



International Actuarial Association
Association Actuarielle Internationale



Presidential Town Hall

Sao Paulo

8.30 – 10am

Bozenna Hinton, IAA President

May 22, 2025



To Enable Text-based Translations and/or Audio Interpretation

1. The host will provide a link in the chat. Copy/paste this link to a web browser or scan the QR code with your phone.
2. Make sure that you are using a headset or earbuds.
3. Select your language of choice and turn on the audio.



The image features a central white circle from which numerous black lines radiate outwards, creating a starburst or impact effect. The lines vary in thickness and length, some ending in small black dots. The word "Impact" is written in a bold, orange, sans-serif font across the center of the white circle.

Impact



IAA Mission

I

Impact: Supranational Relationships

Develop relationships with key supranational institutions, providing actuarial expertise on issues of relevance in *global forums*.

A

Assure: Promotion of the Profession

Support the development of the actuarial profession worldwide and promote appropriate professional/education standards through Member Associations.

A

Advance: Development of Competence

Promote the advancement of scientific knowledge and the skills of the actuarial profession.



The Vision of the IAA



*“The actuarial profession is **globally recognized** as leading experts in risk and financial security, contributing to the well-being of society.”*



Strategic Objectives





Town Hall Agenda - Impact

(i) Impact through Supras

IAIS

OECD

Climate

(ii) Impact through FMAs

Brazil

India

Kenya

AADA

(iii) Individuals making an Impact

Frank Chang

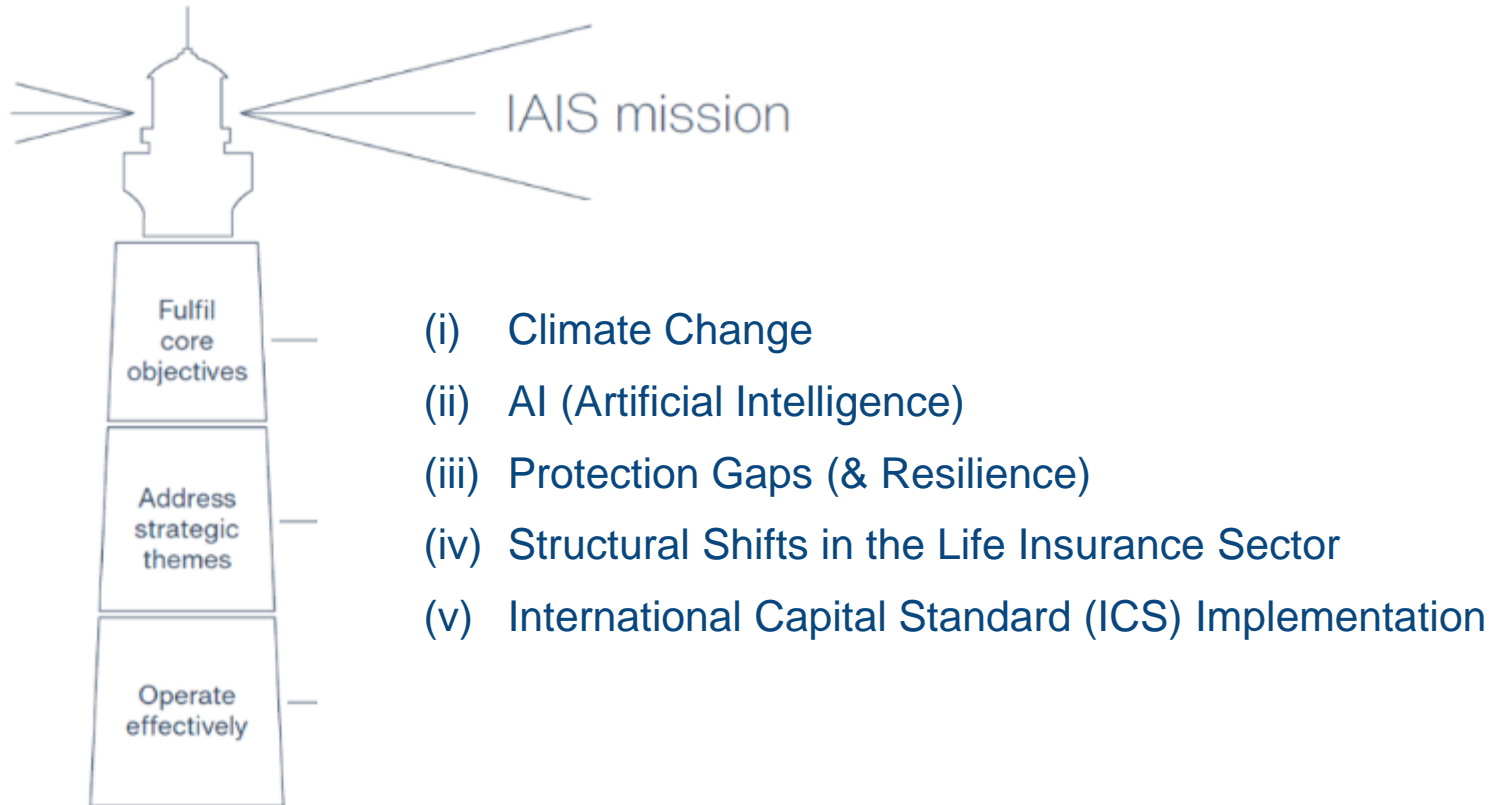
Win-Li Toh

Impact

... through our relationship with
Supranational bodies



International Association of Insurance Supervisors (IAIS) Key Strategic Objectives





IAIS Key Strategic Objectives: (i) Climate Change

- IAIS Challenges (related to Climate Change solvency implications)
 - Data
 - Local politics
 - Regional differences in hazard
 - Different levels of available resources
- How can actuaries help the IAIS:
 - Data analysis
 - Model building
 - Scenario analysis
 - Series of papers already produced
 - Although this is very much a multi-disciplinary issue



IAIS Key Strategic Objectives: (ii) AI

- IAIS Challenges
 - Defining AI, given how broad and evolving AI is
 - Supervisory use of AI vs. Supervised insurer use of AI
 - Learning curve & resources vary greatly by jurisdiction
- How can actuaries help the IAIS:
 - Explaining the issues, educating supervisors & industry
 - Model standards (ISAPs) dealing with models and model governance
 - Educational notes (IANs) related to AI usage and model governance?
 - Actuarial profession perceived to be farther along in AI than for Climate issues





IAIS Key Strategic Objectives: (iii) Protection Gap & Resilience

- IAIS Challenges
 - Hazards/perils vary by geographic region – one size does not fit all
 - Identify what caused the protection gap
 - Solution needs to fit the local culture and laws
 - Not all cultures believe in insurance
 - Very complex; to what extent is the fix the responsibility of the insurance sector?
 - Too focused on post-disaster funding, as opposed to pre-event steps?
- How can actuaries help the IAIS:
 - Framing the discussion
 - Scenario analysis
 - Aiding product innovation efforts
 - Continuing to raise the focus on pre-event actions





IAIS Key Strategic Objectives: (iv) Structural Shifts in the Life Insurance Sector

- Definition
 - Use of asset-intensive cross-border reinsurance – regulatory arbitrage
 - Alternative Investments
- IAIS Challenges
 - Early phase in evaluating possible fixes
- How can actuaries help the IAIS:
 - TBD, as the discussion has just started
 - IAA IRC reviewing the related consultation paper for potential comments





IAIS Key Strategic Objectives: (v) ICS Implementation

- IAIS Challenges
 - Varied implementation by region
 - U.S. – aggregation method
 - Europe – internal models
 - East Asia – Standard formula applied to both IAIGs and non-IAIGs
 - Early in the implementation phase
- How actuaries can help (and have helped) the IAIS:
 - Already produced model actuarial standard (ISAP 7)
 - Future assistance will vary by region, in line with other financial reporting

2025

Development of ICS assessment methodology

- Leveraging the IAIS' general principles and methodologies for assessing its standards
- Taking into account the quantitative nature of the ICS
- Will not be a line-by-line exercise -- the methodology will specify an appropriate level of granularity and articulate the quantitative and qualitative analyses to be used.

OECD



OECD

- An international organization comprising 38 nations from Europe, the Americas, Middle East and Asia
- **OECD** members and key partners represent 80% of world trade

OECD Vision

We work closely with policy makers, stakeholders and citizens to establish evidence-based international standards and to find solutions to social, economic and environmental challenges. From improving economic performance and strengthening policies to fight climate change to bolstering education and fighting international tax evasion, the OECD is a unique forum and knowledge hub for data, analysis and best practices in public policy. Our core aim is to set international standards and support their implementation – and help countries forge a path towards stronger, fairer and cleaner societies.

Which Countries Are in the OECD?

Members of the Organisation for Economic Co-operation and Development, by year joined (as of June 2024)



Source: OECD





IAA-OECD Relationship



OECD-IAA

Memorandum of Understanding (2022-27)

- Participation in respective meetings
- Dialogue and exchange of information
- Joint discussion
- Scope for joint events and outputs

IAA Opportunity

- Inform public policy in IAA member countries
- Raise the profile of actuaries/IAA in public policy context
- Position IAA as a professional organization that supports OECD evidence-based approach to policy

Working Party on Insurance and Pensions

- **Pablo Antolin** | Head of Pensions and Insurance Unit
- **Timothy Bishop** | Senior Policy Analyst - Insurance
- **Leigh Wolfrom** | Policy Analyst - Insurance
- **Jessica Mosher** | Policy Analyst – Pensions (Qualified Actuary)
- **Stephanie Payet** | Policy Analyst - Pensions

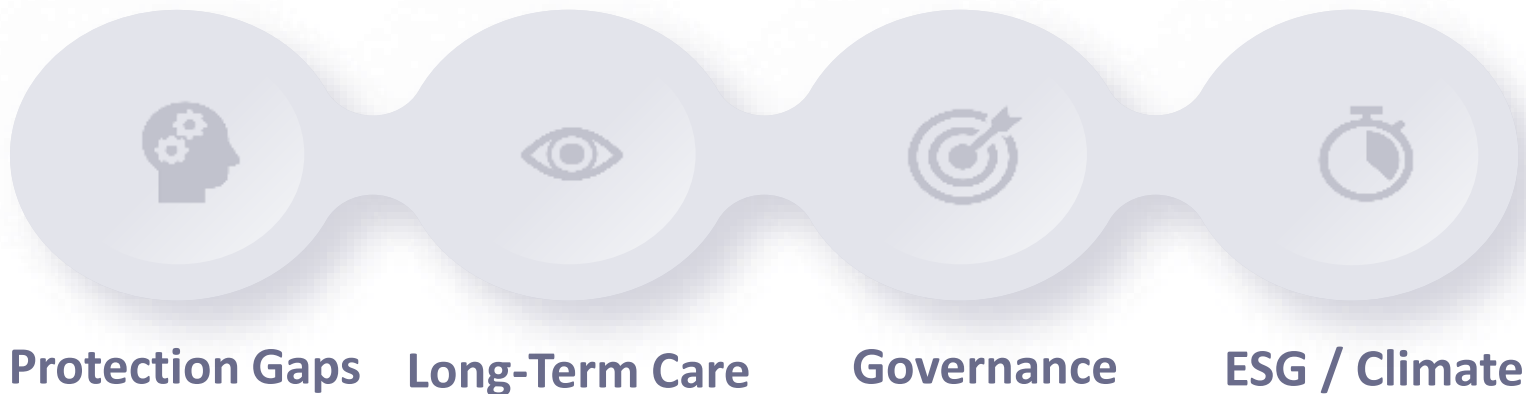
International Organisation of Pension Supervisors (IOPS)

- **Dariusz Stanko** | Senior Policy Analyst and Head of IOPS Secretariat

Other Directorates

- **Xavier Leflaive** | Senior Counsellor, Environment Directorate
- **Lylah Davies** | Policy Analyst, Environment Directorate
- **Chris James** | Senior Health Economist, Health Division

Active Areas of Engagement



OECD also expressed an interest in cooperation around Digitalization



ESG Investing



- An **OECD** project is looking at the role of insurance in fostering investments in climate mitigation (possibly extended to adaptation), and how broader ESG factors are being incorporated in pension funds and insurers investment decisions.
 - A possible deliverable from the project is a good practice document to help improve the consideration of ESG factors.
- The **OECD** has asked the for **IAA** assistance to set up discussions with individuals with ESG investment experience across a range of countries.
- The **OECD** has also asked the **IAA** to provide a speaker on this topic for their Asian roundtable in July.



Environment: Water Risks

- **Ongoing collaboration between the OECD Environment Directorate and the IAA Water Risks Task Force**
 - Lylah Davies, **OECD**, is regularly attending **IAA** Water Task Force meetings, providing insights and linking the IAA team to external water resources.
 - **OECD** provides speaking opportunities to **IAA** reps on water topics at **OECD** conferences.
- IAA supports the OECD Environment Directorate mission by sensitizing and educating actuaries, and through actuaries the broader public (investors, policy makers), of the importance of the risks caused by water, and the risks to water as an asset.



Insurer Governance



- **IAA** has provided feedback for revision of **OECD** Guidelines on Insurer Governance.
- **OECD** plans to revise its Recommendations on Good Practices for Insurance. Claim Management and will seek **IAA** feedback on it.
- IFRS17 and implications for the **OECD** insurance statistics - **IAA** has been asked to review the draft note, share SOP methodology and participate in a IFRS17 session in September.



Long-Term Care



- **OECD** oversees health status and programs across OECD members, including:
 - Health expenditure by age groups and countries, public and private
 - Life expectancies and change in demographics by country
 - Preventive care statistics and their expected/observed impact
 - Impact of policies regarding health risk factors such as obesity, smoking etc.
- **OECD** is interested in **IAA** actuarial input on:
 - Better planning, efficiency review of preventative measures and public health policies
 - “Health as an investment, not an expense”: OECD is seeking to stand up an international agency with a long-term mandate and investment reporting, to address the short-term thinking governments too often take on health, due to the need to balance budget and nature of electoral cycles
- **IAA** is looking in advocacy of possible actuarial contributions to OECD health projects; an option to produce quantitative studies has been raised as well



Protection Gap

- **OECD** has active projects on
 - Evaluating the benefits and limitations of an insurance-based approach to responding to large-scale catastrophes
 - Retirement gap project involved guidelines for improving participation (take up of plans offered) and inclusiveness (employee access to a retirement plan) in asset-backed pensions
- Planned future work on
 - Country approaches to identifying protection gaps
 - Parametric insurance
- **OECD** is seeking **IAA** review of the papers and IAA proactive involvement in the country protection gaps project
- Planned contact after September



Digitalization and Future of Insurance



- OECD plans a project on how technology and digitalization are affecting insurance markets and consumers.
- Create a report on the increased use of data and scope for more granular pricing and implications for consumers and insurance markets.
- **IAA** expressed interest in this topic in the **past**.
- **OECD** plans to consult **IAA** in the course of this project.

Climate & Sustainability



Climate and Sustainability Supras - approach

- There are many supranational organizations with which the IAA might want to interact; the landscape is changing rapidly, requiring us to be agile in our approach
- The new Climate and Sustainability Committee (CSC) is undertaking a census of these organizations to identify which ones we should consider working with
- Key questions include what do we want to get out of external relationships, how do we want to interact, what is the value to our FMAs, what specific projects should we undertake, can we leverage other organizations to help us with education, and what contacts do we currently have?
- We will task a group within the CSC to develop this list, along with a grouping as to how much interaction we want to have and answers to the questions above, in June; this will be presented to the EC and Supranational Committee for approval



Climate and Sustainability Supras - candidates

- [UNEP: United National Environment Program](#)
- [UNDP: United Nations Development Program](#)
- [IPCC: Intergovernmental Panel on Climate Change](#)
- [WHO: World Health Organization](#)
- [WMO: World Meteorological Organization](#)
- [SIF: Sustainable Insurance Forum](#)
- [PSI: Principles for Sustainable Insurance](#)
- [OECD: Organization for Economic Co-operation and Development](#)
- [World Bank, ADB: Asia Development Bank, AFDB: African Development Bank](#)
- [NGFS: Network for the Greening of the Financial System](#)
- [ISSB: International Sustainability Standards Board](#)
- [PCAF: Partnership for Carbon Accounting Financials](#)
- [IAIS: International Association of Insurance Supervisors](#)



Climate and Sustainability Supras - outcome

- Each of these organizations (plus others which are not official supranationals but operate in key areas of actuarial interest, such as carbon markets) can benefit from an interaction with the profession; our challenge is to tailor our approach to gain maximum benefit for the IAA given our limited resources
- Our strategy will be tailored to each organization and provide clarity as to what both parties get from interactions; we will propose specific plans and outcomes for each
- We have established good relationships with many of these organizations through our presence at COPs and prior work with some
- A specific example of a successful prior partnership we want to emulate is the joint project with the IPCC to produce the [“Climate Science – A Summary for Actuaries”](#) based on the IPCC AR6 Working Group I report

Showcase!

Impact

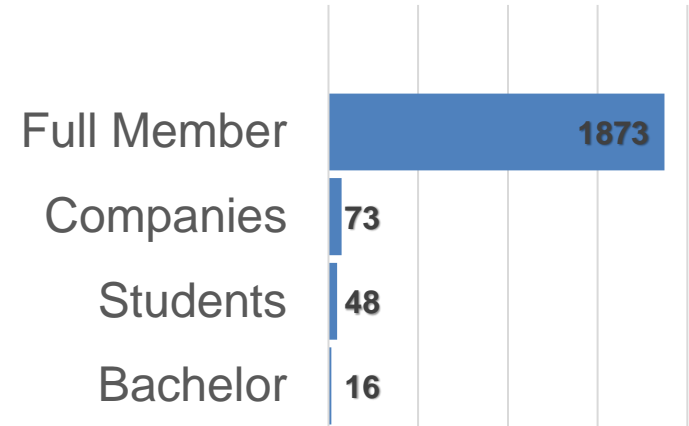
Member Associations making an impact



Brazil – Instituto Brasileiro de Atuária

- Founded in 1944
- Promoted regulation of profession in Brazil – 1970
- Survey with members
- Recognition:
 - Best student – per graduation class
 - Talented young actuaries – visibility
 - Annual prize for best actuarial paper

Members of IBA





Brazil – Instituto Brasileiro de Atuária

Challenges and Opportunities

- Engage Young
- Continuing education
- Relations with regulatory bodies
- Actuarial forensic analysis
- Diversity:
 - Support financially low income applicants to become full members
 - create access to meaningful discussions for students
 - approach diversity and inclusion at our congress in a direct way
 - Wave fees for elders (70+)
- Professional Council Entity

Institute of Actuaries of India



Preeti Chandrashekhar, President

INDIA: WORLD'S FASTEST GROWING ECONOMY

01 5th **largest** economy in the world



Global GDP growth to stabilize at 2.7% in both 2025 and 2026

02 **Huge Potential**
Real GDP growth projected at ~ 6.5%



Expected to become 4th largest by 2025

03 **Intact growth story**
Bullish consumption, infrastructure and investment

Favourable demographics but a big protection gap



A Young Nation
Today, An Aging
Nation
Tomorrow



Low
Insurance
penetration



Lack of
social
security

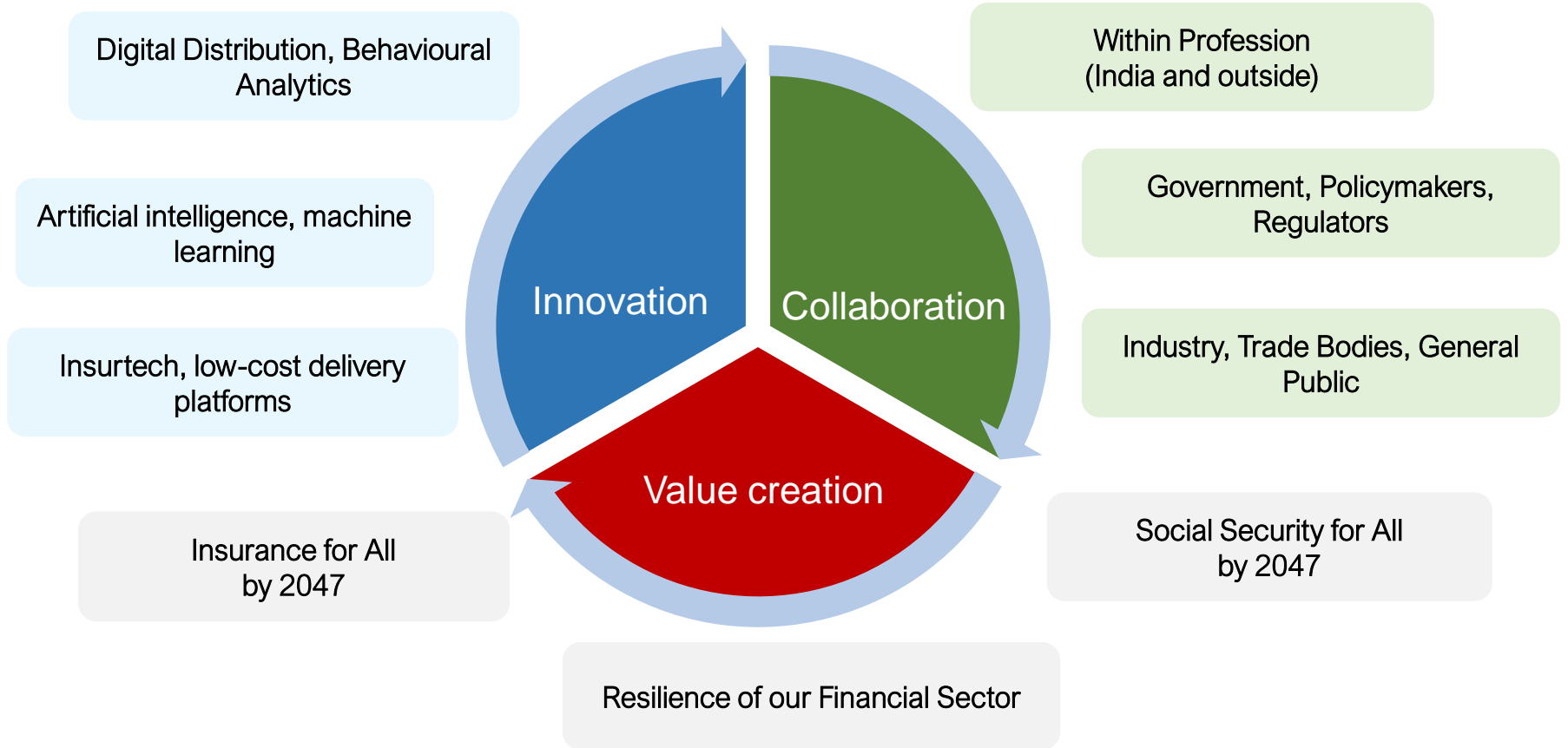


Low per
capita
income



Insufficient
Public
Healthcare

The Trinity: Focus of Institute of Actuaries of India



Two areas that I would cover today

1

Health protection gap

2

Pension protection gap



1. Health Protection Gap



AYUSHMAN BHARAT PM-JAY: India's Path to Universal Health Coverage



Overview Box



Launched: 2018



Mission: Universal Health Coverage



Target Audience:
Poorest & Vulnerable Populations

Insurance Coverage

₹ **5 Lakh**

insurance per family / year



Cashless & Paperless

Pre-existing conditions covered from Day 1



भारत सरकार
GOVERNMENT
OF INDIA

Benefits and Reach



Benefits



Pre/Post
hospitalization



Diagnostic services



Drugs & medical
supplies



Room charges

Reach & Inclusion



120M families |
550M beneficiaries



2024 All citizens
aged 70+ now covered
(irrespective of income)



भारत सरकार
GOVERNMENT
OF INDIA

Funding models



Assurance Model

No involvement of an Insurance company.

Financial risk is borne by the GOI

Insurance Model

States select the Insurance company. Financial risk is borne by the Insurance company. Surplus or excess shared with State, Central and Insurance company

Hybrid Model

Features of both assurance and insurance models



भारत सरकार
GOVERNMENT
OF INDIA



Data mining



AB PM-JAY scheme provides key data like disease-specific records, hospital procedures, and treatment durations.

The National Health Claims Exchange will accelerate digital health adoption and streamline patient record digitization across India

Large Language Models can mine this data to uncover disease patterns, aiding policy-making and preventive healthcare strategies.



ROLE OF ACTUARIES IN ENHANCING PM-JAY SUSTAINABILITY



Burn Cost Estimation

Burn costs used for setting baseline sustainability



Dynamic Pricing

Pricing adjusted based on claim utilization trends



Adapting to Changing Eligibility

Revised assumptions as eligibility criteria evolve



Assurance vs. Insurance Models

Actuaries advise states in assurance models



Regional Pricing

State-specific actuarial pricing strategies





2. Pension Protection Gap



Atal Pension Yojana



Background to the scheme



Representing around 600 million people, the government of India has launched **Atal Pension Yojana (APY)** in 2015



Aims to cover the **majority of India's working population.**



Defined pension based on member contributions. Government guaranteed minimum pension benefits.

**75 Million
Subscribers**

**Growing
monthly
by
500,000
members**



Role of actuaries



Conduct feasibility study on schemes sustainability



Managed membership data of 700 Million people



Set financial and demographic assumptions



Create mortality tables with future projections.



Set financial and demographic assumptions



Design actuarial models to assess liabilities



Project 25 years of liabilities and cash flows



Provided insights on scheme design changes

The Actuarial Society of Kenya

- Kenya's journey as an FMA of
the IAA

Lorraine Njue, TASK President



Actuarial in Kenya



In under two decades, Kenya's actuarial profession has evolved from dependence to influence – shaping local systems and inspiring continental agendas.



TASK – Kenya’s Full Member Association

1993

The year TASK was formed in Kenya



100+

We have 120 registered members with IAA

2005

Year TASK was formally launched to promote actuarial practice in Kenya

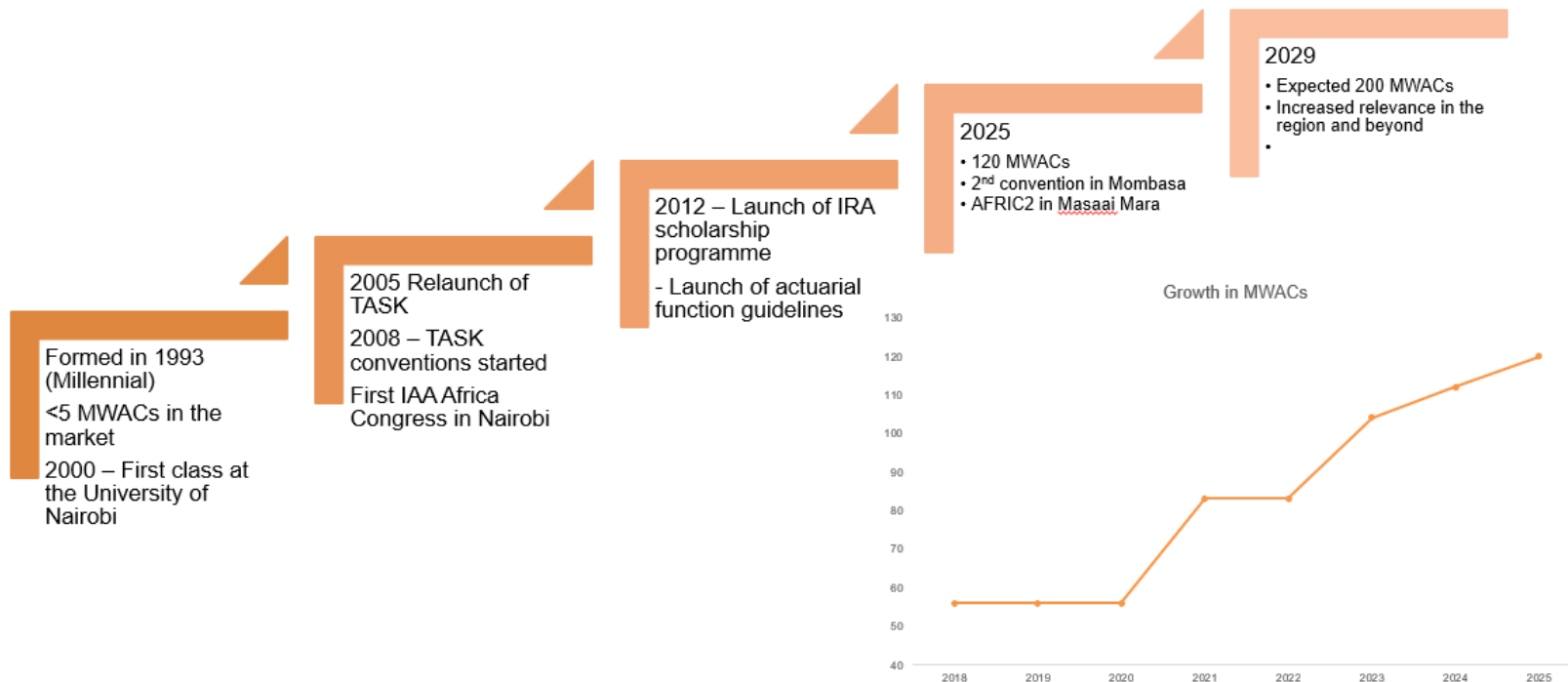


50M+

Kenyan population served by the Actuaries with majority being youths.

We operate in a dynamic environment of fintech growth, health reform, and climate vulnerability.

The Actuarial Society of Kenya





Challenges We Face: Building a Profession Amid Complexity



Actuarial Talent Gap

Low actuary-to-population ratio

Data Scarcity

Especially in emerging fields like climate risk and health economics

Limited public awareness

Most stakeholders outside insurance are unaware of actuarial value

Global Talent Drain

Retention of local actuaries remains a challenge



Our context demands innovation, local relevance, and purpose-driven professional development.



How TASK Is Responding

IRA Scholarship Programme
50+ underserved students supported across Kenya

Mentorship & Apprenticeship Initiatives - Growing actuarial experience through fellow-student pairings

Result: TASK is not only growing numbers but deepening purpose and relevance.



University Engagement

Supporting institutions through commission for university education to align curriculum and practical relevance

CPD Evolution

Offering CPD in ESG, inclusive insurance, data science, and health financing

Strategic Alignment

Engagement with government to adopt Actuaries Bill, Outreach to high schools, national TV features, actuarial bootcamps

Stakeholders such as employers and international partners to advance the actuarial profession in Kenya & beyond.



Our National & Sectoral Impact

Universal Health Coverage

- TASK members working with Kenya's Social Health Authority to model financial sustainability

Agricultural Parametric Insurance

- TASK member-founded PULA covers 5M+ farmers using satellite and actuarial data

ESG Initiatives

- The Nairobi Declaration
- Conducted the First East African actuarial-driven ESG policy summit in 2024

Policy Engagement

- TASK contributes to pensions, microinsurance, climate finance, and disaster preparedness frameworks





Diversity and Inclusion as Growth Strategy

First female president elected to current council

University engagement programs targeting counties underrepresented in STEM

Women in Actuarial Leadership Breakfast Session each year during IWD.

High-impact mentorship for students and early-career actuaries



Looking Ahead: Hosting the Global Profession



ICA 2029

Kenya will host the 34th International Congress of Actuaries



First in East Africa, second in Sub-Saharan Africa



Strategic partnerships already underway: government, academia, and global FMAs

This shall platform to explore global challenges from an African perspective:

- Climate Resilience
- Demographic Shifts
- Digital Disruption
- Financial Inclusion



ICA 2029 LOGO OPTIONS



Logo 1: The 0 in '2029' is themed with Maasai beads. This represents the bravery, strength and courage of the Kenyan people.



Logo 2: The 0 in '2029' is themed with colours of the Kenyan flag, which is recognized the world over through our traditional track sporting events.



Logo3: Is a further buildup from logo 1 where the Lilac will contain the theme for the Kenyan flag.



Local, African, Global Impact of Hosting ICA2029 in Africa #RoadToNairobi2029





Call to Action



Capacity Building

Support our student apprenticeship program through scholarships, internships (including remote), and mentorship



Impact Collaboration

Co-create knowledge with our Working Parties on ESG, inclusive insurance, and public systems modeling



ICA 2029

Walk with us to Nairobi 2029 and shape the future of global actuarial.



10th TASK Actuarial Convention

We invite you to join us in Diani Kenya for our Annual Convention on 29th – 31st Oct 2025





• THANK YOU



• THANK YOU

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actuarieskenya.or.ke



**African Actuarial
Development
Academy
(AADA)**

Why AADA?

BRIDGING THE GAP

- Africa faces a shortage of qualified actuaries, limiting growth of financial services.
- Many countries lack local actuarial training and mentoring infrastructure.
- Bridging the gap is essential for sustainable insurance markets, pensions, and risk management.
- Young talent across Africa needs support to access, persist, and qualify in actuarial careers.



AADA's events – Fireside chats

FIRESIDE CHAT WITH AFRICA RE GROUP MD/CEO
**"BUILDING AFRICA'S FUTURE:
 EMPOWERING ACTUARIAL EXCELLENCE"**
LIVE WEBINAR

MARJORIE NGWENYA
Author, Empowered Evolution

DR. CORNEILLE KAREKEZI
Group MD/CEO, Africa Re

ACTUARIAL ACADEMY
OF AFRICA RE

with the support of

REGISTER NOW

<https://shorturl.at/JGwkH>

WEDNESDAY
 23 OCTOBER 2024

13:00 WAT | 14:00 CAT | 15:00 EAT

You're Invited to

From Actuary to CEO: Leading beyond technical roles

Translating Technical Mastery into Visionary Leadership

Date / Time

**27th March
 2025**

1:00pm GMT
 2:00pm WAT
 3:00pm CAT
 4:00pm EAT

Register here

Wise Chigudu

Lusani Mulaudzi

For more information about the African Actuarial Development Academy (AADA) visit: <https://aada.africa/>

AADA's events - mentoring

CALL FOR MENTEES!

Are you ready to accelerate your professional growth? The AADA Pathways to Success Mentorship Programme pairs you with an experienced actuary who will provide one-on-one guidance tailored to your career goals.

Registration deadline
11 May 2025

Length
4 MONTHS

Individual mentorship application
<https://bit.ly/4VM2nx>

MENTORS NEEDED

AADA PATHWAYS TO SUCCESS MENTORSHIP PROGRAM

ACT NOW AND REGISTER HERE.
REGISTRATIONS OPEN UNTIL FRIDAY APRIL 25

OR <https://bit.ly/42uDKyc>

www.aada.africa

Group Mentorship Opportunity!

AADA Insights and Exchange with Wise Chigudu

Session Date: Wednesday 23 April
Time: 1pm GMT | 2pm WAT | 3pm CAT | 4pm EAT
Length: 80 minutes

Target Audience: Actuaries in Africa with more than 5 years of experience

Limited seats, only 15 spots available!

Click the QR code to register

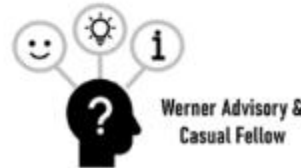


AADA's – professional & educational development

A purple rectangular graphic with white text. At the top, it says 'AADA ANNOUNCES'. Below that, in a darker purple box, it says 'P&C ACTUARIAL FOUNDATIONS COURSE'. At the bottom, it says 'FOR ASPIRING ACTUARIES IN AFRICA'.



Sponsored by:



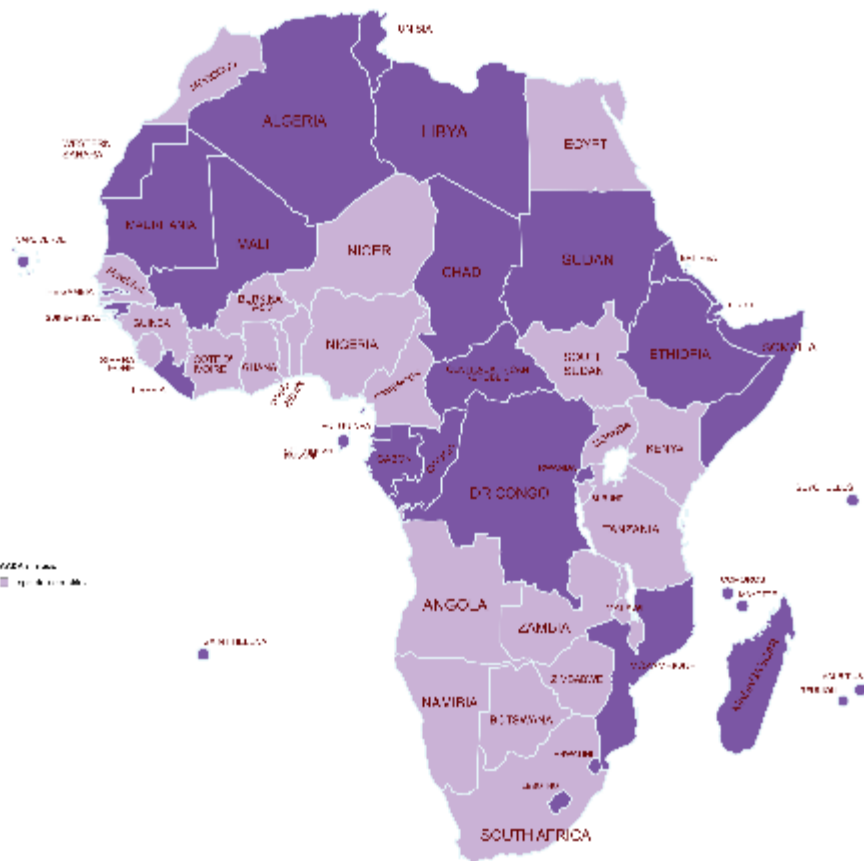
University accreditation support to:

- Nigeria
- Kenya
- Zambia

AADA's – advocacy



AADA's reach



- 26 African countries
- Non-African countries inc:
 - United kingdom
 - United States
 - France
 - Others



AADA's Impact: Abena Farcor – Accra, Ghana



"...the opportunity to learn from experienced actuaries, ask questions, and receive tailored guidance has made a real difference.

It's encouraging to be part of a network that genuinely invests in its people."



AADA's Impact: Dr. Mubanga Lombe – Lusaka, Zambia



*"...AADA's support feels like a partnership in progress - **amplifying local efforts, bridging gaps, connecting us globally** and helping build a stronger, self-sustaining future for the profession in Africa."*



AADA's Impact: Edmond Nkongho – London, UK



“AADA is the dawn of a new era—igniting growth, empowering actuaries, and turning Africa’s insurance dreams into reality.”



AADA – SIGN UP & JOIN US



Email: contact@aada.africa



Website: www.aada.africa



<https://www.linkedin.com/company/aada-africa/>



<https://www.youtube.com/@AADA.actuaries>



Impact

All of us can make a difference.
Let's look at some examples



Frank Chang: One-page C.V.

1997: B.A. Music Composition, B.A. Math

2004: Ph.D. Mathematics

2005: Start work at Esurance

2007: Start CAS volunteering

2008: Finish exams while at Allianz

2012: 1st actuary at Google

2014: 1st actuary at Uber

2017-2019: CAS Board of Directors

2023-2025: CAS President Elect / President / Chairman

Current: Vice President of Applied Science, Core Services at Uber





Actuaries play a critical role, even outside of insurance.



Gus Fuldner, SVP, Uber

Meet The Guy Who Solved Uber's Insurance Problem

BuzzFeed News, 2016

"Had Gus not singlehandedly gone around the country, *Uber* would potentially be out of business. I mean, the regulatory landscape would be vastly different," said Andrew Boron, the former director of the Illinois Department of Insurance. "Gus engaged. He was all over the place, talking to everybody."

April 2016: It is important to have a strong actuarial team that can produce estimates and analyses with relatively limited information.



Actuaries are recognized for their Impact to companies

Companies hiring Uber actuarial alum since 2016:

- Lyft
- Google / Waymo
- DoorDash
- Next Insurance
- Just Insurance
- Cruise / GM
- Hippo
- Tesla

***July 2022:** I have great respect for the actuarial profession. Please join Tesla, especially if you want to change things. This is the place to be. We want revolutionary actuaries.*



Elon Musk, CEO, Tesla



Frank Chang: Challenges Moving to Tech

1. Code-switching
2. Ambiguity
3. Data Scientists
4. Scaling



What aspiring actuaries think



What seasoned actuaries think



What my coworkers think



Reality



Frank Chang: Learnings

1. Code-switching



Uncertainty = Opportunity

2. Ambiguity



Actuaries solve problems

3. Data Scientists



All politics is local

4. Scaling



All roles...
...are political





Win-Li Toh



How are you making an

Impact

at the IAA Sao Paulo
meetings, and beyond?

