Included
4	Reduced paid-up	Included
5	All Reported Claims (Incl. Repudiated Claims)	Included
6	Sub-Standard lives	Not included
7	Pure health policies	Not included
8	Annuities & Pension	Not included
9	Joint Life Insurance Policies	Not included
10	Group Life Insurance Policies	Not included

# New Mortality Tables- Indian Assured Lives Mortality (2012-14)

- Summary of Data considered for investigation by Gender and Duration – 2012 -14 – Individual Assurance

Gender		Duration 0	Duration 1	Duration 2+	All Durations
Male	Exposed to risk (Life years)	57,048,939	42,500,689	348,341,175	447,890,803
	Count of Deaths	92,250	79,807	1,033,898	1,205,955
Female	Exposed to risk (Life years)	22,759,670	17,616,203	114,384,606	154,760,478
	Count of Deaths	28,145	22,343	198,076	248,564
Total	Exposed to risk (Life years)	79,808,609	60,116,892	462,725,781	602,651,281
	Count of Deaths	120,395	102,150	1,231,974	1,454,519

## Observation

- Males constitute more than 82% of the ‘Total Deaths’ and over 75% of the total ‘Exposed to Risk’

# New Mortality Tables- Indian Assured Lives Mortality (2012-14)

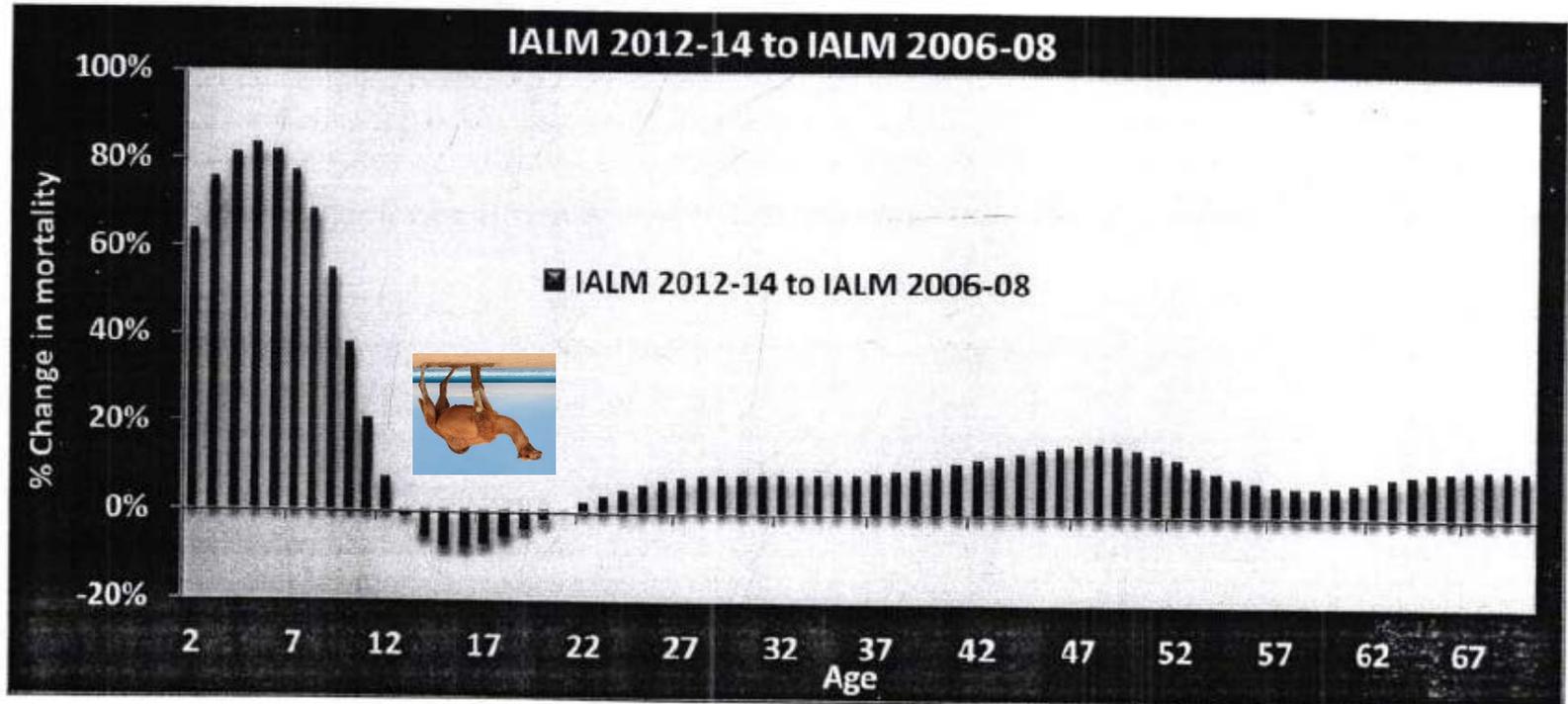
- Summary of Data considered for investigation by Medical Category and Duration – 2012 -14

Category		Duration 0	Duration 1	Duration 2+	All Durations
Medical	Exposed to risk (Life years)	15,172,741	11,517,773	129,017,649	155,708,162
	Count of Deaths	35,250	30,130	485,869	551,249
Non Medical	Exposed to risk (Life years)	64,635,867	48,599,119	333,708,132	446,943,119
	Count of Deaths	85,145	72,020	7,46,105	9,03,270
Total	Exposed to risk (Life years)	79,808,609	60,116,892	462,725,781	602,651,281
	Count of Deaths	120,395	102,150	1,231,974	1,454,519

## Observation

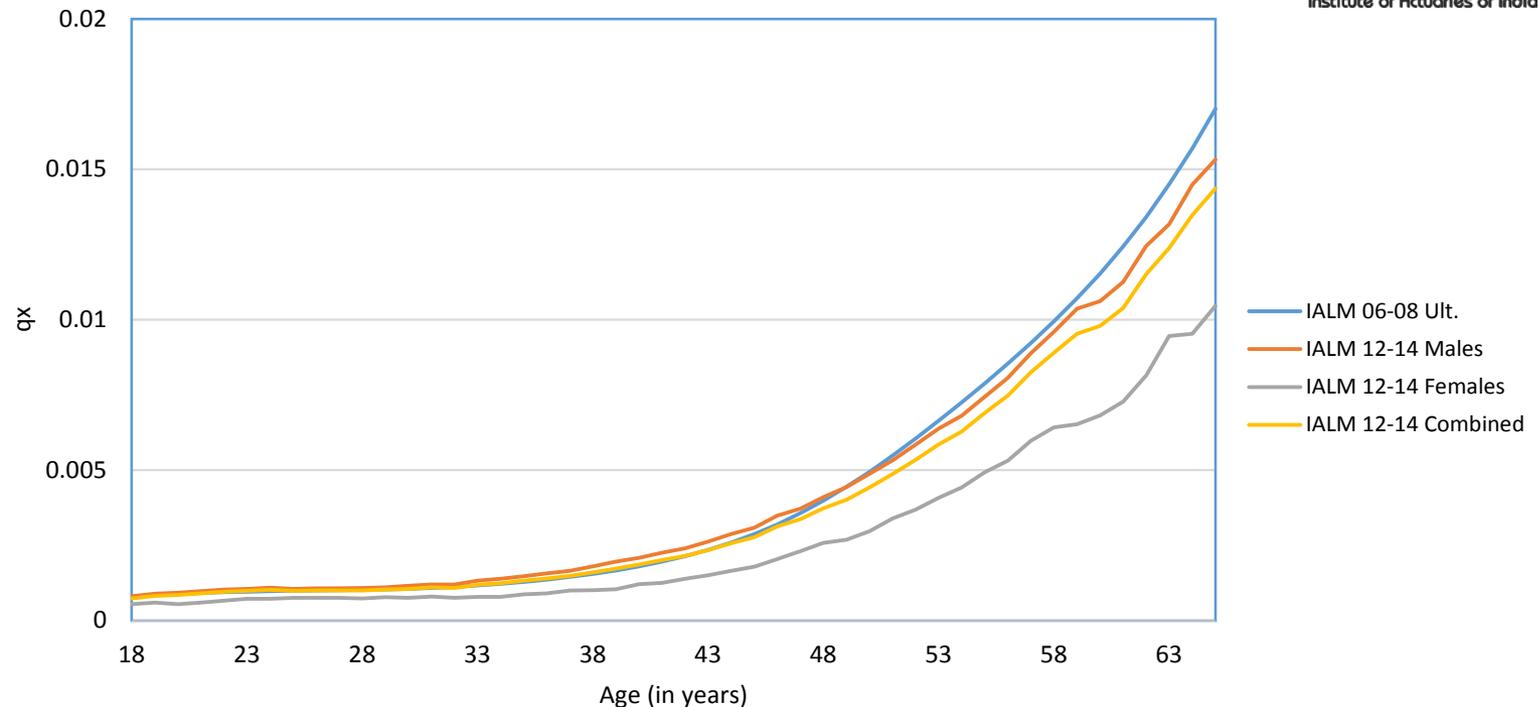
- Medical category makes up only 26% of the Total Exposed to Risk and 38% of the 'Total Deaths'

# Limited Comparisons



## Comparison of mortality rates under IALM 2012-14 with IALM 2006-08 Ult.

IALM 2012-14 vs IALM 2006-08 Ult.



### Note-

- The IALM 2012-14 mortality rates for Males, Females and combined are crude rates and not the graduated rates. The rates also are for 'Duration 2 & Over'.
- The mortality rates for Males and Females have been derived based on the crude mortality rates of 'Medical' and 'Non-Medical' Duration "2 & over" available separately for each gender.
- The mortality rates for the 'combined' population have been derived by combining the crude mortality rates of Males and Females mortality tables.

# Impact of latest 'standard' mortality rates on the Projected Benefit Obligation of Gratuity Plans



	Company 1	Company 2	Company 3
Industry	Construction/ Engg.	IT	Manufacturing
Headcount	3,255	80,937	4,137
Average Age (in years)	39.50	30.42	36.06
Average Service (in years)	8.04	3.41	9.35
Liability impact due to revised rates	(0.02%)	(0.02%)	0.02%

- The impact is in respect of change in mortality table from IALM 2004-06 Ult. to the standard tables of IALM 2012-14 (Male insured lives - Graduated ultimate mortality rates of duration 2 & over)
- Method of Valuation – Projected Unit Credit
- Scheme Rules – Benefit as per Company's gratuity scheme or Payment of Gratuity Act, 1972 (as amended up to date) whichever is greater

# Impact of IALM 2012-14 (Combined) mortality rates on the Projected Benefit Obligation of Gratuity Plans



	Company 1	Company 2	Company 3
Industry	Construction/ Engg.	IT	Manufacturing
Headcount	3,255	80,937	4,137
Average Age (in years)	39.50	30.42	36.06
Average Service (in years)	8.04	3.41	9.35
Liability impact due to revised rates	(0.02%)	(0.01%)	0.02%

- The impact is in respect of change in mortality table from IALM 2004-06 Ult. to the IALM 2012-14 (combined) mortality tables of duration 2 & over
- Method of Valuation – Projected Unit Credit
- Scheme Rules – Benefit as per Company’s gratuity scheme or Payment of Gratuity Act, 1972 (as amended up to date) whichever is greater

## Appendix – Key valuation assumptions applicable to the companies considered for the assessment



	Company 1	Company 2	Company 3
Industry	Construction/ Engg.	IT	Manufacturing
Valuation Date	31 March 2018		
Discount Rate	8.00%	8.10%	8.10%
Salary escalation Rate (p.a.)	5.50% - 7.50%	8.00% - 10.00%	7.00% - 10.00%
Attrition Rate (p.a.)	2.00% - 6.00%	10.00% - 70.00%	4.00% - 18.00%

# Implementation for Employee Benefits?

- APS 27

## 8.5.2.3 Mortality / Morbidity

*When considering mortality assumptions, the latest relevant published mortality tables should be considered as the reference in setting mortality/morbidity assumptions. An in-service period against a post-retirement period may be considered separately. However, the member has to examine suitability of these rates,.....*

- Relevance?
- Suitability?
- In service vs post retirement?
- 1 April 2019?

# Personal points of View

- Published table not necessarily “relevant” or suitable on its own for our purposes and employee base
- 1 April 2019 date mentioned in published circular no relevance to EB work
- Use only for pre-retirement and so materiality small
- What may be suitable?
  - Combined table all lives? How to explain to auditors/clients?
  - Wait for 2015-2017 tables combined and together with annuitants table?



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