



The Actuary India

Magazine of the Institute of Actuaries of India

May 2022

INDUSTRY STATISTICS

INCLUSIVE INSURANCE

PYTHON

PYTHON FOR ACTUARIES

ESG

ESG: WHY SHOULD INSURERS CARE?

INDUSTRY STATISTICS

THE LAST ACTUARY

CULTURE

THE BINOMIAL ACTUARY

Table of **contents**

(Click on the titles to read more)

President's column

Editorial

Letters to the Editor

Job listings

News Flash



Features

ESG: Why should insurers care?

Environmental, Social, and Governance (ESG) risks have become more significant in past years. **Manisha Sharma** discusses these changes and outlines why insurers and actuaries should care about this.

What's your calling?

Shreya V Srikants shares a brief summary of the insurance industry practice areas from the actuarial standouts.

80 plus

An IAI blog space, proposed by **Sateesh Bhat** to share actuarial and related musings.



Resources

Inclusive insurance

ShivaKhumar provides an example of dashboard actuaries can develop to enhance their communication and outreach.

Table of contents

Mind your g's

Subhashree Nigamma sets out a must-refer checklist on determining reserves and undertaking solvency calculations for General Insurance companies in India.

Python for actuaries

Mansi Aggarwal and **Kamal Sardana** discuss why actuaries should learn Python and help them kick-start the journey.



Events

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

● [5th webinar on pensions, other employee benefits & social security](#)



Culture

The binomial actuary

Pritha Dalmia has taken on the job to show the world how talented actuaries can be even outside their professional lives.

● [Jaykishan Rungta](#) ● [Chirag Kumar](#)

The Last Actuary

A graphic novel by **Devadeep Gupta** depicts a world 25 years into the future following the story of the last remaining actuary and the decline in the profession.



Trivia

The trivia(l) actuary

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

● [Origin of surrender values](#)

Table of contents

Humour

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

■ [Twinkle twinkle little star](#)

■ [Graduate job interview](#)

Puzzles

An alcove for actuaries to flex their grey matter and break the monotony by **Kathan Jain**.

■ [Puzzling pension](#)

May 2022

"In today's era of volatility, there is no other way but to re-invent. The only sustainable advantage you can have over others is agility; that's it. Because nothing else is sustainable, everything else you create somebody else will replicate." - Jeff Bezos.

In line with the quote, I am delighted to share that we have received an overwhelming response for the new Digital avatar of Actuary India Magazine. I wholeheartedly thank the Actuarial fraternity and the non-Actuarial community for such a splendid response. "No words, but applause" to the editorial team for their hard work, dedication, and continuous efforts.

It is my pleasure to announce that the election shall be held in the second quarter of this financial year. It will be conducted as per the Actuaries (Election to Council) Rules 2021 by "Voting through electronic means."

I also request fellow members to file their nomination forms in the upcoming Council Election so that their expertise and innovative thinking would be beneficial to leap to the next level.

As you may be aware, IAI has established an Olympiad in Actuarial Science for Indian Students (OASIS) to spread awareness about Actuarial Science among Generation Z. The OASIS was formally launched on 27 May 2022 at Varanasi by conducting the 1st seminar for principals & teachers of schools in the Varanasi District. Going ahead, we plan to have more such seminars or webinars, the next one being tentatively planned for the last week of June 2022. I invite all readers, students, and members to spread awareness about the OASIS. I would encourage each of you to help organise similar seminars in other cities. Kindly get in touch with rashi@actuariesindia.org to conduct OASIS webinars/ seminars.

In the month of April & May 2022, 18 companies approached placement cells, providing various opportunities for interns & experienced students. A few of them are Edelweiss Tokio Life Insurance, Nomura, Tata AIA, SBI General Insurance, Marsh & McLennan Companies, and TCS. Profiles like Decision Analytics, Actuarial Analyst, Pricing and Risk Assessment, and Capital Management were a few of the top ones, among many other opportunities offering a maximum salary package up to 25 lakhs. There were around 500 students who had applied through this placement cell. I would like to invite all employers to take help of our placement cell for their talent requirements.

As we must have read a quote from organisational architect Ms. Jeanne W Ross, "Clearly, the thing that's transforming is not the technology — the technology is transforming you." In line with this, IAI has started training programs to transform the skills of its students and members. Continuing the success of last year in the number of registrations for Python, Machine Learning, and IFRS17, we could see a similar success graph this year. The training department continues to offer high-end learning programs. Currently, Microsoft Excel Macros and Excel VBA Webinar Series 2022 are progressing with huge participation. In addition, a unique and comprehensive training program on Practices of Valuation of Employee and Other Benefits is also rolled out. I urge all our members to utilise the opportunity of all training programs and be equipped to meet the growing challenges of the profession.

After almost 2 years, we will have the 37th IFS in seminar format on 23 & 24 June 2022, where the members can connect and interact in person. I invite you to attend this seminar which is planned to be conducted at Hotel Taj Vivanta, Turbhe, Navi Mumbai.

The Council, in its meeting held on 16 April 2022, approved minor changes in Professional Conduct Standard (version 4.00) to provide clarity on Section 5 relating to Compliance with Standards.

Institute declared the results for March 2022 Actuarial Examinations and CB3 April 2022 Examinations in May 2022. I am happy to mention that the results are improving diet by diet. The March 2022 results have increased around 5% over the previous diet. The next Actuarial Examination is scheduled for July 2022, and I wish success to all the aspiring actuaries!

Best Wishes,

President, Institute of Actuaries of India

Letters to the Editor

Sampadji,

First of all, my best wishes.

I used to read Institute (London) magazines long back, and I still remember FM Redington and others. I started in my mid-70s with programming, not by attending classes but by reading manuals. It was really challenging. In 5 decades, things changed too fast, and I have lesser energy due to old age.

Everything is available from Google, but I find that too time-consuming - you ask one question, you get a dozen or more answers. You have to use your actuarial skill to pick the right answer!

Now with webinars, we hear, and we forget. I need to download the whole thing and watch it again and again. But I don't know how to download it - maybe it is intellectual property.

At least after a month of the webinar, all members should be allowed to download these if the profession has to progress - knowledge sharing!

Once again, wish you all success in your endeavour.

Regards,

A P Peethambaran

26 May 2022

Sampadji,

This has reference to the article related to "Mind your p's: 15 checks to complete before signing off valuation reports".

Please find my observation below. Overall, this list provides the necessary checks required before signing off the valuation. However, I have the following suggestions:

Segregate the list based on the data (demographic/ financial), assumptions (demographic/financial), method and provision.

In addition to that, I would like to suggest a few more checks in this list (several points might be already there in the article). I understand these checks will increase the count.

Data (Demographics):

Any changes in personal information (e.g. date of birth, date of hire, etc.) since the prior year.

Any record valued last year but not included in the current year data provided.

Reasonable increase in investing service and credited service since the prior year.

Checking the presence of any duplicate records from the data.

Checking the presence of any unreasonable data (e.g. age less than 18 years of service more than 50 years).

Benefit eligibility checks for severing employees who received benefits.

Data (Asset)

The beginning of the year asset number should match the end of year asset value from last year's final report.

The actual return on assets should be reasonable with the asset mix.

Benefit payment to the severing employees & contribution payment date should be during the valuation period.

Assumption

Demographic assumptions (withdrawal rates, benefit payment date etc.) used for valuation should be aligned with actual experience. Actuary required to check how often experience studies on the demographic assumptions are performed.

The expected return on assets should be reasonable with the asset mix.

The discount rate should conform to the guidelines of accounting standards.

Valuation method

Rerun the valuation system to check if it was producing the same result which has been delivered to a client last year.

Check and analyse for any record producing zero liability in the current year result.

Check whether test cases are completed to verify the reasonability of the valuation coding.

Regards,

Partha Chaudhuri

14 May 2022

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

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May 2022

MEGHALAYA ENERGY CORPORATION LIMITED
"ACCOUNTS DEPARTMENT"
" LumJingshai", Short Round Road, Shillong – 793001

Phone No :::: 0364 – 2592155 :::: Fax No. :::: 0364 – 2591344

No. MeECL/Accts/PEN/ACV/50/2022/6

Dated 12th May, 2022.

Notice inviting expression of interest

The Meghalaya Energy Corporation Limited (MeECL) invites Expression of Interest (Eoi) for engagement of an Actuarial Valuation Consultant for doing actuarial valuation of retirement benefits viz, pension liability, leave Encashment liability, Gratuity liability and Medical liability for the employees, pensioners and family pensioners as on 31.03.2022

1	Due date & time for receipt of tenders	30 th May, 2022 at 12.00 Noon
2	Technical bid opening date	30 th May, 2022 at 3.00 PM

Interested firms may view and download the Eoi document containing the detailed terms and conditions, evaluation criteria and scope of work at the website 'www.meecl.nic.in and website of Institute of Actuaries of India, for any clarification, due date extension or corrigendum.



R. Warjri
Chief Accounts Officer

Copy to:

- 1) The Chairman-cum-Managing Director, MeECL & Subs. for kind information.
- 2) The Director (Finance), MeECL & Subs. for kind information.
- 3) The Director (Corporate Affairs), MeECL & Subs. for kind information.
- 4) The Director (Transmission), MePTCL for information.
- 5) The Director (Generation), MePGCL for information.
- 6) The Director (Distribution), MePDCL for information.

R. Warjri
Chief Accounts Officer

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At EY, the leading global professional services firm, our Actuarial Advisory 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

- Job specification:**
- ▶ You will be required to assist our largest Indian and global clients in a variety of Actuarial tasks, including Developing Actuarial Models & Testing
 - ▶ Prophet, AXIS, MG-ALFA
 - ▶ Pricing & Product Development
 - ▶ Valuation & Reporting
 - ▶ Support in preparation of reports and documentation to be presented to the Board and the Regulator
 - ▶ IFRS17 implementation with an understanding of SAS, Moody's and/or Aptitude



Minimum eligibility criteria:

- 1 5-10 years
- 2 Willingness and flexibility to travel and work with global clients
- 3 Strong analytical mindset
- 4 Candidate should have cleared at least 6 Actuarial papers
- 5 Good communication skills

Location Delhi, Mumbai & Kolkata

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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 opportunity to collaborate with our team of experts from across the world in a fast paced, challenging, and rewarding environment.

REQUIREMENTS

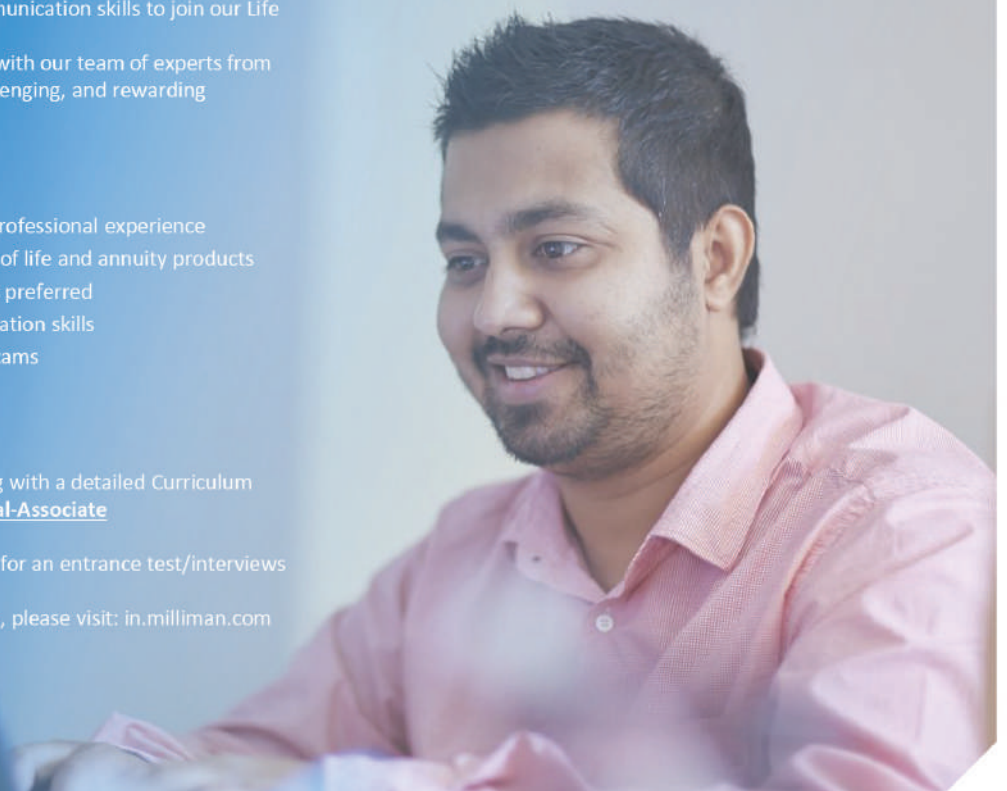
- Fresh graduates / up to 1 year of professional experience
- Basic actuarial domain knowledge of life and annuity products
- Knowledge of Python, R and SQL is preferred
- Excellent analytical and communication skills
- Demonstrable progress through exams
- Driven and self-motivated

GET READY TO MAKE A DIFFERENCE

Please upload your applications along with a detailed Curriculum Vitae at <https://tinyurl.com/Actuarial-Associate>

Shortlisted candidates will be invited for an entrance test/interviews in May/June 2022.

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



Gain a global perspective

Milliman is seeking actuarial professionals with strong technical, actuarial modelling and communication skills to join our **Non Life** practice based in Gurgaon.

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

REQUIREMENTS

- Masters or Bachelors degree in a relevant field with a good academic record.
- 0-1 year of relevant experience
- Strong technical and actuarial modelling skills
- Excellent communication skills
- Demonstrable progress through exams
- Prior SAS, R, Python and SQL experience is preferred
- Driven and self-motivated

GET READY TO MAKE A DIFFERENCE

Please upload your applications along with a detailed Curriculum Vitae at <https://recruiting2.ultipro.com/MIL1017/JobBoard/f54234e9-dfde-b183-fd20-4fbd19c8a7a/OpportunityDetail?opportunityId=c913eef2-f838-40ed-bfdf-cf67ae4cf080>

Shortlisted candidates will be invited for an interview in early June 2022.
For more information about Milliman, please visit: in.milliman.com



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- Must Have: Cleared Min of 3 Actuarial Papers

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Please send your Resume to andrea.north@pnbmetlife.com
Subject Line: Application for Actuarial Opening

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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.