



The Actuary India

Magazine of the Institute of Actuaries of India

September 2022

DEEP-DIVE: LIFE INSURANCE PRODUCTS

NON-PARTICIPATING INDEX LINKED PLANS: A PRIMER

ONLINE TERM INSURANCE

RETRACING RATES

ARTIFICIAL INTELLIGENCE

I, ACTUARY

ORIGIN STORIES

IN CONVERSATION WITH SHRI N RANGACHARY



Table of **contents**

(Click on the titles to read more)

Editorial

Job listings



Features

I, Actuary

Himanshu Arora discusses the importance of Artificial Intelligence and how the AI revolution is impacting our actuarial profession.

REtracing rates

Should life insurers brace for another round of hikes in online risk rates? Read as **Ishaan Wadhwa** and **Abinash Churoria** reflect on the evolution of the online term insurance market in India.

IAI Core Practice exam execution guidelines - Part 2

This second article of the series by **Shreyash Naresh Maheshwari** outlines the exam techniques that must be implemented after receiving the answer paper to maximise the probability of passing.

Non-participating index linked plans: A primer

Read as **Shailly Keshwani**, **Dipesh Gupta** and **Apeksha Momaya** discuss in detail the product design, features, risks as well as reserving and investment framework around non-participating index-linked insurance products.



Resources

Dealing with reinsurance clauses in reserving: Part 2

This is in continuation of "Dealing with reinsurance clauses in reserving (Part 1)". In this part, **Siddharth Sandeep Gandhi** explains clean-cut treaties and the protection of PML error with a sample calculation.

Table of contents

Events

Get a synopsis of IAI events and webinars reported by various dedicated actuaries and students.

● 6th webinar on IFRS17

● 6th webinar on banking, finance and investments

Podcasts

Reflections on two decades of insurance liberalisation

Join our host, **Yogita Arora**, as she takes us on the glorious journey of the Indian Insurance industry with **Shri N Rangachary Ji**, the first chairperson of IRDAI, reflecting on the two decades of insurance liberalisation.

Culture

Risk management for academicians and practitioners

Sonjai Kumar shares a summary of his latest book on the fundamentals and practicalities of enterprise risk management (ERM). The book is a handy reference for students and qualified actuaries as ERM gets adopted across financial institutions in India and abroad.

Trivia

The trivia(l) actuary

A cozy nook to share actuarial (or mathematical) trivia, history, and other nuggets of information to spill over tea.

● The rise and fall of the Indian motor third-party pool

Table of contents



Humour

A light-hearted take on the hopes, trials, tribulations and perhaps even foibles of everyday actuaries in their everyday lives.

■ External oversight by **B.M. Sampad**

■ Product & pricing review committee by **Sunil Sharma**



Puzzles

Take a much-needed study break to beat exam stress and tease your brain with this rebus puzzle by **Ritesh Gupta**.

■ Exposing exams

Editorial

September is an interesting month! Weather-wise, the Indian subcontinent is seeing one monsoon withdrawing and another setting in and the equinox. For the avid readers – the Hobbit Day and Tolkien week fall in September and here is another unverified fact – Shakespeare has never mentioned September in any of his plays!

At The Actuary India (TAI), we have tried to make this month interesting and useful for all of us with some more new content.

This September, TAI brings to you a couple of life insurance and reinsurance focused articles. We take a deep dive into non-participating index linked plans specifically at product design, reserving and the investment framework. There is also an interesting feature on how life reinsurance rates have been historically.

Life around us is changing rapidly thanks to new and emerging technology. Smart devices are everywhere, there is plenty of data being gathered and analysed. Where there is data, there is always opportunity for actuarial work, and this may well determine the future of our profession and we have a feature on AI and us!

As in August, we continue looking at P&C reinsurance clauses and how to deal with them in reserving. We also have our usual dose of humour, puzzles, trivia, and a book summary. For those sitting exams, there are tips on tackling the CP2. Do have a look and add your experience and hints in the comments!

Thank you for being with us in the TAI journey so far and please do read, share and contribute.

Rajeshwarie Iyer

Editor, The Actuary India

Magazine of the Institute of Actuaries of India

Job listings

GLOBAL RISK CONSULTANTS



Global Risk Consultants (GRC) is an Actuarial Consulting Partnership Firm established in India in 2015. Since its incorporation, GRC has had impressive growth whilst maintaining uncompromising quality standards. With its clients spread across Asia, Middle East, Africa & Europe; GRC has been offering consulting services in the areas of Life, Non-Life, Health, Re-insurance, Employee and Other Benefits.

GLIMPSE OF OUR SERVICE OFFERINGS:

INSURANCE RELATED COVERING:

Regulatory Reporting/Appointed Actuary Services:

Valuation of policyholder liabilities, preparation of regulatory & financial condition reports, claims adequacy assessment, peer review, scenario & stress testing, re-insurance adequacy & sufficiency assessment, retro-cession arrangement & risk retention analysis, claims experience analysis.

Implementation of IFRS 17:

Gap analysis, financial impact assessment, implementation planning, implementation & dry run, support services covering actuarial, accounting, IT & finance, capital modelling and business strategy.

Actuarial Services as part of Insurance Audit under International Standard on Auditing (ISA 620): Valuation of Policyholder Liabilities.

Product Designing and pricing:

Product design in compliance with the Regulatory Requirements, Target market and market benchmark, building robust Pricing Models, Regulatory Filing and Reporting, Experience monitoring and management, Premium Adequacy Assessment, Re-pricing of existing products to meet underlying Regulatory Compliance.

Capital Management and Business Strategy:

Projection of capital requirements, assessment of economic capital/risk based capital, impact analysis of new products on capital requirement, solvency assessment and risk management.

Merger/Acquisition/New entrants:

Assessment of fair value of business, Actuarial due diligence, Financial due diligence, Commercial due diligence, Assisting in discussion with the buyer/seller, Feasibility and Viability studies.

PENSION & EMPLOYEE BENEFITS COVERING:

Compliance Reporting:

Certified reports as per IAS 19 (Revised 2011) & US GAAP (ASC 715), Due diligence and consulting on accounting framework, merger, acquisitions, and takeovers, accounting for cost of benefits.

Benefit design & Review:

Determine the cost impact of introduction of new plans and benefits, benchmark existing Defined benefit (DB) plans with the general market, Scheme design and alteration from Defined Benefit to Defined Contribution conversion, analysis of cost v/s benefit.

Other Benefit Services:

Actuarial valuations for assessing funding level, derive contribution rates of funded plans for adequacy and better financial management and financial planning, advice cost implications of changes in policy from an HR & compliance perspective.

Actuarial valuation for Defined Benefit Plans like;

Gratuity, Leave Encashment, Long Service Award, Long Term Incentives, Employee Stock Ownership Plans (ESOP), Corporate Defined Benefit and State Sponsored Pension Plans.

WE ARE REACHABLE AT

503, 5th Floor, Madhava Building, Bandra Kurla Complex, Bandra (E), Mumbai - 400051, India

Tel.: +91 22 4600 3434

Email: grc@globalriskconsultants.in

Website: www.globalriskconsultants.in

©2015 Global Risk Consultants, All Rights Reserved.

September 2022

Reliance Nippon Life Insurance Company (RNLIC)

Reliance Nippon Life Insurance Company is amongst the leading private sector life insurance companies in India in terms of individual WRP (weighted received premium) and new business WRP. The company is one of the largest non-bank supported private life insurers with over 10 million policyholders*, a strong distribution network of 713 branches and 46,538 advisors as on March 31, 2022. The company holds Claim Settlement Ratio of 98.7% as on March 31, 2022.



1 JD for Valuation

Designation - **Senior Manager/Associate Vice President**
Reporting to - **Head of Valuation**

Job Description: -

- ❖ Statutory Valuation
- ❖ Determining solvency capital requirement
- ❖ IRDA reporting
- ❖ Experience analysis
- ❖ Reinsurance

Qualifications and Technical Skills: -

- ❖ 7+ years of total experience preferably 3+ years in statutory reporting team
- ❖ Should have cleared at least 10+ Actuarial exams
- ❖ Proficient in Excel and Good working knowledge of Prophet (Actuarial software) and SQL
- ❖ Should have good understanding of actuarial principles

2 JD for Pricing

Designation - **Senior manager/Associate Vice President**
Reporting to - **Head of Pricing**

Job Description: -

- ❖ Product pricing, designing innovative and attractive products
- ❖ Coordination with the reinsurer
- ❖ Participate in the Product Management Committee
- ❖ Identification of key risk in the product
- ❖ Support in product launch
- ❖ UAT and system readiness
- ❖ Additional responsibility may be assigned from time to time

Qualifications and Technical Skills: -

- ❖ 8+ Actuarial exams
- ❖ 7+ years of experience in Indian Life Insurance Actuarial team, pricing experience will be preferred
- ❖ Proficiency in developing actuarial models and excel

3 JD for Shareholder Reporting and Business Planning Team

Designation - **Sr. Manager/Chief Manager**
Reporting to - **Chief Manager/AVP**

Job Description: -

- ❖ New business profitability
- ❖ Embedded value calculations
- ❖ P/L and KPI projections
- ❖ Economic capital
- ❖ Planned vs Actual walks
- ❖ Ad hoc requirements

Qualifications and Technical Skills: -

- ❖ 6+ Actuarial exams
- ❖ 4+ years of experience in Indian Life Insurance Actuarial team
- ❖ Reporting/planning experience will be preferred
- ❖ Proficiency in developing actuarial models, excel and Prophet

Contact Person

Please send your resume to

Sejal Choudhary (+91 9892910946)

sejal.choudhary@relianceada.com

September 2022

Reliance Nippon Life Insurance Company Limited. IRDAI Registration No.: 121, Registered Office: Unit Nos. 401B, 402, 403 & 404, 4th Floor, Inspire-BKC, G Block, BKC Main Road, Bandra Kurla Complex, Bandra East, Mumbai - 400051. India. T +91 22 6896 5000. For more information or any grievance, 1. Call us between 9am to 6pm, Monday to Saturday (except public holidays) on our Toll Free Number 1800 102 1010 or 2. Visit us at www.reliancenipponlife.com or 3. Email us at: mlife.customerservice@relianceada.com. 4. Chat with us on our WhatsApp number (+91) 7208852700. Trade logo displayed above belongs to Anil Dhirubhai Ambani Ventures Private Limited & Nippon Life Insurance Company and used by Reliance Nippon Life Insurance Company Limited under license.

Beware of spurious phone calls and fictitious/fraudulent offers. IRDAI clarifies to public that: 1. IRDAI or its officials do not involve in activities like sel of any kind of insurance or financial products nor invest premiums. 2. IRDAI does not announce any bonus. Public receiving such phone calls are requested to lodge a police complaint along with details of phone call, number.



निक्षेप बीमा और प्रत्यय गारंटी निगम

www.dicgc.org.in

निविदा सूचना

निगम के बीमांकिक दायित्व के आकलन हेतु बीमांकिक फर्म / कंपनी की नियुक्ति के लिए निक्षेप बीमा और प्रत्यय गारंटी निगम (निबीप्रगानि) दो भागों (तकनीकी बोली और मूल्य बोली (अलग-अलग लिफाफों में)) में सीलबंद निविदा आमंत्रित करता है। प्रस्तावों को एक बड़े लिफाफे में रखा जाए जिसपर स्पष्ट अक्षरों में "बीमांकिक की नियुक्ति / **Appointment of Actuary**" लिखा हो और वह सीलबंद हो और प्रस्ताव 28 अक्टूबर, 2022 को शाम 04:00 बजे तक या उसके पहले प्रस्तुत किया जाए। निविदाएं 01 नवम्बर, 2022 को दोपहर 03:30 बजे खोली जाएंगी। इस निविदा में भाग लेने के संबंध में विवरण www.dicgc.org.in पर लॉग इन करके प्राप्त किया जा सकता है।

सी एम सैमुएल
उप महाप्रबंधक



Deposit Insurance and Credit Guarantee Corporation

www.dicgc.org.in

Tender Notice

Deposit Insurance and Credit Guarantee Corporation (DICGC) invites sealed tenders in two parts (Technical Bid and Price Bid (in separate envelopes)) for appointment of Actuary Firm / Company **for estimating the actuarial liability of the Corporation. The proposals should be** put in a large envelope super scribed "**Appointment of Actuary**" and should be sealed and submitted to the Corporation on or before **October 28, 2022 at 04:00 pm.** The tenders will be opened on **November 01, 2022 at 03:30 pm.**

The details regarding participation for this tender can be obtained by logging on to www.dicgc.org.in

C. M. Samuel
Deputy General Manager

ONE DECISION, A LIFETIME OF OPPORTUNITY

At EY, the leading global professional services firm, our Actuarial consulting services combine the best of global insight and local reach. We assist our financial services and insurance clients in developing sound strategies and decisions for the success of their enterprise. We are looking for Actuarial Fresher's with the right analytical and interpersonal skills and a truly global mind-set to join us.

Job Description:

You will get to view complex issues from every angle for some of the world's leading financial services companies that are our clients. You will be tackling a variety of challenges with consulting projects such as Mergers & Acquisitions; Asset Liability Management; Model Validation and Financial Modelling for Pricing, Reporting, Business Planning; MCEV; Product Pricing and Development; Regulatory compliance and more.

Minimum eligibility criteria:

Freshers with Graduate degree and membership of IAI/IFOA/SOA, with minimum of 5 actuarial exams cleared (as per the old curriculum)



Location: Mumbai/Delhi - NCR/Kolkata

Apply today by sending your resume to
pani.raj@in.ey.com and nayan.bhagat@in.ey.com 



Also please fill in your details in the form while applying:
<https://forms.gle/i8xuKMncLUzkA1CV7>

The Exceptional EY experience lasts a lifetime!!



AGRICULTURE INSURANCE COMPANY OF INDIA LIMITED
Regd. Office: Office Complex 1, 5th floor, Plate B & C, East Kidwai Nagar, New Delhi-110023

ADVERTISEMENT FOR APPOINTED ACTUARY and or CHIEF ACTUARY

"Agriculture Insurance Company of India Ltd. (AIC), New Delhi is a speciality Agriculture Insurance Company, 5th largest in the Indian non-life insurance sector, having market share of more than 50% in Crop insurance. Further, AIC has also been permitted to carry on Agriculture Insurance Business except health insurance, which widens the scope of coverage to all Rural Non-traditional Businesses and aiming to cover the huge protection gap lying uninsured with respect to other risks related to agriculture and allied activities of the farmers.

The Company is inviting application from resident Indian Citizens for the post of Appointed Actuary and or Chief Actuary on full time contractual basis for a period of 3 years, renewable subject to approval of the Competent Authority.

For details about Age, Qualification, experience, emoluments, place of posting, Scope of work etc, please visit Careers section of our website www.aicofindia.com.

Gain a global perspective

Milliman is seeking actuarial professionals with strong analytical, problem-solving, technical and communication skills to join our life practice based in Gurgaon.

This is an ideal opportunity for actuarial students to join and collaborate with our team of experts from across the world in a fast-paced, challenging and rewarding environment.

REQUIREMENTS

- 0-1 year of professional experience
- Bachelors or Masters in a relevant field (Actuarial Science, Mathematics, Statistics, Economics, etc.)
- Pursuing actuarial examinations from a recognized professional body/institute
- Basic actuarial domain knowledge of life and annuity products
- Knowledge of Python, R and SQL is preferred
- Excellent analytical and communication skills

GET READY TO MAKE A DIFFERENCE

Please upload your applications along with a detailed Curriculum Vitae at

<https://tinyurl.com/mrxht785>

For more information about Milliman, please visit: in.milliman.com



Our Team



Kunj Behari Maheshwari

Chief editor

Kunj Behari Maheshwari is a partner at Willis Towers Watson Actuarial Advisory LLP and the Head of Life Insurance consulting for India and Sri Lanka within WTW's Insurance Consulting and Technology division.

He is passionate about actuarial work, research and volunteers regularly towards initiatives at the IAI. He enjoys swimming and being outdoors.



Prakhar Mody

Editor

Prakhar is a qualified actuary with extensive experience in financial risk management and technology transformations having worked with banks, insurers, financial institutions and corporate clients across the globe.

He is also an avid gamer with an interest in fictional novels and trekking



Anirudh Bansal

Editor

Anirudh is the founder of InsurTech Actuary and is a General Insurance Actuary. He is passionate about microinsurance, innovation and InsurTech startups.



Rajeshwarie Iyer

Editor

Rajeshwarie Iyer is working as the VP, Head Specialty Bangalore for SwissRe Global Business Solutions. She is a Fellow of the Institute of Actuaries of India and the Institute and Faculty of Actuaries UK. Rajeshwarie has worked in General Insurance in reserving, pricing and regulatory reporting and is currently underwriting reinsurance.

She volunteers actively for the profession and is a classical dancer who enjoys swimming, blogging and reading



Kathan Jain

Editor

Kathan works at Ankolekar & Co. as a senior associate. He's obsessed with food and enjoys binge-watching & solving puzzles in his free time.

The Institute of Actuaries of India (IAI) is a statutory body established under The Actuaries Act 2006 (35 of 2006) for regulating the profession of Actuaries in India. The provisions of the said Act have come into force from the 10th day of November 2006, in terms of the notification dated 8th November 2006, issued by the Government of India in the Ministry of Finance, Department of Economic Affairs.

The Actuary India is the flagship magazine of the IAI that has been in publication for over two decades. We aim to provide our members and the larger actuarial community a platform to connect, exchange views and promote thought-leadership and research beneficial to the profession.