



ABOUT THE BOOK

Worthy Milestones, Enduring Vision celebrates 75 years of the Indian Actuarial profession. It is a legacy document which provides glimpses of the history of the profession in India.

Over these 75 years, the profession has been through various challenging times and triumphs. This book reflects the tremendous will and resolve of those who stood out and made a difference.

While the journey began with the formation of the Actuarial Society of India in 1944, the roots of Actuarial concepts had been laid much before. In fact, the book takes us as far back as the Vedic era – since texts of that period point to what possibly could be the roots of insurance in India.

It also journeys through major events such as formation of the Actuarial Society of India in 1944, nationalisation of life insurance companies in 1956, the start of ASI's Actuarial Examinations in 1989, formation of the IRDAI and the launch of Global Conference of Actuaries in 1999, and the Actuaries Act, 2006, which helped in the evolution of the profession in India.

A profession is made up by people and their contributions and achievements and thus the book covers the contribution of noteworthy individuals who helped in shaping the Actuarial profession through the years to where we stand today.



Worthy Milestones Enduring Vision

Worthy Milestones, Enduring Vision



ABOUT THE AUTHOR

Yogita Arora is a Fellow of the Institute of Actuaries of India with dual specialisation in General and Health Insurance. She has more than 13 years of experience across Life, General, and Health Insurance and Employee Benefits Valuation, and has worked for Indian, South Asian, Middle East and US markets.

Yogita is Principal and Consulting Actuary at Actuarial Analytics and Risk Consultants (AARC) and serves as Director-IFRS 17 with Global Risk Consultants (GRC).

Her experience has been further enriched by serving in crucial roles at leading direct insurer, consultant and shared service firms such as McKinsey, Milliman and Aviva Life Insurance.

Yogita has served as Appointed Actuary of the Agriculture Insurance Company of India Ltd and ECGC Ltd.

She holds a British Council certificate in Creative Writing and is an experienced proofreader of books on Quantitative Aptitude and Data Interpretation.

She likes to devote her free time to social work. She is a cinephile and passionately fond of dance.



Institute of Actuaries of India

(Statutory body established under an Act of Parliament)

Unit No F-206, 2nd Floor, 'F' Wing in Tower 2, Seawoods Grand Central, Plot No R-1,

Sector 40, Seawoods, Near Seawoods Railway Station, Navi Mumbai - 400 706

Board Line: +91-22-62433333 | Email: hms@actuariesindia.org | Website: www.actuariesindia.org

© INSTITUTE OF ACTUARIES OF INDIA
FEBRUARY 2020



Institute of Actuaries of India
(Statutory body established under an Act of Parliament)
Unit No F-206, 2nd Floor, 'F' Wing in Tower 2, Seawoods Grand
Central, Plot No R-1, Sector 40, Seawoods
Near Seawoods Railway Station, Navi Mumbai - 400 706
Board Line: +91-22-62433333 | Email: hms@actuariesindia.org |
Website: www.actuariesindia.org

AUTHOR AND EDITOR
YOGITA ARORA

ASSOCIATE AUTHOR
RAHUL JAIN

Designed and Printed by



Peninsula Spenta
Mathuradas Mill Compound
N M Joshi Marg, Lower Parel (W)
Mumbai – 400 013
Tel: +91-22-2481 1010
Fax: +91-22-2481 1021
Website: www.spentamultimedia.com

Executive Publisher
Maneck E. Davar

Editor
Monideepa Choudhuri

Design
Kiran Jadhav
Rohit Patil
Vijay Gawale
Nikunj Parikh

Digital Imaging
Ninad Jadhav

Project Head
Bobby Daniel

Project Coordinator
Imran Syed

DISCLAIMER: THIS COFFEE TABLE BOOK HAS BEEN DESIGNED TO PROVIDE INFORMATION TO READERS. IT MAKES NO REPRESENTATION OR WARRANTIES OF ANY KIND AND ASSUMES NO LIABILITIES WITH RESPECT TO THE ACCURACY OR COMPLETENESS OF THE CONTENTS. THE PUBLISHER AND ENTITY INVOLVED IN THE PRODUCTION AND CREATION OF THE BOOK SHALL NOT BE LIABLE OR RESPONSIBLE TO ANY PERSON OR ENTITY WITH RESPECT TO ANY LOSS OR INCIDENTAL OR CONSEQUENTIAL DAMAGES CAUSED OR ALLEGED TO HAVE BEEN CAUSED, DIRECTLY OR INDIRECTLY BY THE CONTENT AND THE PHOTO REPRESENTATION IN THE BOOK. INFORMATION MAY NOT BE USED TO VIOLATE ANY LOCAL, STATE OR REGIONAL LAWS OF ANY COUNTRY.

WITH REGARD TO PHOTOGRAPHS NO COPYRIGHT IS CLAIMED ON THOSE THAT HAVE BEEN PRINTED UNDER PERMISSION OR ARE ALREADY COPYRIGHTED OR ARE IN THE PUBLIC DOMAIN. ALL COPYRIGHTS ARE RESERVED BY THE INSTITUTE OF ACTUARIES OF INDIA AND REPRODUCTION IN ANY FORM IS STRICTLY PROHIBITED.

*Dedicated to the passion, zeal and grit of the great visionaries
who laid the foundation of the Actuarial profession in India.*

Worthy Milestones Enduring Vision

YOGITA ARORA, Author and Editor
RAHUL JAIN, Associate Author



FROM THE DESK OF THE CHAIRPERSON



Liyaquat Khan
Chairperson,
21st GCA, AGFA
2020 and 75 Yrs
Celebration
Organising Group,
Institute of Actuaries
of India

The decision to publish a coffee-table book on the history of the Indian Actuarial profession in its formalised form was taken rather late, in October 2019. The date of release of the coffee-table book being February 17, 2020, the time period was rather stretched and extremely challenging.

I am really fortunate to have been entrusted with this responsibility and happy to recall my association with the profession since 1964, when after passing the Actuarial examinations, I was recruited as a Class I officer by the Life Insurance Corporation of India in the category of 'direct recruits'.

It was decided that the coffee-table book would capture the history of the Actuarial profession in India, which took shape in an organised form when the Actuarial Society of India was formed in 1944. Historical records, however, point to evidence of qualified Actuaries having worked in India right since 1912.

History is all about persons and events who make a difference and the Indian Actuarial profession is blessed with a large number of such persons – both Actuaries and non-Actuaries – who have made a difference to the progress of the profession. Events impacting the profession have also been recorded in the book. It is, therefore, not only a coffee-table book, but also one that aims to present factual history as much as can be verified from available records.

As a matter of principle we have avoided opinions about the past; rather, we have adhered to recording the contribution of people and events with integrity so that members of our profession as well as stakeholders can rely upon us. Actuaries are professionals who make a difference in the lives of the people and society. Life insurance is all about ensuring that money is available to people when they need it and economic institutions remain stable during calamities. Actuaries design products to ensure this and monitor solvency so as to make sure that money is available when it is needed.

This coffee-table book is a record of people who have made a difference to society in a land that we love as India, as Bharat.

FROM THE DESK OF THE PRESIDENT



Sunil Sharma
President,
Institute of Actuaries
of India

It is indeed a pleasure to see our dream of a coffee-table book come alive on the occasion of the celebration of 75 years of the Indian Actuarial profession. I would like to offer my heartfelt gratitude to our predecessors who contributed to the growth of this unique profession and helped us to achieve this milestone. The path to reach here has not been easy; it is the outcome of hard work and bold steps that were taken by our predecessors. They have been kind enough to help us visualise the path of the future.

I am blessed to have witnessed the evolution of the profession from conducting its own Global Conference of Actuaries to globalisation of the Indian Actuarial profession, MRA with UK, Australian and Canadian Actuarial professions, converting from a Society to a statutory body through the Actuaries Act, 2006 and striving to expand the horizon beyond traditional areas.

I must thank all my Actuarial colleagues and the IAI staff who took out time to contribute to various chapters of this coffee-table book.

I am very confident that together we can grow the profession at a much faster pace and expand the horizon for the Actuarial profession to the cause of public interest across all financial services.

BLESSINGS



डॉ. सुभाष चंद्र खुंटिया
अध्यक्ष
Dr. Subhash C. Khuntia
Chairman



MESSAGE

I am happy to know that the Institute of Actuaries of India is bringing out a Coffee Table Book on the occasion of Platinum Jubilee of Actuarial Profession in India.

Actuaries play a crucial role in the insurance sector by assessing various risks undertaken by insurers. This critical function demands not just academic skills but also a deep understanding of the overall financial market, the range of factors that influence the business as also a high level of integrity and professionalism. Keeping this in view, the Insurance Regulatory and Development Authority of India has mandated Appointed Actuary system for Indian insurers.

Institute of Actuaries of India, as the institution for regulating the profession of Actuaries in India, has to enhance its efforts to attract bright students across the country into the profession. I convey my best wishes to the Institute of Actuaries of India and to all the Actuarial Professionals in India on the occasion of the Platinum Jubilee and hope that the Coffee Table Book being brought out will adequately capture the journey of the profession in upholding public interest.

Hyderabad
29th January 2020

(Signature)
29/1/20
(Dr. Subhash C. Khuntia)

सर्वे नं. 115/1, पार्लियामेंट बिल्डिंग, कारकागमपुर, हैदराबाद-52, भारत
☎ : +91-40-20204201, ई-मेल: chairman@irdai.gov.in
वेब: www.irdai.gov.in

Survey No. 115/1, Financial District, Nizamsagar, Hyderabad-52, INDIA
☎ : +91-40-20204201, E-mail: chairman@irdai.gov.in
Web: www.irdai.gov.in

BLESSINGS



The International Actuarial Association wishes to congratulate the Institute of Actuaries of India and Indian actuarial profession on its 75th anniversary. The profession has grown and now thrives in India, thanks to the tremendous efforts and support of the IAI. We wish the profession many more strong future years in India, as our two associations continue to work together to keep the profession relevant and always advancing.

(Signature)
Tonya B. Manning
IAA President



On behalf of the Actuaries Institute Australia, it is my great pleasure to congratulate the Institute of Actuaries of India on the occasion of their 75th Anniversary. It is inspiring to see the continuous growth in members, particularly the number of Fellows that have more than doubled over the past ten years. The Actuaries Institute Australia and the Institute of Actuaries of India share similar values, particularly in integrity and continued professional learning. We are very much looking forward to welcoming our colleagues from India to the 32nd International Congress of Actuaries being held in Sydney from 3 – 7 April 2022.

(Signature)
Hoa Bui
President, Actuaries Institute Australia
2020



Institute of Actuaries of India

20 January 2020

75 Years of the Indian Actuarial Profession

Dear all at the Institute of Actuaries of India,

On behalf of the Institute and Faculty of Actuaries (IFoA), I would like to extend my warmest congratulations to you, as you celebrate 75 years of the Indian Actuarial Profession.

Over that time, you have demonstrated great staying power, and it is a great testament to the skill and the dedication of all who have passed through the Institute of Actuaries of India that it remains strong and vibrant today.

At the IFoA, we celebrate the values of community, integrity, and progress and it is clear that the Institute of Actuaries of India also models these values as a leader in the Indian actuarial profession.

Since joining the IFoA's Presidential Team, it's been my privilege and pleasure to work closely with the Institute of Actuaries of India and President, Sunil Sharma. This relationship has been characterised by its constructive and open nature, giving me great confidence that we can look forward to an enduring partnership that will continue to benefit members and India more generally.

We value the long-term relationship we have enjoyed with the Institute of Actuaries of India, and look forward to our continued partnership. Once again, congratulations on this momentous occasion.

Yours sincerely,

(Signature)

John Taylor
President, Institute and Faculty of Actuaries

BLESSINGS



Steven D. Armstrong, FCAS
President, Casualty Actuarial Society

100 Years of Expertise,
Insight & Solutions

Mr. Sunil Sharma, President
Institute of Actuaries of India

Dear President Sharma:

On behalf of the Casualty Actuarial Society (CAS), I extend warmest congratulations to the Institute of Actuaries of India on the 75th anniversary of the formal establishment of the professional actuarial body in India.

We particularly note and celebrate the many accomplishments of IAI that:

- Develop, promote and uphold high standards of professional education, training, knowledge, practice and conduct amongst actuaries;
- Promote, in the public interest, knowledge and research in all aspects of actuarial science and its application; and
- Promote the status of the actuarial profession.

As you know the CAS is focused specifically on General Insurance, and CAS supports the development of a robust GI actuarial community globally. From this vantage point, CAS has been pleased over the years to see diverse IAI offerings and initiatives that can help foster the GI actuarial community and practice within India and the region, including:

- General Insurance Specialist Track within the IAI Education Curriculum and Qualification program;
- Relevant Actuarial Practice Standards, as well as Guidance Notes;
- The IAI's ongoing series of seminars on topics such as Current Issues in General Insurance, Crop Insurance, and Data Science and Analytics; and
- Research in relevant areas such as claims inflation, crop insurance, and micro insurance, among others.

We perceive that there are interesting dimensions along which to explore potential expanded collaborations between IAI and CAS, specifically for the benefit of GI practitioners.

Clearly, IAI is serving key roles in India. But CAS congratulates IAI also for being an active member of the global actuarial community through full membership and participation in the International Actuarial Association; status as an accredited grantor of the Chartered Enterprise Risk Actuary global risk management credential; collaboration in various initiatives with other actuarial organizations around the world (including CAS); support of developing actuarial associations in Asia; and organizer/host of the Global Conference of Actuaries for the past twenty years. This year's GCA promises to be excellent, and we greatly appreciate the opportunity to support the Conference and to participate!

The Casualty Actuarial Society is delighted to join IAI's many Members and other stakeholders in celebrating the IAI's accomplishments to date, and we eagerly anticipate the opportunity to be both a witness, and a collaborator with you, as IAI tackles many important and interesting challenges, opportunities, and endeavors in the years to come.

Cheers!

Steven D. Armstrong

Steven D. Armstrong
CAS, President

Casualty Actuarial Society 4350 North Fairfax Drive, Suite 250, Arlington, VA 22203
office@casact.org 703.276.3100 tel 703.276.3108 fax
www.casact.org



475 N. Michigan Road, Suite 600
 Schaumburg, IL 60196
 P: 630.706.1000
 F: 630.706.0099
 800.686

January 23, 2020

Sunil Sharma
The Institute of Actuaries of India
Unit no. F-206, 2nd Floor, F Wing in Tower Z,
Seawoods Grand Central, Plot no R-1, Sector 40,
Seawoods, Near Seawoods Railway Station,
Navi Mumbai - 400 706



President Sharma:

My warmest congratulations in celebrating 75 years of the actuarial profession in India. I have been involved in the Indian actuarial community for the past decade, and I am humbled and proud to see how the actuarial profession has grown. I count many Indian actuaries amongst my most trusted colleagues and my best friends. The profession has changed lives and opened the door to opportunity to many aspiring actuaries. As we look to the future, it is leading the transformation of the Indian economy through the rapidly expanding insurance markets.

As SDA President and a long-time volunteer, I am proud to join you in acknowledging this anniversary and the Institute's efforts on behalf of the profession. There's an opportunity for actuaries around the world to support and expand the profession, and we look forward to working with you in the future.

Sincerely,

Andrew D. Rallis
Andrew D. Rallis, FSA, MAAA
President, Society of Actuaries

BLESSINGS



SINGAPORE ACTUARIAL SOCIETY

163 Tanjong Road, #07-04 Lion Huat Building, Singapore 079024
UBN : S76550016

20 January 2020

To: The Institute of Actuaries of India
Unit no. F-206, 22nd floor, F Wing in Tower Z
Seawoods Grand Central,
Plot no R-1, Sector 40
Seawoods, Near Seawoods Railway Station
Navi Mumbai - 400 706



Dear President of the Institute of Actuaries of India

CELEBRATING 75 YEARS OF INDIA ACTUARIAL PROFESSION

The Singapore Actuarial Society congratulates the Institute of Actuaries of India (erstwhile Actuarial Society of India) and Indian Actuarial Profession for completing 75 years of existence. Through hard work and excellence, you have now reached a incontestable status of respected Actuarial Institute across the world.

The SAS and IAI have achieved a lot together and I hope that the collaboration and friendship between our bodies and members will last for the next 75 years – at least!

Yours sincerely,

Mr. Frederic Weber
President, Singapore Actuarial Society



PERSATUAN AKTUARIS INDONESIA
(THE SOCIETY OF ACTUARIES OF INDONESIA)

Secretariat : Setiabudi Avenue, Lantai 7, Suite 702 A, B, 100 Rangka Sudi Kari, RT, Jakarta 12920 Indonesia
Telpon : +6221 29128176 - 78, Website : www.iaia.or.id, Email : secretariat@iaia.or.id

No. 006/SRT/KTA-PAI/2020

Jakarta, 22 January 2020

Dear Mr. Sunil Sharma, President of Actuarial of Society of India

Greeting from The Society of Actuaries of Indonesia

Proudly, we would like to congratulate The Institute of Actuaries of India and Indian Actuarial Profession for your 75 years of anniversary.

We are very proud with your proven contribution to the Financial Industries and the economic growth of India and we are seeing you as one of the most Influencer Actuarial Profession in Asia. We believe we will see a leapfrog improvement in Actuarial Profession across Asia by seeing you as the example.

Thank you and again, congratulation !!

Regards,

Fauzi Artan FSAI
Fauzi Artan FSAI
President Actuarial of Society of Indonesia



The Institute of Actuaries of Japan

Think the Future, Manage the Risk

International Finance Square, Office Tower 2, 2/F, 1-8-10, Marunouchi, Chiyoda-ku, Tokyo 100-8002, Japan
Tel: 81 3 6344 6221 Fax: 81 3 6344 6222 E-mail: secretariat@iaj.or.jp

January 22, 2020

Mr. Sunil Sharma, President
Institute of Actuaries of India
Unit F-206, 2nd Floor, F Wing Tower 2
Seawoods Grand Central, Plot R-1
Sector 40, Seawoods
Navi Mumbai 400 706
India

Dear Mr. Sunil Sharma,

The Institute of Actuaries of Japan wish to congratulate Institute of Actuaries of India on your 75-year Anniversary of foundation.

IAJ is pleased to have been a close relationship with IAI for a long time. I expect we will both continue to benefit from the relationship in the future.

Once again, congratulations on the IAI's 75th Anniversary, and I do hope the celebrations are a success and enjoyed by all.

Yours Sincerely,

Hiroshi Shoji

Hiroshi Shoji
President
The Institute of Actuaries of Japan



ACKNOWLEDGEMENTS

Sincere thanks to one and all who have helped in this journey. This book is a combined effort of contributors, compilers, researchers, authors, editors, designers, friends and families of everyone involved. The information has been compiled from various sources such as archives of the IAI Library, LIC Library, New India Assurance Library, M/s K A Pandit Consultants & Actuaries Office, discussions with individuals and, of course, the World Wide Web.

We have tried to include the names of everyone involved (in alphabetical order). Sincere apologies if anyone has been missed.

Actuarial Fraternity

A G Hemamalini	Dr S Doss	Nirav Mamnia
Abhinav Kumar	G L N Sarma	P A Balasubramanian
Anshu Shanbhag	Heerak Basu	Raju Seetharaman
Anuradha Lal	Jason Noronha	Richard Holloway
Anurag Rastogi	Jayesh Pandit	S Madhusudhanan
Bharat Solanki	Jenil Shah	Sherena Mehta
Bruce Porteous	K S Gopalakrishnan	Smriti Aggarwal
Chinnaraja Pandian	K Subramanyam	Subhendu Kumar Bal
Chitra Jaisimha	Kailash Mittal	Sunil Sharma
D K Pandit	Krushmi Gandhi	Surabhi
Derek Stott	Liyaquat Khan	Swati Umre
Dhruv Rana	Mayuresh	Tanay Chandra
Dr Elisabeth Goodwin	B J Sane	V Rajagopalan

IAI Staff

Binita Rautela
Gauri Kothari
Gururaj Nayak
Larry Barretto
Nilima Kadam
Nitin Kalani
Sandeep Mahajan
Vijaya Bhosle
Vinod Kumar Kuttierath

A special note of thanks to the Spenta Multimedia team who worked tirelessly to publish this book.

AUTHOR'S NOTE



Yogita Arora

“The more you know about the past, the better prepared you are for the future.”

– Theodore Roosevelt

The history of the Actuarial profession is a treasure trove of memories, a wealth that helps us appreciate the hard work and dedication of earlier generations. Today, as we delight in our high-paying jobs and smart offices, it is difficult to fathom the struggle of yesteryear's stalwarts. However, it is their labour of love that is the wellspring of the eminence of our profession. Ours has been an exemplary journey of great endeavours.

As for me, writing this book has been an enriching and enlightening experience.

I would like to thank Sunil Sharma, President, Institute of Actuaries of India (IAI) and the IAI for this wonderful opportunity. My sincere gratitude to Liyaquat Khan, Chairperson, 21st GCA, AGFA 2020 and 75 Yrs Celebration Organising Group, for entrusting me with the task, and his valuable guidance during writing. He not only enriched the imagination, but also understanding of how the events unfolded.

Rahul Jain, Associate Author, very diligently and patiently helped me discover the different eras of the profession, and it will not be incorrect if I acknowledge him as Associate Editor. Without his valuable insights, I could not have written the book.

My gratitude also to budding Actuary, Nirav Mamniya, who worked tirelessly in examining documents, photographs and data of the past.

A note of appreciation for the compilers of information of each era – each one of whom took out time from their busy schedules for the same – and also Vinod Kumar Kuttierath, who worked with the compilers to gather the information.

Binita Rautela and other IAI staff also extended full cooperation during the writing of this book and I am ever so grateful.

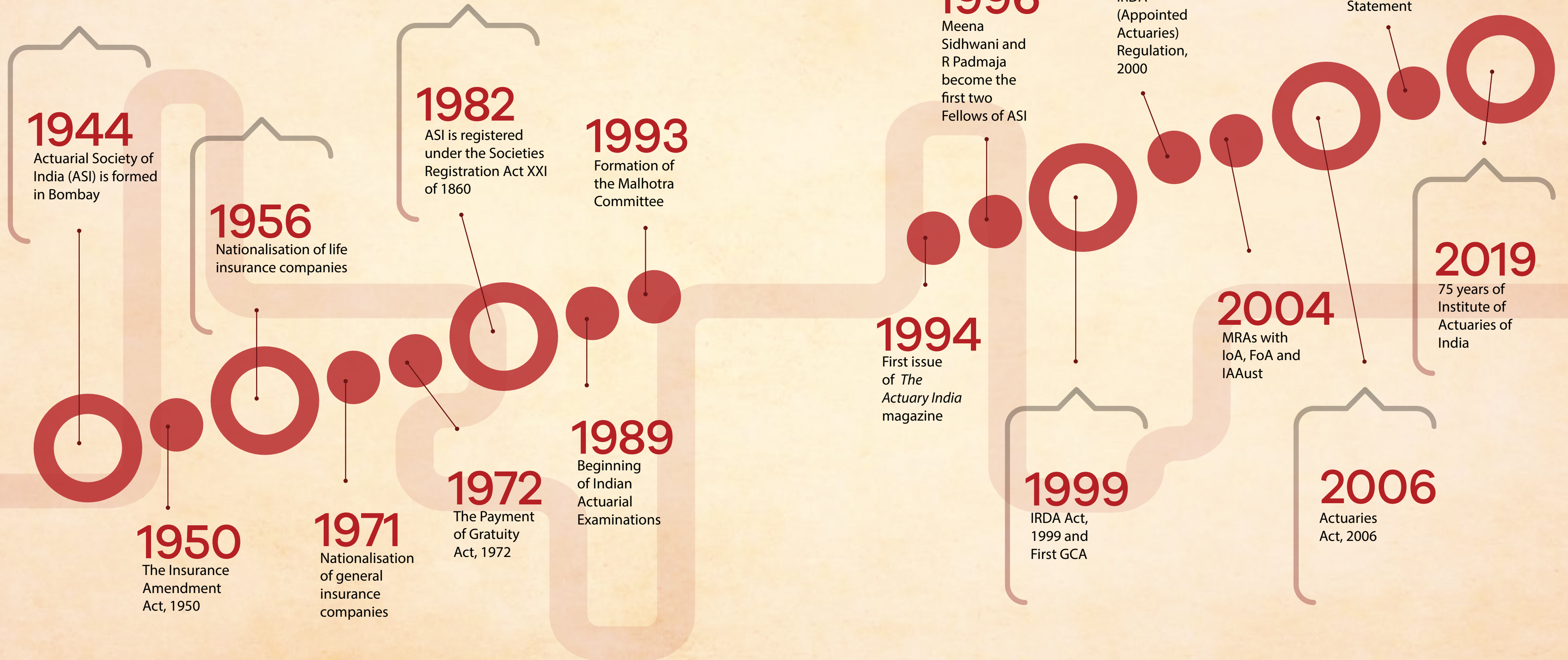
Heartfelt thanks to our publisher Spenta Multimedia, especially Chairman Maneck Davar, for publishing the book in such an efficient and fine way.

My gratitude to all who have been involved in the book – most importantly, my family for supporting me in completing the book in a short span of three weeks.

We have sourced data from insurance and Actuarial books, journals and publications over the years. Our endeavour has been to represent facts as they are, without judgement. Not everything that we wanted to feature in this book has been written; but hopefully, the spirit has been conveyed. We have also done our best to accurately present facts and our sincere apologies if we have missed out anything important.

Bon voyage! May this journey inspire us all.

THE 75-YEAR JOURNEY



PRESIDENTS OF IAI



L S Vaidyanathan K R Srinivasan K A Pandit N V Nayudu A Rajagopalan



S D Srinivasan D D Markan V H Vora (1967-1969) J T Ranadive (1969-1971) M K D Patel S Rangarajan R M Mehta (1980-1982)



R K Daruwala (1982-1984) M G Diwan (1985-1986) M C Chakravarti (1987-1989) N K Shinkar (1989-1991) Ramakrishnan (1991-1993) N H Thanawala (1993-1995) S P Subhedar (1995-1997)



N M Govardhan (1997-1998) K P Narasimhan (1998-2000) Liyaquat Khan (2000-2001) N R Kapadia (2001-2002) Liyaquat Khan (2002-2005) R Kannan (2005-2007) G N Agarwal (2007-2010)



Liyaquat Khan (2010-2012) M Karunanidhi (2012-2014) Rajesh Dalmia (2014-2016) Sanjeeb Kumar (2016-2018) Sunil Sharma (2018-Present)

Source: IAI Library

ACTUARIES WHO SERVED AS LIC CHAIRPERSON



R B Pradhan (20/08/1975 – 25/09/1977) S Rangarajan (26/09/1977 – 11/11/1978) J R Joshi (25/07/1980 – 16/09/1982) A S Gupta (09/09/1985 – 30/11/1986) N K Shinkar (06/07/1989 – 08/10/1990)



M G Diwan (09/10/1990 – 13/11/1991) K P Narasimhan (23/01/1992 – 31/10/1992) N N Jambusaria (24/12/1992 – 31/12/1993) J S Salunkhe (01/01/1994 – 31/07/1996) N M Govardhan (01.08.1996 – 31.05.1997)

RECOGNITION



M Karunanidhi, President, IAI, receiving the Education Leadership Award given to IAI by the Dewang Mehta Business School in 2013 in recognition of its leadership, development, innovation and industry interface.



CONTENTS

Pre1944
Looking Back.....16

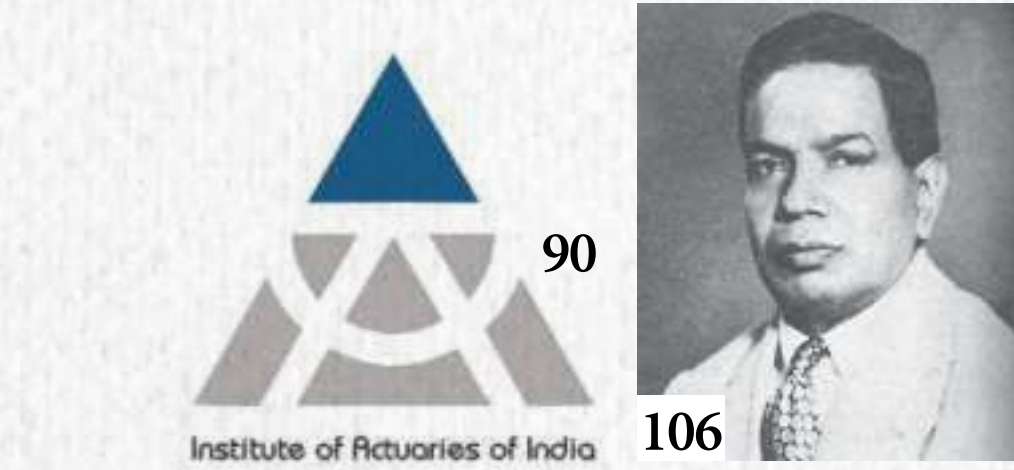
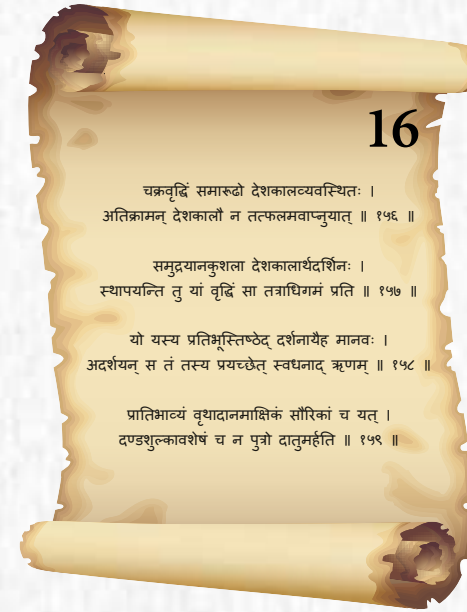
1944-1955
The Beginning.....32

1956-1981
Winds of Change.....42

1982-1998
Setting Out on the Journey.....58

1999-2005
A Kink in the Graph.....70

2006-2019
The Journey Redefined.....90




Leaders
Who Made It.....106


Professional Actuarial Education
Changing Gears to Grow.....120

GCA
Together Towards Tomorrow.....126

Future Outlook of the Profession
Expanding the Horizon.....134



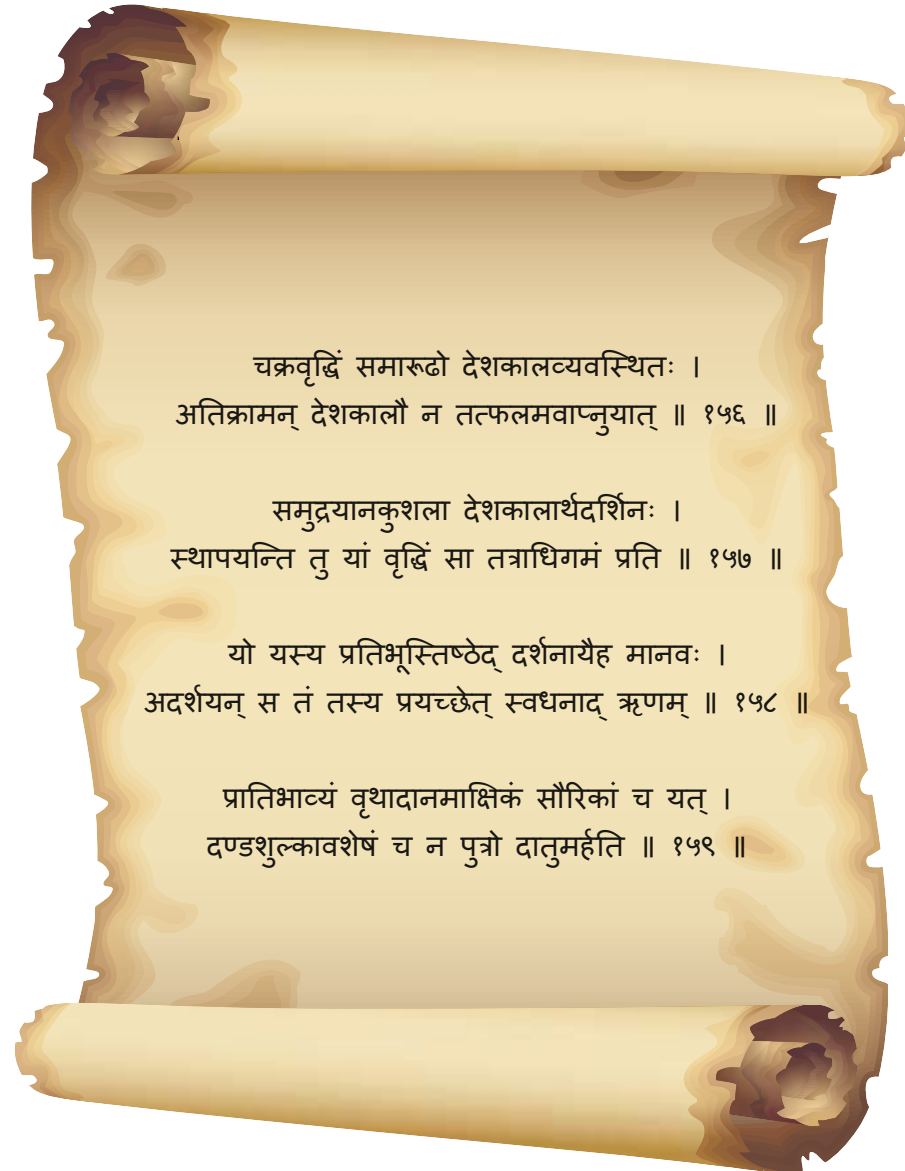
The seeds of the Actuarial profession in India was sown long before the formation of the Actuarial Society of India. The first era of the profession was defined by an atmosphere of professionalism that is enshrined in Actuarial Science. The profession is truly beholden to the legacy set by these pioneers.



PRE 1944

LOOKING BACK

ACTUARIAL WORK IN ANCIENT INDIA



The lines alongside are from Shlokas 156-159 of Chapter VIII of *Manav Dharma Shastra*¹ and translated in English means²:

156. "He who has made a contract to carry goods by a wheeled carriage for money and has agreed to a certain place or time, shall not reap that reward, if he does not keep to the place and the time (stipulated).

157. Whatever rate men fix, who are expert in sea voyages and able to calculate (the profit) according to the place, the time, and the objects (carried), that (has legal force) in such cases with respect to the payment (to be made).

158. The man who becomes a surety in this (world) for the appearance of a (debtor), and produces him not, shall pay the debt out of his own property.

159. But money due by a surety, or idly promised, or lost at play, or due for spirituous liquor, or what remains unpaid of a fine and a tax or duty, the son (of the party owing it) shall not be obliged to pay."

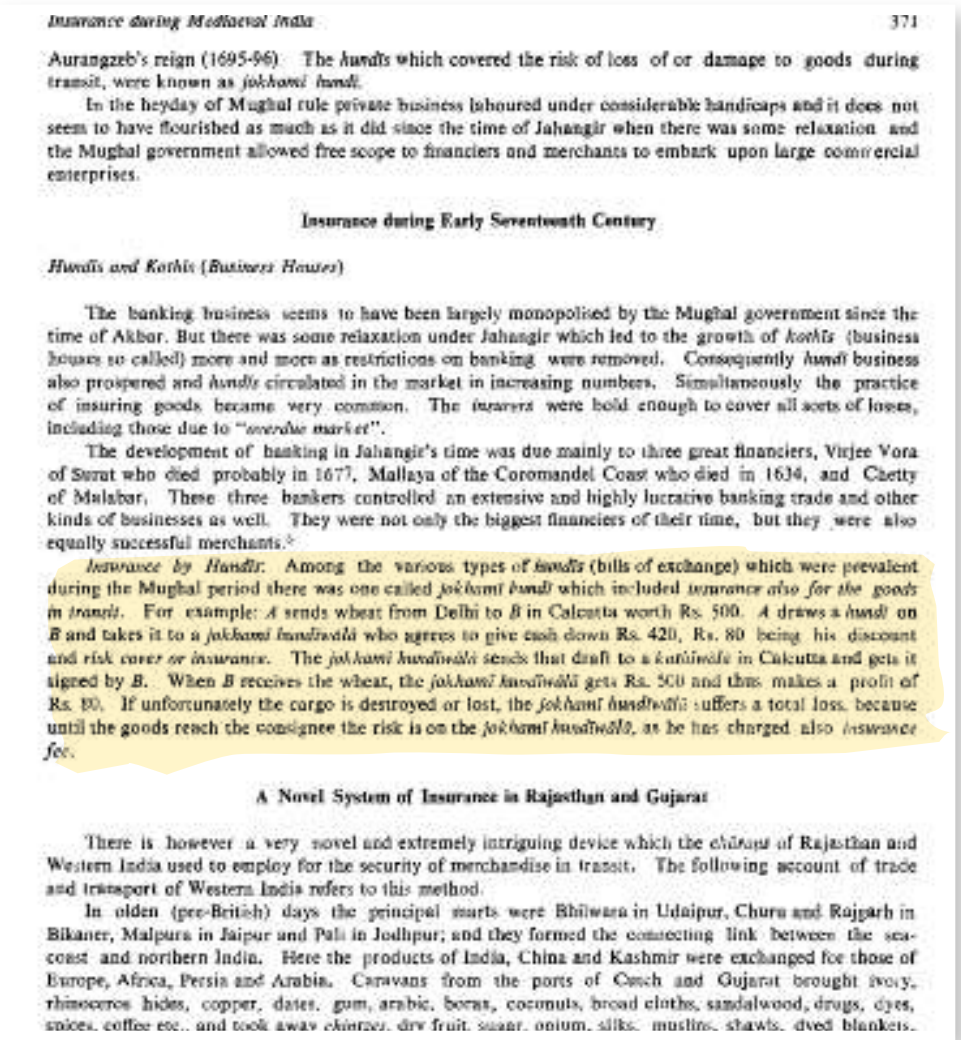
Manu, India's ancient lawgiver, put forward the thought that a special charge be made on goods carried from one town to another (through land or sea), to ensure their safe carriage until handed over to the consignee at the destination. This was a type of insurance and the 'expert' men referred to above were doing what, in the actuarial world, has come to be known as 'pricing'. This is, perhaps, the first recorded instance of Actuarial work in Indian history. In fact, a few centuries after Manu, Yajnavalkya, an ancient teacher, in his *Dharmashastra* and Kautilya (Chanakya) in

Arthashastra also laid down several rules and regulations of a similar nature³.

This system enabled the establishment of a network of business relations through oceanic transport, leading to flourishing overseas trade. The 'contract of insurance' was part of the 'contract of carriage' and it is observed from the laws of Manu that 'expert men' those days had even anticipated the doctrines of 'average', 'contribution' and 'act of god'. If cargo was lost due to the negligence of the ship's crew, the loss had to be borne by all its members; but when the loss was caused by an 'act of god', the members of the crew were not held responsible.

Yajnavalkya, further developed the law relating to the carrier. A carrier who failed to reach the destination could not claim freight but was exempt from responsibility if loss of goods was occasioned by an 'act of god'. In the case of loss by piracy, etc., the carrier was not protected. Kautilya also discussed the legal position of the carrier in the same strain. It, therefore, appears from these ancient writings that the carrier was also an insurer in a limited sense. Seeds of insurance and actuarial concepts thus continued to grow.

Insurance took firm root in the 16th-17th century CE. There are references to cover against war risk or loss due to passage of royal troops through farms. These were compensated by the State as a gesture of goodwill – a form of 'social insurance' that required an 'expert' to assess the loss.



Screenshots from the book *Cultural Contours of India* by Dr Satya Prakash; Felicitation volume edited by Vijay Shankar Srivastava

It is also interesting to note that the earliest known policy in English (1555) is expressed as "on the good ship *Sancta Crux* from any port of the isles of India of Calicut into Lixborne". Thus, modern-day marine insurance also developed first in this country.

¹ Source: www.wisdomlib.org/hinduism/book/manusmriti-with-the-commentary-of-medhatithi
² From *Manusmriti: The Laws Of Manu 1500 BC* translated by G Buhler
³ <https://shodhganga.inflibnet.ac.in/bitstream/10603/50603/5/ch-2.pdf>, <https://archive.org/details/in.ernet.dli.2015.224568/page/n23>

INSURANCE UNDER THE EAST INDIA COMPANY AND BRITISH RULE^{4,5}

Early history of the present system of insurance (based on principles of Actuarial Science i.e. happening of random events, its effect on the society and measure of the same) shows that it was introduced here by the British.

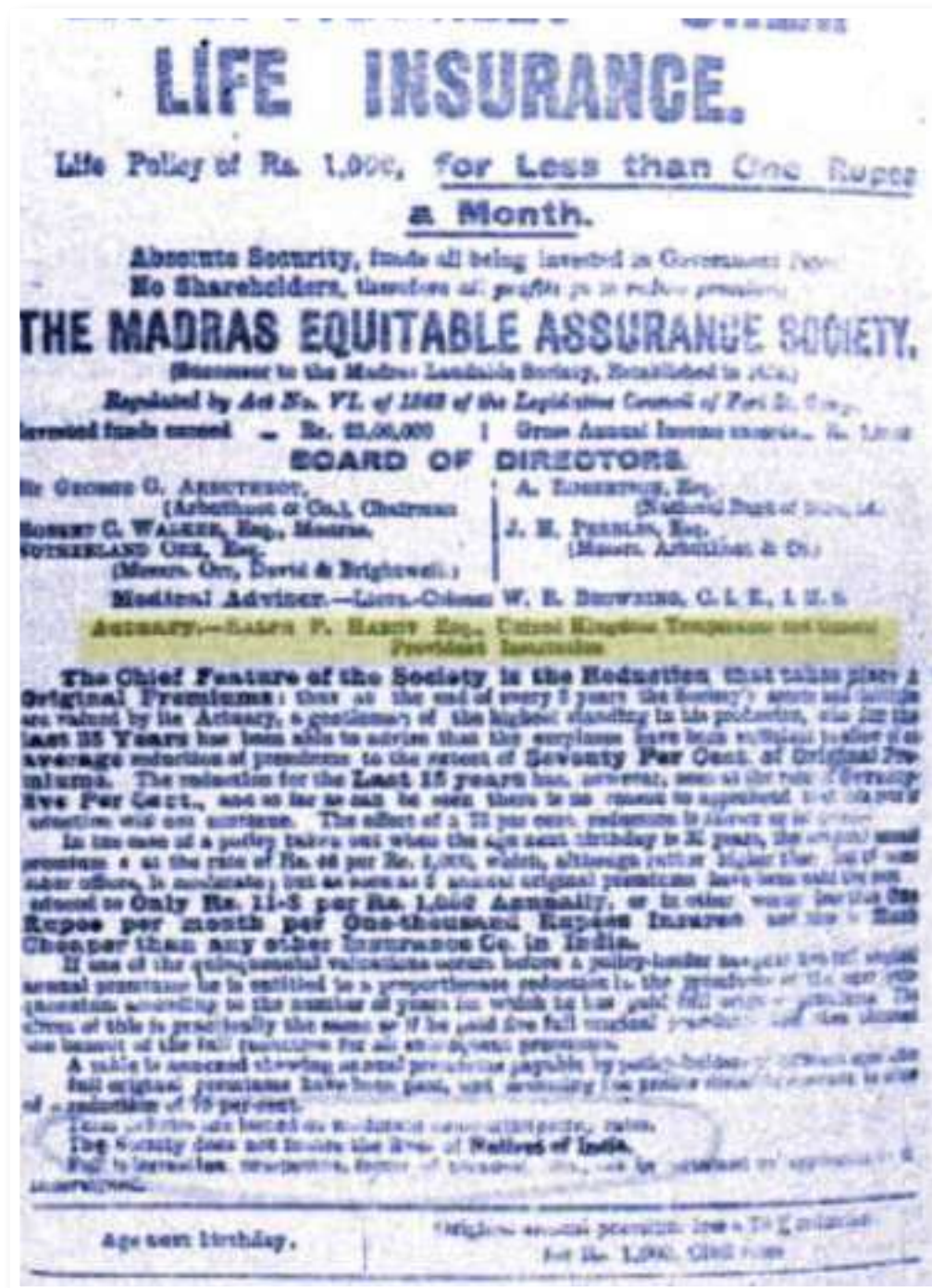
In 1818, a company called Oriental Life Insurance was set up in Calcutta, now Kolkata. It was the first insurance firm in India, and was followed by the Bombay Assurance Company in 1823 and the Madras Equitable Life Insurance Society in 1829. The Oriental Life Insurance failed in 1834.

The premium charged by early life insurers in India were almost 20 per cent higher for Indian policyholders than European policyholders due to the expected mortality difference. Until 1870, all insurance companies in India were subsidiaries of European companies.

It was Bombay Mutual Life Assurance Society that heralded the birth of the first Indian life assurance company in the year 1870. Unlike a subsidiary, it covered both Indian and European policyholders at same rates – thus eliminating pricing difference on grounds of difference in mortality.

⁴ Source: *Saga of Security, Story of Indian Life Insurance 1870-1970*

⁵ Source: *Tryst with Trust, The LIC Story*



Advertisement for the Madras Equitable Society on February 27, 1906 showing the name of the Actuary, Ralph P Hardy, along with board members and directors



Facsimile copies of insurance policies issued by early insurance companies

Four years later, in the year 1874, the Oriental Government Security Life Assurance Company was established in Bombay.

Later from 1905, the Swadeshi Movement inspired the proliferation of insurance companies in India. Prominent among them were United India, Hindustan Cooperative, National Insurance, New India and Laxmi Insurance companies. Coincidentally, this was also the time when Indians started to take up the Actuarial profession.



Bombay Mutual Building

The Oriental Government Security Life Assurance Company⁶

A major contribution was by a British Actuary, Duncan McLauchlan Slater, Fellow of the Institute of Actuaries, London. On May 5, 1874, Slater along with a few influential Indians, started the first Indian proprietary insurance company, The Oriental Government Security Life Assurance Company (Oriental), in Bombay (now Mumbai).



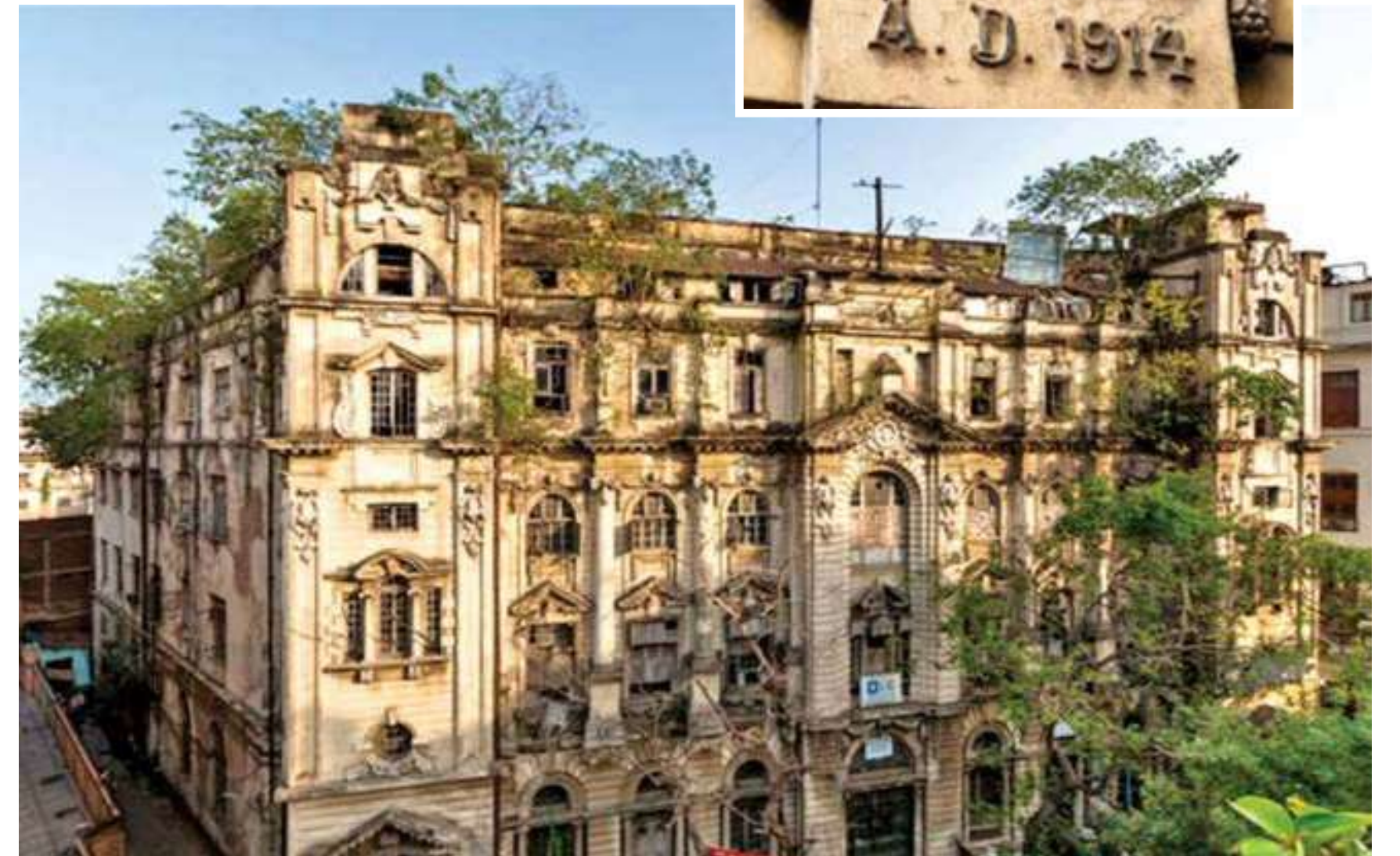
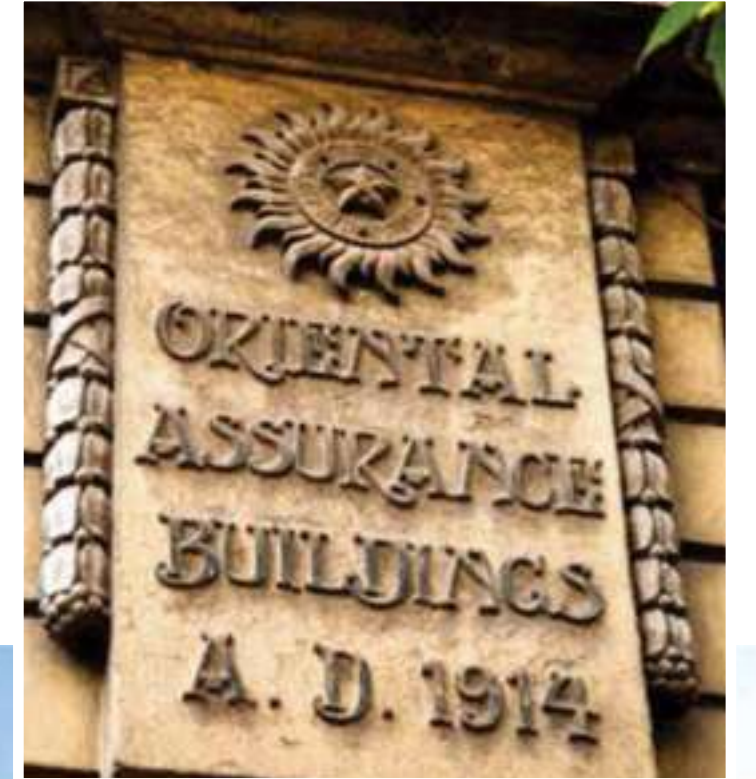
Duncan McLauchlan Slater, Eng., F. I. A., Founder of the Company and Manager and Actuary, 1874–1899

Given his considerable experience, enterprising expertise and foresight, Duncan McLauchlan Slater understood the requirements and available resources in the Indian market. He believed that Oriental should have full control over its operations, allowing policyholders a voice in the management and distributing profits in a fair manner between shareholders and policyholders.

Under the leadership of Slater, the company laid down definite rules of conduct guaranteeing security of its investments and careful management, which led to its unparalleled reputation as a strong and secure institution.

⁶ *Short History of the Oriental Government Security Life Assurance Company Limited*, published in 1924 on the 50th anniversary of the company
<http://double-dolphin.blogspot.com/2014/07/the-oriental-assurance-building-clive.html>
<https://shodhganga.inflibnet.ac.in/bitstream/10603/50603/5/ch-2.pdf>

Pictures of Oriental Assurance Building taken in July 2014⁷



⁷ (Photo Courtesy) <http://double-dolphin.blogspot.com/2014/07/the-oriental-assurance-building-clive.html>



H Edwin Jones

H Edwin Jones joined Oriental as an Assistant Actuary in 1912, the year in which the first life insurance Act in India was put in place. He served in the same capacity until 1922, after which he took over as Head of Oriental. In the 22 years of his leadership, Oriental saw a massive surge in business growth, from Rs 17 crore to Rs 117 crore. He was also the founder-president of the Indian Life Assurance Offices' Association (I.L.A.O.A) and was thrice elected its president. The most notable feature of H Edwin Jones' career was the fact that he completely identified himself with Indian insurance and served it nobly.



The Oriental Government Security Life Assurance Company Limited management in 1924 – at the time of the 50th anniversary celebration. The management included three Actuaries – Hugh W Brown, H Edwin Jones and Douglas Forrest.

THE EARLY INDIAN ACTUARIES

The roots of the Actuarial community in India can be traced to G S Marathe, more than a century ago.

The formation of the Institute of Actuaries, London in 1848 led to a steady influx of its members practising in India – eventually illuminating the path for Indians interested in Actuarial Science. While documentation on how Indians made their way into this profession

is insufficient, by the beginning of the 20th century, the country had begun to witness the initiation of Indians into Actuarial Science. Those who found this ‘art of numbers’ fascinating, travelled to London to learn the science – although they were just a handful.

Gyan Chand was the first Indian to be taken as member of the International Congress of Actuaries held in New York, 1903⁸.



⁸ https://shodhganga.inflibnet.ac.in/bitstream/10603/156516/7/07_chapter%202.pdf



G S Marathe
First Indian Associate⁹

G S Marathe was the trailblazer of the Actuarial profession in India. He qualified as an 'Associate' of the Institute of Actuaries, London in 1911 – the first Indian to be so.

On receiving permission from the Controller of Insurance in Simla, now Shimla, he was allowed to practise as Consultant Actuary in India – another first for an Indian.

He sincerely endeavoured to raise the status of Indian life insurance companies, to give them the stability and ability to sustain competition with foreign companies. He was the one who took an effort to use independent discretion in assumptions used in Actuarial valuation, based on circumstances unique to the Indian market rather than using assumptions used in European markets. He was of the opinion that long-term banking was perfectly compatible with the life assurance business.



L S Vaidyanathan
First Indian Fellow

One person who shaped the history of the Indian Actuarial profession was L S Vaidyanathan. He qualified as a 'Fellow' of the Institute of Actuaries in 1926 – the first Indian to be a Fellow of the institute.

Vaidyanathan's significant contributions helped in establishing the Actuarial profession in India and ultimately also helped the Indian insurance industry, post-nationalisation of the life insurance business in 1956. He joined the Oriental Government Security Life Assurance Co. Ltd as Assistant Actuary and was simultaneously appointed a part-time Professor of Actuarial Science in the Sydenham College of Commerce and Economics, Bombay. In his latter capacity, he launched several youthful aspirants on their Actuarial careers. He also worked with the government and contributed immensely to the Census of India, 1931 and the Insurance Act, 1938.



N V Nayudu

NV Nayudu made notable contribution to the insurance sector and Actuarial profession.

He qualified as an Associate of the Institute of Actuaries, London in 1937, and as a Fellow in 1939. Thereafter, for five years he was Assistant Superintendent of Insurance after which he joined United India in 1945. He was a member of the Post-War Sub-Committee on Insurance and Insurance Legislation Committee as well. He was also the president of the South India Insurance Offices' Association and the Indian Life Assurance Offices' Association (I.L.A.O.A).

According to the Insurance Year Book of 1929, only 11 Actuaries were practising in India then. In the next 11 years, the number increased to 39. The role of Actuaries gained importance after The Insurance Act, 1938. Actuaries were appointed to evaluate the financial condition of insurance companies and valuation of liabilities of insurance companies. While some practised as Consulting Actuary, others were appointed by the government for investigating mortality-related issues.

LIST OF ACTUARIES IN INDIA.

Fellows.	
Date of admission.	
1908	Douglas Forrest, Actuary, Oriental Government Security Life Assurance Company, Oriental Buildings, Bombay.
1911	H. E. Jones, Manager, Oriental Government Security Life Assurance Company, Oriental Buildings, Bombay.
1926	L. S. Vaidyanathan, M.A., Assistant Actuary, Oriental Government Security Life Assurance Company, Oriental Buildings, Bombay.
Associates.	
1908	J. C. Sen, M.A., B.L., Reader, 38, Sitaram Ghose Street, Calcutta.
1911	G. S. Marathe, M.A., Poona, No. 4.
1913	M. B. Tamlie, B.A., L.C.E., A.S.A.A., Assistant, Banker Corporation, 14, Tamlie Building, Dadar, Bombay.
1919	H. L. Humphreys, National Insurance Company, 3, Old Court House Street, Calcutta.
1922	K. Y. Joshi, B.A., General Assurance Society, Ajmer.
1923	K. B. Madhava, M.A., F.R.A.S., Professor, Maharaja's College, Mysore.
1923	A. Pal, M.Sc., National Indian Life Insurance Company, 6-7, Clive Street, Calcutta.
1929	A. S. Chakr, M.Sc., Gillanders, Arbuthnot & Company, Clive Buildings, Calcutta.

List of Actuaries in 1929

List of Actuaries practising in India.

Fellows of the Institute of Actuaries or of the Faculty of Actuaries—

1. Gubin, K., F.F.A., Hindustan Co-operative Insurance Society, 55, Saranbhatnagar Basantpur Road, Calcutta.
2. Hoole, L.B., F.F.A., A.I.A., A.A.S., C/o The Sun Life Assurance Co. of Canada, Canada Buildings, Hornby Road, Bombay.
3. Miles, A. J., F.I.A., Prudential Assurance Company, 8, Clive Street, Calcutta.
4. Pandit, Kantilal A., F.I.A., Bombay Mutual Life Assurance Company Limited, Bombay Mutual Building, Hornby Road, Bombay.
5. Sen, H. K., F.F.A., Mission Court, P12 Mission Row Extension, Calcutta.
6. Saha Iyer, D., M.A., F.I.A., Actuary, General Assurance Society, Limited, Ajmer.
7. Shah, B. K., F.I.A., New India Assurance Company Limited, Esplanade Road, Bombay.
8. Sharp, C. D., F.I.A., Gresham Buildings, Esplanade Road, Bombay.
9. Srinivasa, K. H., F.I.A., Oriental Government Security Life Assurance Company Limited, Bombay.
10. Vaidya, S. N., F.I.A., Oriental Government Security Life Assurance Company Limited, Bombay.
11. Vaidyanathan, L. S., M.A., F.I.A., Oriental Government Security Life Assurance Company Limited, Bombay.

Associates of the Institute of Actuaries who have been granted certificates in terms of rule 4 of the Insurance Rules, 1939.

1. Balasubrahmanyam, K., B.Com., A.I.A., Actuary, The Bombay Life Assurance Company Limited, Bombay Life Building, 45-47, Church Gate Street, Fort, Bombay.
2. Bhatia, Harbans Lal, M.A., A.I.A., Krishna Bhatia, Mohala Mohlan, Lahore.
3. Divan, G. S., A.I.A., 126, Hindu Colony, Dadar, Bombay 14.
4. Humphreys, H. L., A.I.A., 7, Council House Street, Calcutta.
5. Joshi, K. Y., A.I.A., C/o Western India Life Insurance Co. Ltd., Satara City.
6. Madhava, Professor K. B., M.A., A.I.A., F.R.A.S., Mysore University, Mysore.
7. Makar, Sant Ram, A.I.A., Actuary, 31, Bawa Dunga Singh Buildings, Nalut Road, Lahore.
8. Marathe, G. S., M.A., A.I.A., Actuary, Servants of India Society, Road, near Ferguson College, Poona No. 4.
9. Muthuswamy Iyer, N. S., M.A., B.L., A.I.A., Superintendent of State Insurance, Financial Sect., Trivandrum.
10. Pal, Anutosh, M.Sc., A.I.A., Actuary, C/o National Indian Life Insurance Company Limited, 12, Mission Row, Calcutta.
11. Sen, J. C., M.A., B.L., A.I.A., 18-D, Narayana Sen Square, Calcutta.
12. Srinivasa, S. D., A.I.A., National Insurance Company Limited, 7, Council House Street, Calcutta.
13. Srinivasa, T. R., A.I.A., C/o United India Life Office, Post Box No. 281, Madras.
14. Subramanian, D. S., M.A., F.R.S., A.I.A., Assistant Secretary, The Andhra Insurance Company Limited, Masulipatanam.
15. Swaminathan, T. S., M.A., A.I.A., Actuary, United India Life Assurance Company Limited, United India Life Building, Madras.
16. Venkatasubbiah, G., M.A., B.T., A.I.A., 89A, Amrai Camp, Poona 4.
17. Venkatasubramoni Aiyar, B.A., A.I.A., Saraj Villa, Vaidyanatham Nagercoil, Travancore State.
18. Vora, V. H., B.Sc., A.I.A., C/o The New India Assurance Co. Limited, Esplanade Road, Bombay.

List of Actuaries in 1940

⁹ <https://archive.org/details/in.ernet.dli.2015.224568/page/n245>

MAJOR INSURANCE LAWS IN BRITISH INDIA

Prior to 1912, there was no legislation governing the functioning of insurance business in India. Almost 50 Life Offices and more than 500 Provident Societies operated in the first decade of the 20th century. Many of the Provident Societies were a result of the Swadeshi Movement. These societies, working on the 'dividing principle' had inherent defects and were destined to fail. This resulted in loud demands to regulate the affairs of insurance companies to avoid failures and check malpractices. The Government of India realised the inadequacy of the Assurance Companies Act, 1909 and decided to come up with separate rules and regulations to govern the insurance sector.

INDIAN LIFE INSURANCE COMPANIES ACT, 1912

In the year 1912, the Indian Life Insurance Companies Act and the Provident Fund Act were passed, and with their introduction, the government gave recognition to the importance of actuarial function in the life insurance sector.

The Indian Life Insurance Companies Act, 1912 made it necessary for premium rate tables and periodical valuations of companies to be certified by an Actuary¹⁰. Insurers were also required to keep certain stated deposits¹¹ to prevent any financial weakness, which is similar to the 'solvency margin' concept that exists now.

By law, every company had to submit certain returns in a schedule form to the Office of Government Actuary

and these were published under the authority of the Government of India – "Every life assurance company shall once in every five years, or at such shorter intervals as may be prescribed by the instrument constituting the company, or by its regulations or bye-laws, cause an investigation to be made into its financial condition, including a valuation of its liabilities, by an Actuary."

But the Act differentiated between foreign and Indian companies on many accounts, putting Indian companies at a disadvantage. Due to various shortcomings such as limited power of the government Actuary, small paid-up capital requirements, absence of check on irregularities or unhealthy concerns and investment of their funds, the Act was not effective in curbing malpractices.

INDIAN INSURANCE COMPANIES ACT, 1928

Some of the loopholes and defects of the Life Insurance Companies Act, 1912 that were severe in nature were plugged by subsequent Acts. The Government of India in 1928 passed a stopgap legislation with the main objective of collecting statistics on insurance matters so that the information collected would be of value when time would come to pass a comprehensive legislation.

The Act was not very comprehensive and could only serve the purpose of collection of statistical data. It required every insurance company which conducted transaction in any class of insurance business in India to submit annual

statements showing details of its business both in and outside India – supervision of which required expertise in terms of statistics and Actuarial techniques. It also allowed the government to collect statistical information from both foreign and India insurance companies operating in India.

THE INSURANCE ACT, 1938

Post the 1928 Act, the Indian Government decided to wait for the British Government to amend the Assurance Companies Act of 1909 – passed in the British Parliament – on which the Indian Life Insurance Companies Act of 1912 was based. Although the committee set up in Britain completed its enquiry in 1927, the binding legislation was not passed.

In 1935, the Indian government decided to proceed with the reform of insurance law without waiting for enactment of legislation in Britain.

Based on the report of the study of insurance market in India, submitted by Sushil C Sen towards the end of 1935, a consultative committee consisting of representatives of various interests, was formed. The committee framed a bill which was introduced in the Indian Legislative Assembly in 1937, became a law in early 1938 and came into force on July 1, 1939.

The Insurance Act, 1938 created a solid foundation for all subsequent Acts and Amendments. It was the first legislation that not only governed life insurance but also non-life insurance to provide strict State control over the insurance business.

The Act, by its requirements and provision of control of insurers established a prominent place for Actuaries, as key risk managers, in insurance companies. Overall, it was perceived as a wide and well-balanced Act that addressed various complex issues of the insurance business.

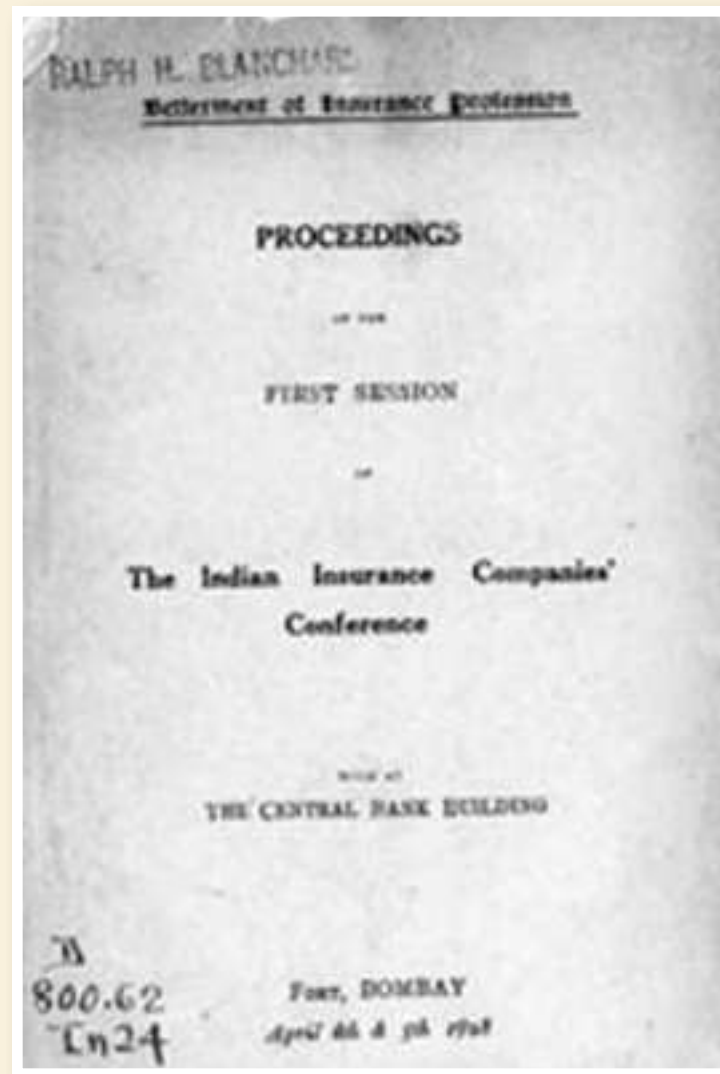
The first Indian Actuary and first President of Actuarial Society of India, L S Vaidyanathan, was a prominent contributor to all such government initiatives, along with B K Shah and N V Nayudu.

¹⁰ <https://archive.org/details/in.ernet.dli.2015.224568/page/n113>

¹¹ <https://archive.org/details/in.ernet.dli.2015.224568/page/n109>

THE INDIAN INSURANCE COMPANIES CONFERENCE, APRIL 4-5, 1928¹²

In 1928, for the first time in the history of the insurance business in India, a conference of Indian insurance companies was organised in Bombay. It was attended by some notable Actuaries of the time – G S Marathe and Prof K B Madhav.



That long term Banking is perfectly compatible with life Assurance business, has been opined, by eminent actuaries Mr. G. S. Marathe, the eminent Actuary of Poona, in his very recent article on Insurance in the popular Marathi monthly "Chitramaya Jagat" has favourably talked of investing the funds of life offices in sound long term investments. Sir Gerald Ryan opines in his Presidential Address : – "I may add that I am strongly in favour of a substantial portion of the funds of a life office being employed in mortgages of free hold and lease hold properties not only for the reasons given above but to lend stability to assets in times of monetary crises." There is Prof. K. B.

in times of monetary crises." There is Prof. K. B. Madhav M.A.A.I.A. another eminent Indian Actuary of Mysore who genuinely realized the importance of the problem of agricultural indebtedness in India and says in one of his articles "of immediate concern, is the relief of agricultural indebtedness, in the country

which is well known and ever increasing. The ordinary kinds of financing, joint stock industrial and co-operative Banks, have naturally all failed, because of the peculiar, characteristics of Agricultural relief." On further discussing investments on land and real property mortgages by life Assurance companies, he adds "These loans satisfy all the canons of sound investment for life Assurance offices ; security unimpeachable, when not actually guaranteed by Govt. interest rates very favourable, long term investments, and being directly helpful in the relief of the indebted, it is intrinsically of the same nature of social service, as life Assurance itself. This form of investment is eminently suitable, for the life offices, and future participation is bound to bring both profit and popularity." These opinions of experienced Actuaries ought to weigh high on all sceptic minds and to remove

188	Mr. B. H. Warden Sir Psychomethe Treasurer
Oriental Govt. Sec. Life Assurance Co. Ltd.	Mr. H. E. Jones - D. Farrow - G. D. Southland - L. S. Vaidyanathan - Malabar - M. J. S. Khan
Presidency Provident & General Insurance Co. Ltd.	Mr. K. J. Goo - R. H. Vyas
Pranai Life Assurance Co. Ltd.	Mr. I. S. Sarwadhari
Tropical Insurance Co. Ltd.	Mr. I. K. Yank
Universal Fire & General Insurance Co. Ltd.	Mr. E. D. Birla - Maruti Kaul - Paghari Kish - Kanchal Varshni - K. H. Srinivas - B. K. Srinivas
The Viceroy Assurance Bank Ltd.	Mr. Patel
The Viceroy Insurance Co. Ltd.	Mr. V. L. Lakshmi - J. C. Srinivas - K. C. Desai
The Western India Life Assurance Co. Ltd.	Mr. K. E. Maitland - D. H. Parth - W. G. Chinnai - V. M. Karandikar - V. N. Deshpande
Zenith Life Assurance Co. Ltd.	Mr. H. M. Mehta - Byramji Harasjee
Insurance Association Calcutta Actuary	Mr. P. V. Subramanian - G. S. Marathe

189	SOME DISTINGUISHED VISITORS.
	Sir Geoffrey Corbett Mr. Jambhai M. Mehta, M. L. A. - H. P. Nair - Mirza Ali Motameddin - S. S. Pathania - Leander E. Turner - Walchand Hirchand, C.I.E. - S. N. Hajji, B.L.A. - M. A. Meher - Shanti Kumar N. Mowjee - Haroon Piraji - J. K. Mehta - R. K. Datta Sanyal - N. Lallu - I. Sankhli - J. Chatterjee - A. N. Chatterjee - F. C. S. Paul - S. D. Sankarala - F. S. Gokhale - Yashwanth P. Vaidya - M. V. Narayan - A. S. Erskine
	List of Delegates present at the Conference.
The Andhra Insurance Co. Ltd.	Mr. Y. Mangayya - C. V. Narasimhan
The Arun Insurance Co. Ltd.	Mr. N. B. Dave - R. P. Ganga
The Axis Assurance Co. Ltd.	Mr. C. G. Foster
Blair Insurance Co. Ltd.	Mr. Lalit Gadhari - Mullick - V. B. Sanyal - S. E. Tripathi

The First Mortality Investigations¹²

Five mortality investigations were carried out from the time of inception of The Oriental Government Security Life Assurance Company Limited until 1938. Of the five, two were reported by Indian Fellow Actuary L S Vaidyanathan. The first mortality investigation by him was based on policyholders' experience of the 'Oriental' of 1905-25, while the second was based on policyholders' experience of 1925-35.

Mortality of Indian Assured Lives. By L. S. Vaidyanathan, M.A., F.I.A., Assistant Actuary of the Oriental Government Security Life Assurance Co., Ltd.
[Submitted to the Institute, 26 February 1930.]

MORTALITY OF INDIAN ASSURED LIVES
By L. S. VAIDYANATHAN, M.A., F.I.A.
Actuary of the Oriental Government Security Life Assurance Company, Ltd.

[Submitted to the Institute, 28 November 1938]

186	Bombay Life Assurance Co. Ltd.	Dr. Lalitlal Sankhli, Et. Mr. P. J. Srinivas - J. L. Mehta - S. B. Carl Kaur - N. S. Patil - K. S. Subramanian Iyer
Bombay Mutual Life Assurance Society Ltd.	Mr. L. V. Vaidya - V. P. Vaidya - M. K. Desai	
British India General Insurance Co. Ltd.	Mr. H. M. Mehta - G. S. Sanyal - Firoz - Sankhli	
Crescent Insurance Co. Ltd.	Mr. R. M. Dhar	
Empire of India Life Assurance Co. Ltd.	Mr. S. F. Aham - Bharucha	
General Assurance Society of Ajmer.	Mr. S. Kishore - Sankhli	
Hindustan Co-operative Insurance Society Ltd.	Mr. N. Datta	
India Mutual Life Insurance Co.	Mr. P. C. Ray	
Hindustan Bima Co. Ltd.	Mr. Lalit Gadhari	
Ideal Democratic Assurance & Mortgage Loans Ltd.	Mr. S. M. Panchapande - D. H. Deshpande - G. N. Prasadikar	
India Mercantile Insurance Co. Ltd.	Mr. P. E. Datta	
India Equitable Insurance Co. Ltd.	Mr. F. S. D'Souza	

187	The Industrial & Provident Insurance Co. Ltd.	Mr. J. C. Srinivas - K. C. Desai - V. C. Srinivas - J. P. Mehta - K. J. Datta
The Jupiter General Insurance Co. Ltd.	Mr. Lalit Sankhli - D. J. Mehta - K. S. R. Iyer - Lakshminar Dwarakdas - D. H. Harasimani	
Lalital Insurance Co. Ltd.	Mr. Lalit Lalit Sankhli - Pandit K. Srinivas	
National Indian Life Insurance Co. Ltd.	- H. K. Pathan	
National Insurance Co. Ltd.	Mr. Sankhli - P. D. Chari - K. K. Moudgali	
The New India Assurance Co. Ltd.	Mr. N. S. Sankarala, et al. Mr. P. C. Sankarala Et. Mr. Narayan Mowjee - B. P. Mehta - R. J. Dutt - A. D. Pathan - K. J. Mehta - H. Mehta - K. M. Wadhkar - K. B. Ray - G. S. Bose - Patel	
The Jupiter Finance Insurance Co. Ltd.	Mr. A. V. Mehta - D. L. Sankhli - B. V. Dhar	
New Era Insurance Co. Ltd.	Mr. P. A. Dapunt	

New Kid on the Block¹³



K A Pandit



Kantilal Anandrai Pandit, the founder of M/s K A Pandit, Consultants & Actuaries, was one of the earlier Fellows in India. He attained Fellowship from the Institute of Actuaries, London in the year 1940. He established M/s K A Pandit Consultants & Actuaries on February 1, 1943 – the oldest Actuarial consulting firm in India.

¹³ <https://www.ka-pandit.com/>

¹² LIC Library

Empire of India Life Assurance Co Ltd

Valuation Report of the Actuary

I HAVE completed the valuation of the Assets and Liabilities of the Company as at 31st December, 1954 and wish to report as under:

The total business valued consisted of 1,37,164 policies assuring together with bonus additions a sum of Rs. 29,01,57,205 as against 1,36,606 policies assuring with bonus additions Rs. 29,60,63,382 as at the date of the previous Valuation. The slight fall in the sum assured is the result of the unhappy events of 1954 and the rate war of 1954 resulting in the conversion of the existing policies into Paid-up ones and switching over to new policies at lower rates of premiums. The following table will show how in spite of the above facts the Company has been making all round progress year to year. The new business underwritten, the premium income, the interest income and the assets of the Company have all been increasing.

The total Life Fund as on 31-12-1954 is Rs. 10,63,33,889. The funds of the Company are all invested in Redeemable Government Securities, Redeemable Debentures, Real Property and Mortgages.

After the Administrator took over charge, the investments have all been made only in Government securities or Municipal Loans. The total of these amounts to Rs. 2,40,37,600. The book value of these up to 31st December 1954 is Rs. 2,18,17,385 and the market value Rs. 2,19,20,825. No provision under 'Reserves' is required on account of these during this Valuation.

In regard to other assets, there has been no depreciation or loss during the Valuation period. But there has unfortunately been both a depreciation and a loss on account of some investments made by the previous management, the chief of which is the fraudulent investment made in the purchase of the controlling block of shares by camouflaging the transaction as though it were a loan on mortgage of properties. The amount so invested is Rs. 24 lakhs and an estimate has already been made of the possible loss on this account and provision has been made in the period to cover the loss which has been made on fair and reasonable lines; further provision is necessary in this Valuation on that account.

It was on a Saturday afternoon in the year 1944 that six Actuaries, including L S Vaidyanathan, K A Pandit and G S Diwan, met at Hotel Monginis in Churchgate in Bombay to decide the shape of the Actuarial profession in India.

When we come to analyse the claim experience it is to be noted with satisfaction that an increasing number of policies have matured after running over the full term while the claims by death have been more or less stationary. This is due in a large measure to the strict policy of selection of lives the Company has been following all along.

Mortality Experience :

An investigation into the mortality experience of the Company based on policies and on sum assured has been made for each year of the triennium and the results given in the following table show the extent of improvement since the triennium ended 31-12-1951. It may be noted that the ratio of actual to expected deaths during the said triennium was 66.9%.

Year	New Business		Premiums including Consideration for Annuities	Interest less Income-tax (excluding refund)	Total assets at the end of the year
	No. of Policies	Sums Assured			
		Rs.	Rs.	Rs.	Rs.
1952	10,058	2,81,45,900	1,17,10,606	29,39,119	11,52,70,583
1953	11,489	3,22,06,250	1,17,10,318	29,76,664	11,97,50,963
1954	11,887	3,84,06,774	1,19,77,645	32,90,968	12,38,65,507

Year	Claims by Death	Claims by Maturity	Total
	Rs.	Rs.	
1952	15,83,485	43,12,577	58,96,062
1953	18,08,841	51,14,750	70,23,590
1954	19,32,760	48,65,670	67,98,430

Valuation report of the Actuary of the Empire of India Life Assurance Company Limited in The Economic Weekly on December 3, 1955.

1944-1955

THE BEGINNING



ACTUARIAL SOCIETY OF INDIA

The Actuarial Society of India (ASI) was formed in September 1944 with the main objective of fostering growth of the Actuarial profession in the country, led by L S Vaidyanathan in the role of its first president.

Since all founding members and other Actuaries were members of the Institute of Actuaries, London (IoA), the formation of the ASI was communicated to the IoA in February 1945 – both for support and assistance. Centres were set up in Bombay (now Mumbai), Calcutta (now Kolkata), Madras (now Chennai) and New Delhi. The ASI also set up its library in Bombay. From November 1945, a process of discussing the examination paper of IoA was also set in motion.

From the outset, the ASI played a vital role in providing inputs to the government to help formulate policies regarding

insurance, pension funds and more. In 1945, ASI members also met to discuss the income-tax system as applicable to life insurance business and submitted a note to the government on the same.

Year ¹	Number of Fellows	Number of Associates
1946	24	28
1947	30	38
1948	35	39
1949	41	45
1950	53	50
1951	72	38
1952	73	38
1953	82	29
1954	89	31
1955	102	31

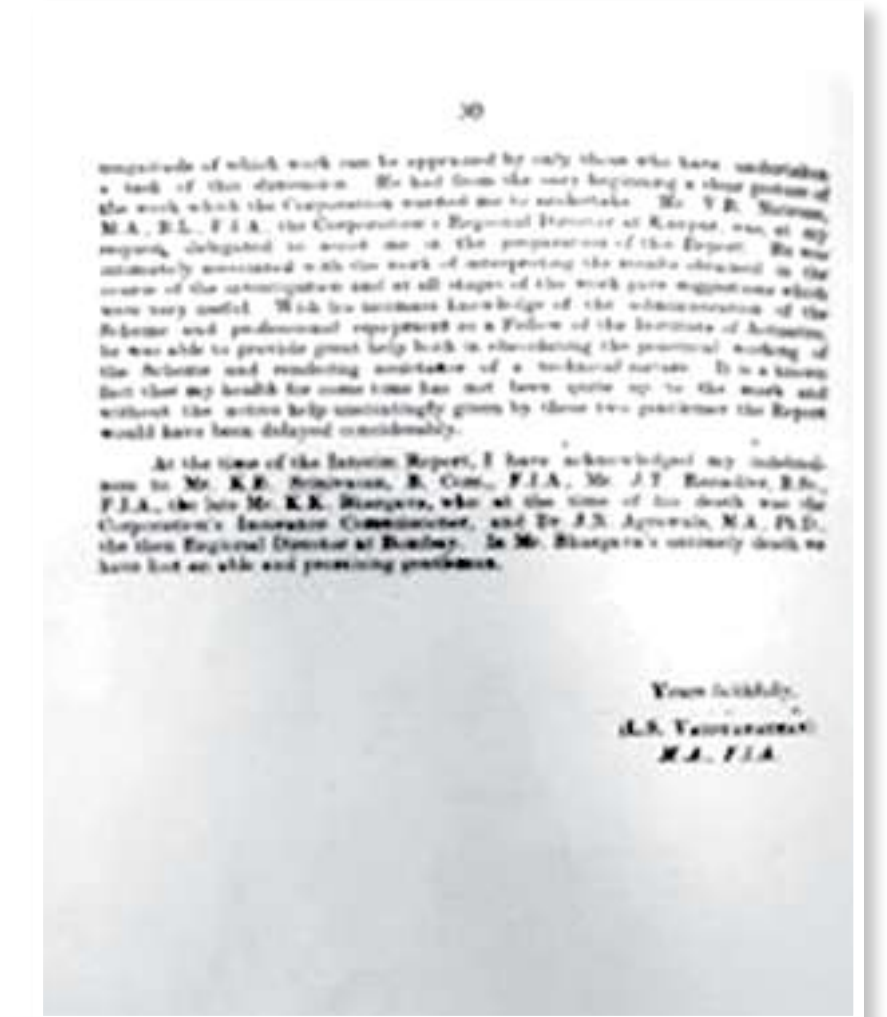
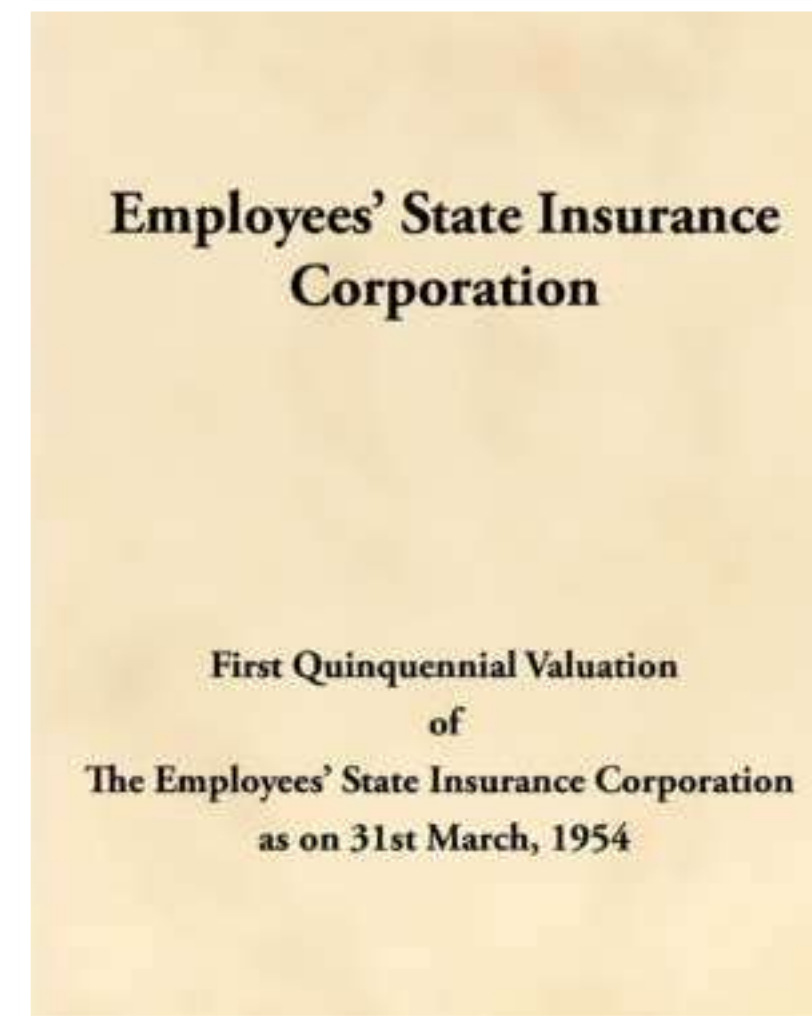
Progression of Fellow and Associate members of ASI during this period

¹Source: IAI data

EMPLOYEES' STATE INSURANCE CORPORATION²

In 1948, the Employees' State Insurance Corporation was inaugurated at Kanpur and Delhi, marking the beginning of social security in the country. However, it was only after almost three years that it began to be even partially implemented. On October 17, 1950, the Employees' State Insurance Corporation, under the Ministry of Labour, notified the Employees' State Insurance (General)

Regulations. And the 'First Quinquennial Actuarial Valuation' of the Corporation as on March 31, 1954, was carried out in accordance with Section 37 of the Employees' State Insurance Act, by L S Vaidyanathan, the first president of the ASI. The report contained the analysis and experience of different benefits, analysis of surplus, etc.



²Source: IAI Library

THE RUMBLINGS OF REGULATION³

In 1939, World War II broke out and continued for six years. Although the war did lead to an interruption in the normal course of development that might have happened after the introduction of the Insurance Act, 1938, there is no doubt that it did put the life insurance business on a healthy footing in the country.

The year 1946 was a peak year for Indian insurers. Several life insurance companies emerged, riding on the spirit of *swadeshi*. However, despite record progress made by life insurance companies, the business was marked by malpractices, deficiencies and frequent liquidation of insurance companies – all of which resulted in loss of public confidence as policyholders were deprived of their savings and their security.

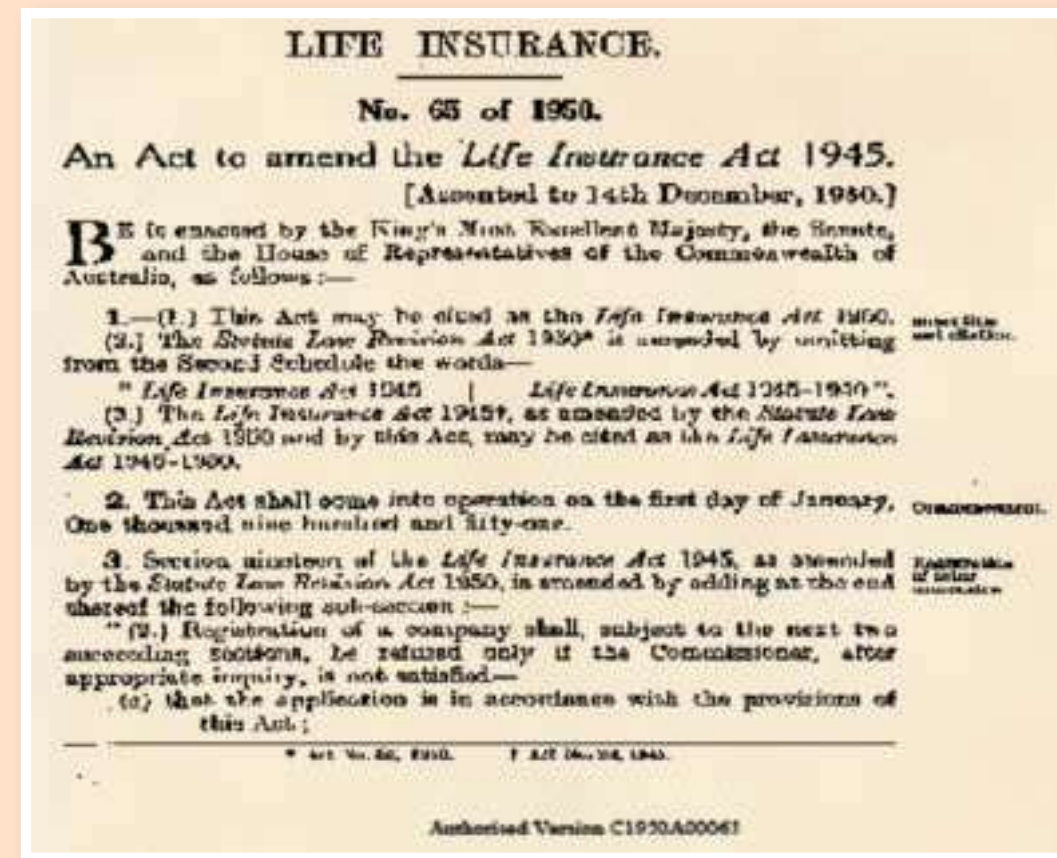
In the post-war period, the *Government of India Gazette* often published notifications of the Superintendent of Insurance (the then Insurance Regulatory Department) cancelling the registration of insurance companies working in India.

INSURANCE AMENDMENT ACT, 1950

The Insurance Act, 1938 placed severe restrictions on investment of funds of insurance companies and was thoroughly denounced in insurance circles. However,

several others thanked the government for its consistent refusal to amend the section that allowed funds to be used to promote unsound and speculative activities.

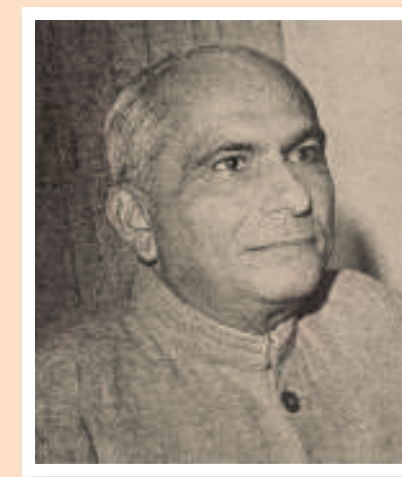
All these malpractices, led the government to form the Cowasjee Jehangir Committee led by Sir Cowasjee Jehangir as Chairman, L S Vaidyanathan (Actuary) as Secretary, Sarvashri Wajahat Hussain, K R P Shroff, J K Mitter, Sir Alan Lloyd and Sir George Morton as members. The report of the committee in March 1947 led to the introduction of the bill in April 1947. However, due to political developments in 1947, the Legislative Assembly could not take up the bill right away. Changes suggested by the committee had detractors who opposed the extreme State control suggested by the committee. Later, upon consideration, the amendments were deemed inadequate to some and unacceptable to others.



³Source: *Saga of Security: Story of Indian Life Insurance, 1870-1970*

In order to circumvent malpractices, the government decided to set up another committee, which included three members of the Executive Committee of the ASI – L S Vaidyanathan, B K Shah and N V Nayudu.

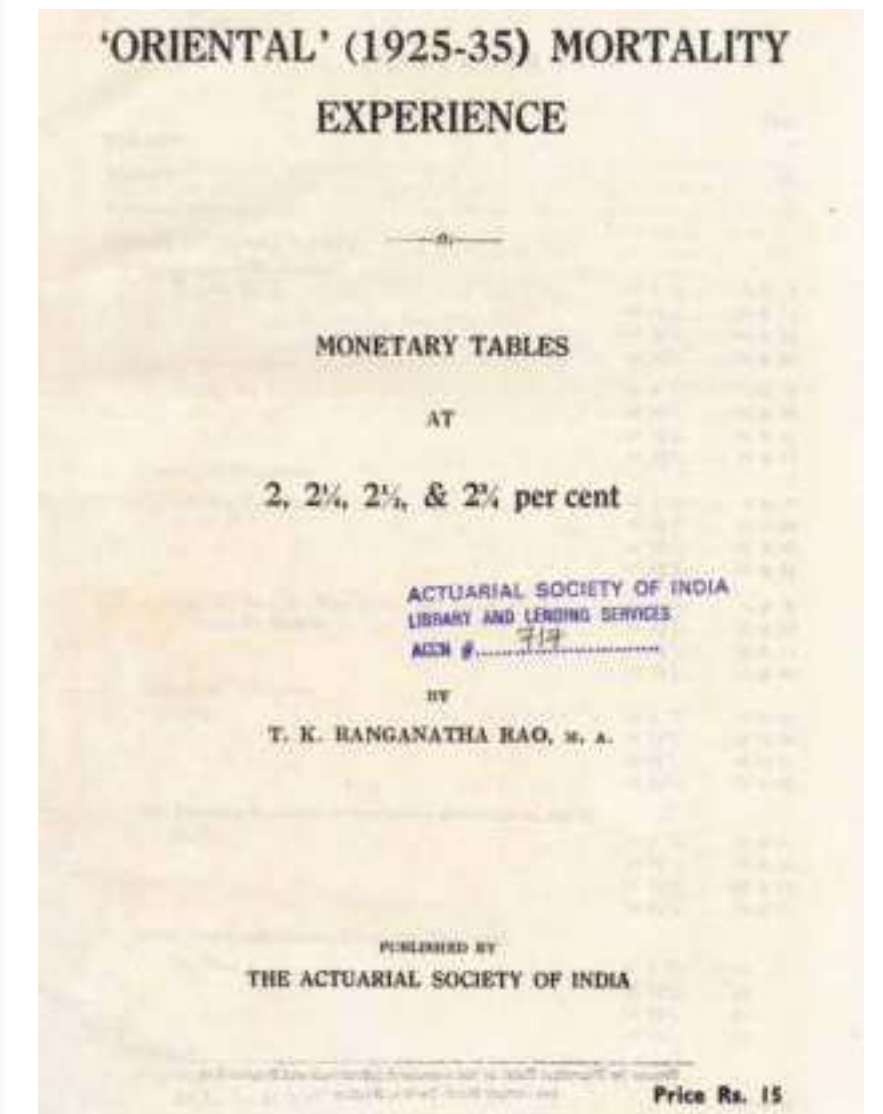
Based on the report of this committee, a fresh bill was introduced in the Legislative Assembly which ultimately became the Insurance Amendment Act, 1950. The Act redesignated the post of 'Superintendent of Insurance' as 'Controller of Insurance' and vested it with more powers. Autonomous organisations like Life Insurance Council and General Insurance Council were also set up. Provision was made for appointment of an administrator to manage the business of financially unsound concerns. Further, restrictions on investments, expense ratio, consolidation of shares of different classes into ordinary shares, etc. were introduced.



B K Shah

FIRST COMMUTATION FUNCTIONS TABLE

In 1948, the ASI published commutation functions for 'Oriental' ultimate mortality at various interest rates. The tables were prepared by T K Ranganatha Rao, a member of the ASI. It was based on the mortality rates 'Oriental (25-35)' prepared by L S Vaidyanathan, derived from the study of mortality experience of policyholders of the Oriental Government Security Life Insurance Company.



LIST OF INSURERS IN INDIA

List of non-Indian Insurers.

In the first column L stands for Life, F for Fire, M for Marine and Misc. for Miscellaneous.

Table with columns: Name of Insurer & Character of business for which registered, Year of establishment, Principal Office in India. Includes entries like Alliance Assurance Company, Atlas Assurance Company, Avasthi & General Insurance Co., etc.

List of Indian Insurers—contd.

Table with columns: Name of Insurer & Character of business for which registered, Year of establishment, Head Office. Includes entries like Hindu Mutual Life Assurance Co., Hindustan Mutual Assurance Co. (M), etc.

List of Indian Insurers—contd.

Table with columns: Name of Insurer & Character of business for which registered, Year of establishment, Head Office. Includes entries like Kapur Theroor Insurance Company, Kaveri Insurance Company, etc.

List of Indian Insurers—contd.

Table with columns: Name of Insurer & Character of business for which registered, Year of establishment, Head Office. Includes entries like Metropolitan Assurance Company, National Fire & Marine Insurance Co., etc.

List of non-Indian Insurers.

Table with columns: Name of Insurer & Character of business for which registered, Year of establishment, Principal Office in India. Includes entries like Alliance Assurance Company, Atlas Assurance Company, etc.

List of non-Indian Insurers—contd.

Table with columns: Name of Insurer & Character of business for which registered, Year of establishment, Principal Office in India. Includes entries like Eastern United Assurance Corporation, Gresham Assurance Corporation, etc.

ACTUARIES: KEEPERS OF A WELL-GUARDED SECRET

During 1945-55, as many as 25 insurers went into liquidation and an equal number transferred their business to other companies. Quite a few companies were unable to declare any bonus at their last 1953-55 Actuarial valuations.

In order to suggest effective ways of protecting policyholders, a sub-committee of the National Planning Committee, with Pandit Jawaharlal Nehru as its chairman, published an interim report. It had already suggested in 1946 the need for a State-established central coordinating National Insurance Board to organise national insurance business. The need to have the cheapest possible price for insurance was also highlighted.

Although the National Planning Committee did not very categorically recommend nationalisation of the life insurance business, stress was on State control being more effective in the public interest. In 1955, at the All India Congress Committee (AICC) session at Avadi, there was a demand for nationalisation of the life insurance business.

Nationalisation of life insurance was by far one of the most well-guarded secrets. The brain trust for this decision was an eminent Actuary, A Rajagopalan – then the Controller of Insurance.

Mr. Vaidyanathan on Nationalisation in 1945 and 1950

T. Bagchee, B.Sc., B.A. (Lon.), F.F.A. (Edin.)
Manager, Sentinel Assurance Co. Ltd.

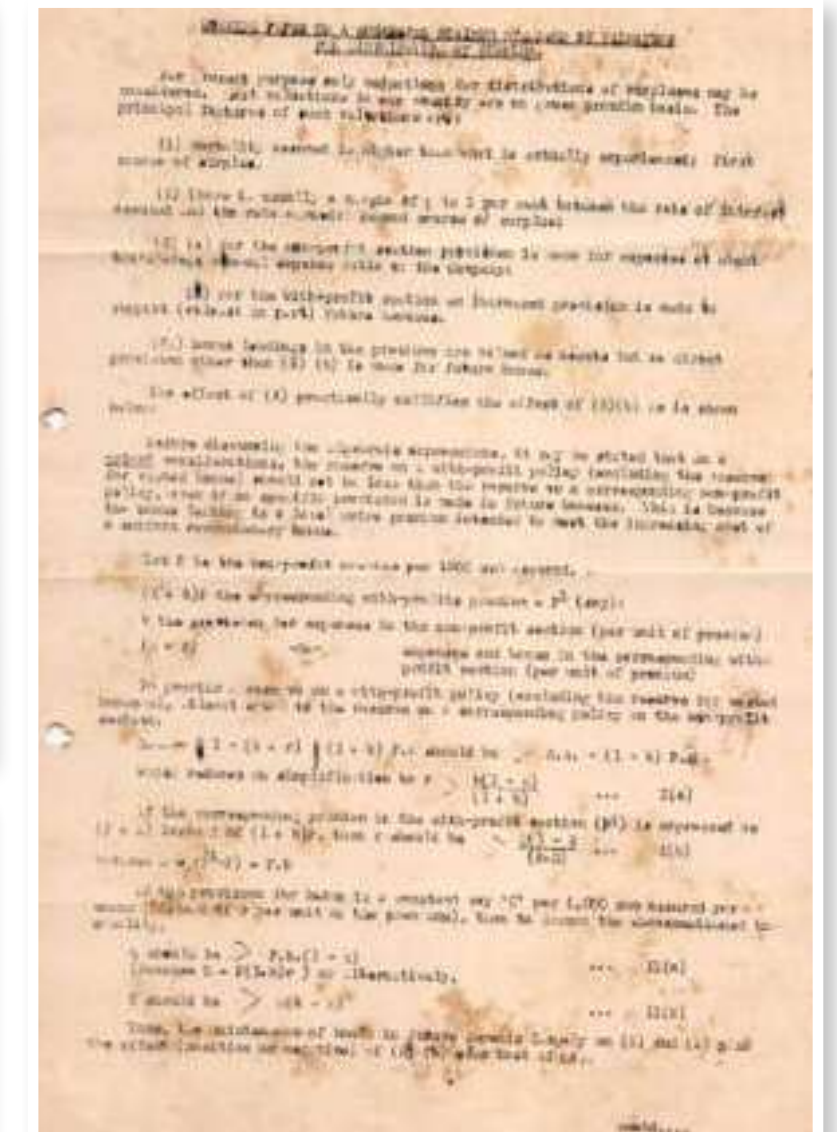
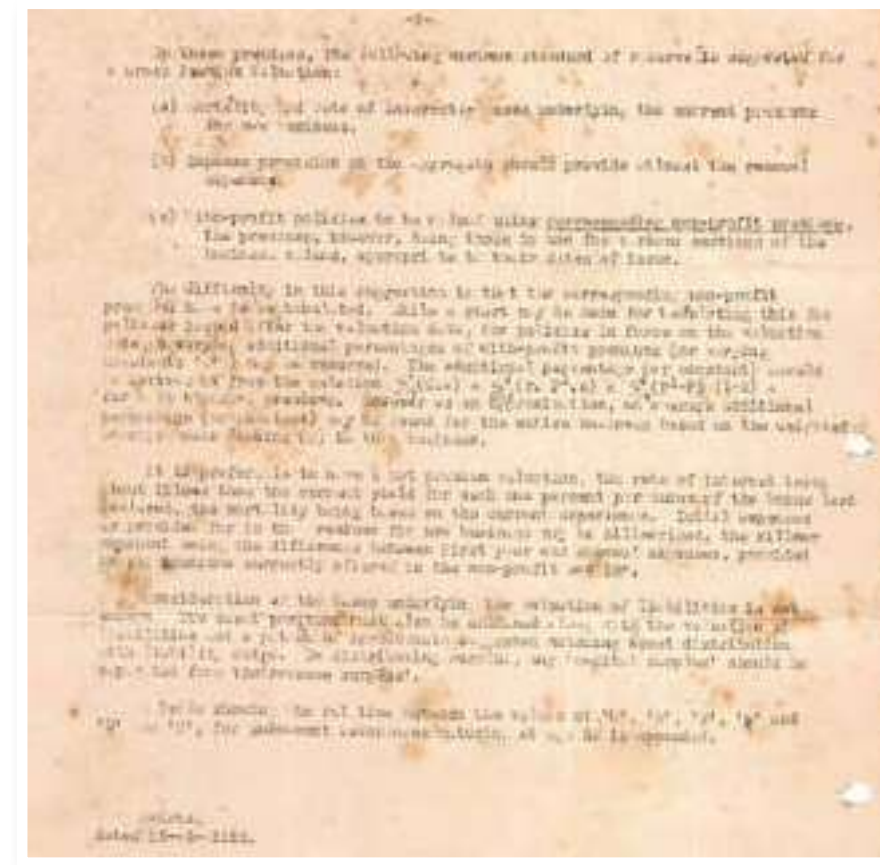
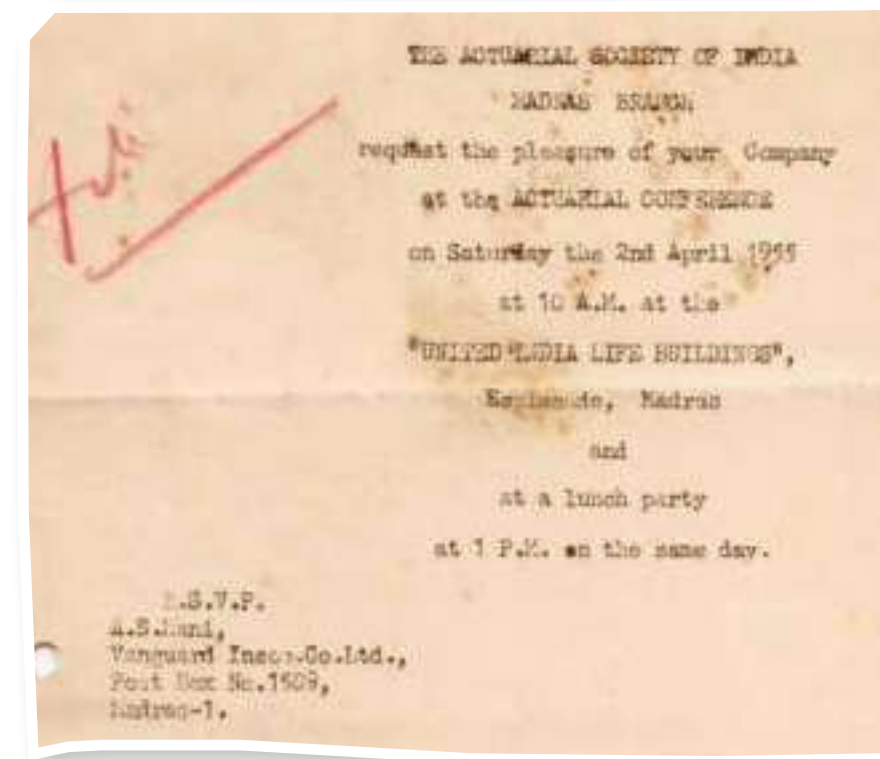
IN his article on Nationalisation of Insurance published in *The Economic Weekly* of May 13, Mr. S. Chakravarty has quoted from the speech delivered by Mr. L. S. Vaidyanathan, M.A., F.I.A., at the Fourth Indian Insurance Conference, in support of his contention that nationalisation is the only remedy for the alleged malpractices in Insurance business. It will be of interest to Mr. Chakravarty to read the remarks of Mr. Vaidyanathan contained in the Indian Insurance Year Book 1945 on the same subject. As the then Superintendent of Insurance, Mr. Vaidyanathan criticised in his report the demand for nationalisation made by certain members of the Legislative Assembly when a Bill to further amend the Insurance Act, 1938 was introduced in November, 1944. In his note Mr. Vaidyanathan analysed the position if insurance undertakings were to be nationalised and condemned the move as it would

have a deleterious effect not only on the business of insurance but also on the economy of the country. I will just quote here the concluding remark from his able exposition of the subject. "Therefore, from every point of view, it would appear that nationalisation of Insurance would be an entirely retrograde step and it would be inadvisable to embark on this venture without giving careful consideration to various untoward repercussions which the change would engender." Obviously, Mr. Vaidyanathan has changed his view on the subject, as his recent utterances will show, though, personally, I do not think that the position of indigenous insurance business has changed since 1945 to such an extent as to call for its nationalisation. But then, today, when the cry for nationalisation is in the air and one can understand Mr. Vaidyanathan's advocacy for the same.



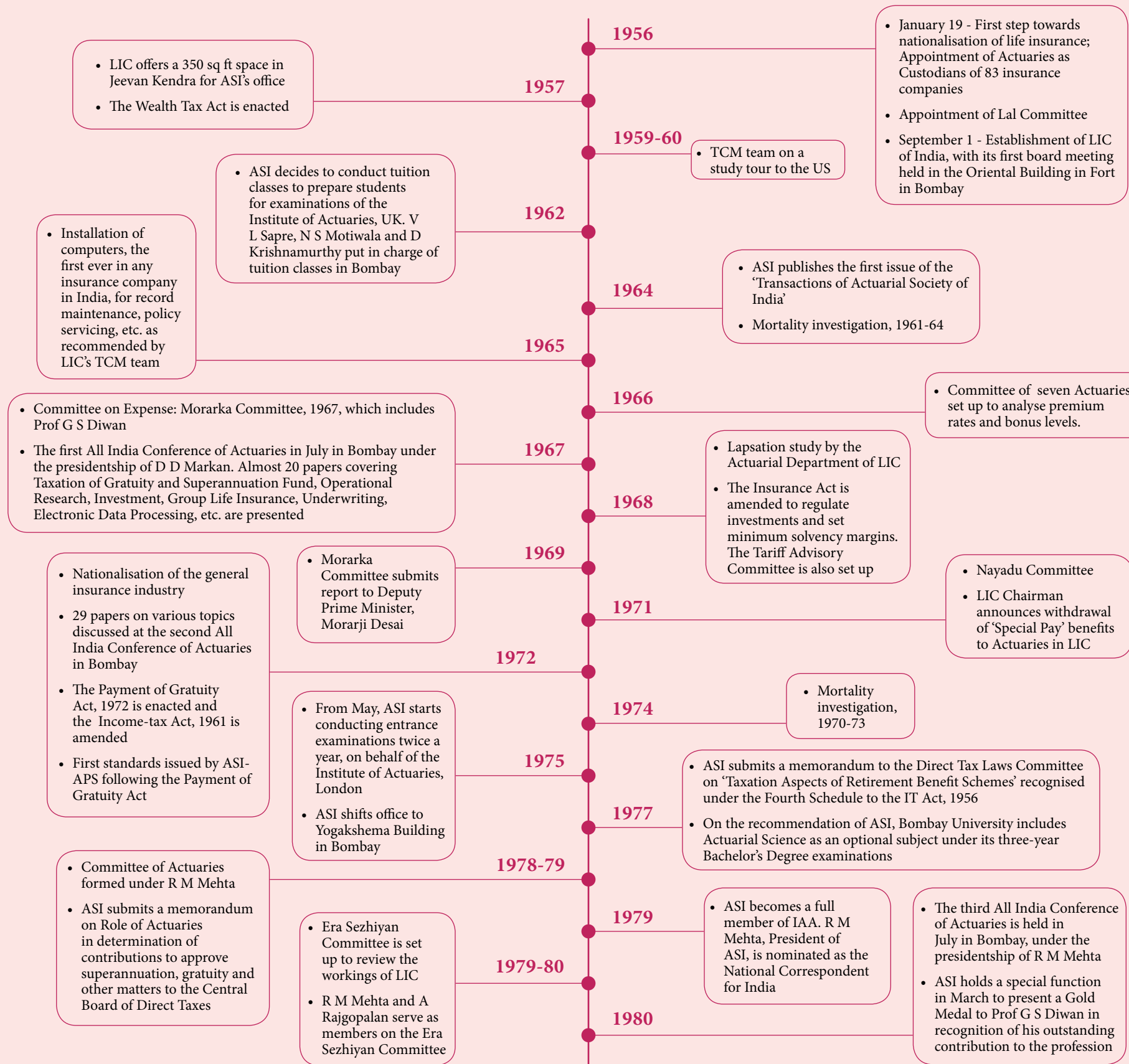
A Rajagopalan

While it evidenced the role of Actuaries in sound government decisions, the nationalisation of the life insurance business was the beginning of retardation in the growth of the Indian Actuarial profession. The numbers speak for themselves since ASI Fellow/Associate members grew by only 100 over more than four decades – from 133 in 1955 to only 233 in 1999.



Year	Members	Notes
1955	133	Initial membership
1965	143	Small increase
1975	153	Continued slow growth
1985	163	Minimal growth
1999	233	Total membership after 44 years

Invitation (including appendices) to the first Actuarial Conference in April 1955 in Madras



1956-1981

WINDS OF CHANGE

THE MOMENT THAT CHANGED IT ALL

January 19, 1956, was the day that changed India's life insurance sector for many years to come! It began with Union Finance Minister C D Deshmukh's announcement at 8:30 pm on All India Radio:

"This afternoon the government has promulgated an ordinance regarding life insurance. All life insurance companies, Indian as well as foreign, doing business in India has come under government management and control. This is the first and preparatory step towards nationalisation of life insurance. It will be followed by the more elaborate action that is called for, and it is proposed to be placed before the

next session of Parliament a Bill for the nationalisation of this important sector of insurance business. Both in respect of the short period during which the management of the companies will vest on the government, and in respect of the ultimate assumption of proprietorial rights over them, reasonable compensation will be paid by the government."

The Indian life insurance sector was nationalised and 154 Indian insurers, 16 non-Indian insurers and 75 provident societies were combined to form the Life Insurance Corporation of India.



C D Deshmukh, Finance Minister of India, who announced the nationalisation of the insurance sector on January 19, 1956



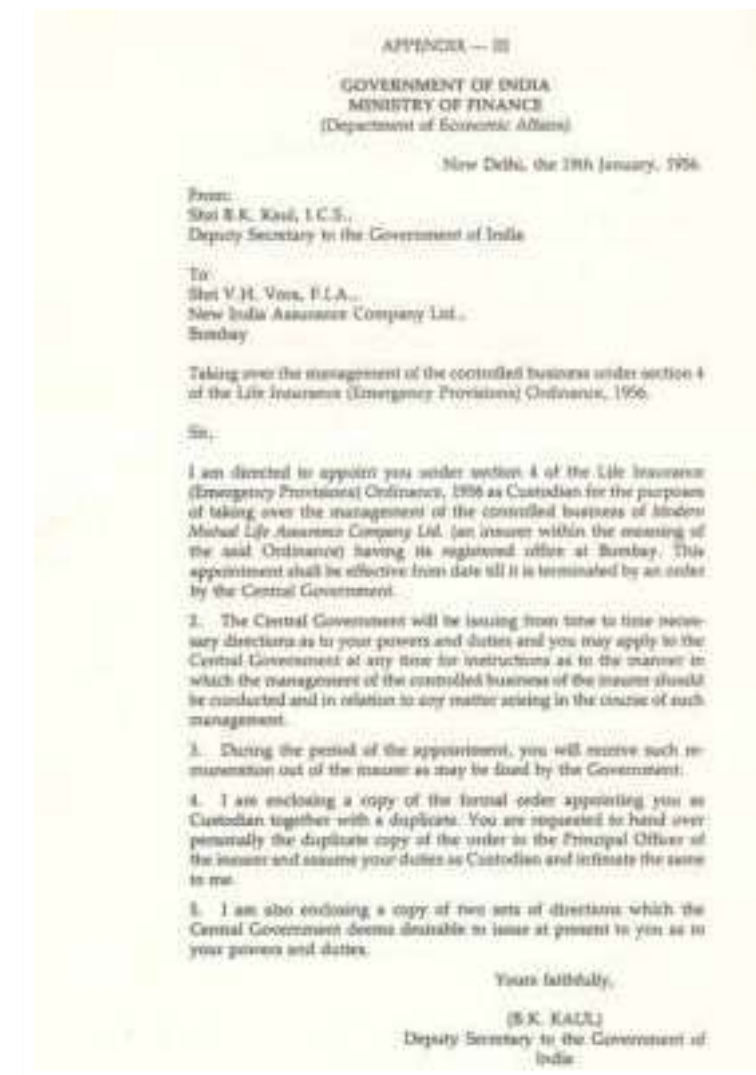
APPOINTMENT OF ACTUARIES AS CUSTODIANS

On January 19, 1956, the day nationalisation of the insurance sector was announced, A Rajagopalan flew to Bombay (now Mumbai) with signed orders of appointment of custodians for Bombay-based insurers. Similarly, Sarva P D Sheth, M J Rao and S K Vaiyapuri carried orders for insurers in Madras (now Chennai), Calcutta (now Kolkata) and Delhi respectively.

Nationalisation was enforced all over the country with the appointment of Custodians for various insurance companies. Of a total of 43 Custodians responsible for over 83 insurance companies in the country, 27 were Actuaries.

The process of transfer of management took nearly eight months. With management in Government hands, all decisions were taken at the ministry level.

A Joint Committee of Custodians (JCC) was also set up to evolve strategies of integration and build the future machinery of operations. Union Ministry of Finance Secretary, H M Patel, formed various JCC Sub-Committees to look into different aspects of operations. R M Mehta, an Actuary, was appointed as Secretary of the JCC to coordinate activities.



**GOVERNMENT OF INDIA
MINISTRY OF FINANCE
(Department of Economic Affairs)**

New Delhi, the 19th January, 1956

Directions

In exercise of the powers conferred by sub-section (3) of section 4 of the Life Insurance (Emergency Provisions) Ordinance, 1956, the Central Government hereby gives the following directions to the Custodian as to his powers and duties in the management of the controlled business of the Madhav Mutual Life Assurance Company Limited, Bombay.

- On the day of assumption of charge by the Custodian, information should be sent to all the directors or persons in charge of the management of the controlled business of the insurer or provident society, that they have ceased to be in charge of the management of the controlled business for and on behalf of the Government and that in future the Custodian will be in charge of the Management of the controlled business.
- Attention should also be sent to all holders of the insured or provident society that passes of question by persons other than the Custodian are suspended, but claims already issued may be honoured.
- The Custodian should take decision on the following as early as possible with particular reference to possibility of delegation of duty:
 - Persons authorized to accept proposals for different sums assured.
 - Persons who may sign policies.
 - Policy in the matter of signing of letters.
 - Persons who shall verify and verify the closing daily balances and annual vouchers.
 - Persons who will verify the daily transactions in the books.
 - Operation of bank accounts at the headquarters and sub-offices.
 - Authority/authorities who will sanction (i) payment of salaries to clerical and all subordinates staff at the Head Office and branches, and all payments in respect of postage, transport etc. and contingency expenditure incurred by the office, similarly, the authority who will approve of an annual statement for two proprietors of the employees of the insurer and payment of their L.A. bills. The powers in regard to the issue of the Branch employees will also be decided.
 - Authority for sanctioning payments of claims, surrenders, loans, etc. and also to take steps, administrative and legal, to resolve any disputes regarding claims to represent to court such matters.

B.E. VAMS,
Deputy Secretary to the Government of India

**APPENDIX - I
Appointment of Custodians**

On February 9, 1956, the Government of India announced the names of custodians appointed for life insurance companies in the country. This was in pursuance of the authority conferred by the President on January 15, 1956 which delegated the appointment of Government nominees to manage life insurance business under the Government.

The following are the institutions and the companies for which they are appointed:

Bombay City

Shri V.M. Vora, F.I.A. (Manager, Life) (New India)

- Standard Life
- Madhav Mutual
- Chowani
- Deepak General

Shri K. Balasubrahmaniam, A.C.A., A.I.A. (Manager, Bombay Life)

- Reliance & Prudential
- Indian Globe
- Devasthan Trustee

Shri K.S. Parthi, F.I.A. (Controlling Authority, Secretary Manager, Madhav Mutual)

- Madhav Mutual General
- Janaki
- Central Mutual

Shri K. Srinivasan, F.I.A. (Actuary, Overseas)

- New India
- Southwest

Shri S.K. Vaidya, F.I.A. (In-charge of Oriental, Dr. General Manager of Oriental Fire & General)

- Bombay Mutual
- New India
- Madhav

Shri D.V.S. Iyer, F.I.A. (General Manager, General Agent, Indian Subcontinent, Secretary, Export of India)

- Indian Subcontinent
- AP India General
- Export Fire and General (India)

Shri Suresh K. Desai (Manager, Devasthan Trustee)

- Janaki
- Reliance Finance

Shri V.L. Nagesh, F.I.A. (Actuary, Madhav Mutual General & Janaki)

- Madhav General
- Bombay Alliance
- New South
- Titan

Shri K.N. Sankar (Administration, East & West)

- Prudential Life
- Goodwill
- Business Life

Appendix - II

Shri P.A. Gupta, F.C.I. (Manager, Life) (Rajya General, India)

- National Indian
- Insurance of India
- Kalidasa

Shri P.M. Dada, F.I.A. (General Manager, General Agent, Assam)

- Arav Insurance
- National Insurance

Shri S. Chok, F.I.A. (Actuary, Calcutta Insurance)

- Shakti Mutual
- Prudential
- Madhav Mutual

Shri G. Srinivasan, C.I.E., A.C.I. (In-charge of Dept. of Insurance)

- Calcutta Insurance
- Happy India

Shri S. Sen, (Chief Accountant (West, Metropolitan))

Business Mutual

Shri G. Basu, F.C.A. (Chartered Accountant)

- Shri Jagadishan
- Prudential

Shri S. Ghosh, F.C.A. (Chartered Accountant)

- Calcutta Insurance
- Madhav Mutual

Shri P.M. Sanyal (General Manager on the Board, Assam Manager, Reserve Bank of India)

Indian Insurance

Dr. H.K. Das Gupta

- Hindu Family Annuity Fund
- Madhav Insurance

Madhav

Shri D.D. Sarkar, F.I.A. (General Manager, Export and Subsequently Asst. Manager, New India, assisted by C.M. Sharma, F.I.A.)

- Life Insurance Corporation (later for Agent)
- Southwest, State Light
- Happy Mutual
- Prudential Mutual
- Vijaya Mutual
- Calcutta of India (Madhav Mutual)

Shri R. S. Paul (Managing Director, South of India)

- New South
- Daily General
- Co-operative Assurance (Madhav)
- India Debt (Madhav)

Appendix - III

Shri K.M. Vaidya, F.I.A. (In-charge, New India)

- Vijaya
- Vijaya
- New India
- Great India

Shri T.S. Srinivasan, F.I.A. (Actuary, Bombay Mutual)

- The Union
- Home Security
- Arav Chhatra
- Indian Life (General)
- Janaki (East India)

Shri G.R. Pradhan, F.I.A. (Manager, Export of India)

Commercial Insurance

Shri L.S. Sankar, F.I.A.

- Oriental Life
- New India (Canada)
- Chowani (Canada)
- Goodwill (U.S.)
- New South (U.S.)
- Yashwanth (U.S.)

India

Shri P. Sankar, F.I.A. (Manager, Bombay Mutual)

Western India

Pune

Shri K.V. Sankar, F.I.A. (Manager, Western India)

- Commercial
- Shakti Mutual
- Trust of India

Calcutta City

Shri D.N. Sankar (Government Director on the Board, assisted by the S.I. Department, F.I.A., General Manager, National Insurance)

Hindustan Co-operative

Shri H.B. Sen, F.I.A. (Controlling Authority)

- Royal
- South Union and other foreign companies

Shri P.B. Ghosh, F.I.A. (Actuary, Metropolitan, former Sub-Inspector, Standard Mutual)

- National Insurance
- Devasthan (Prudential)
- East India

Shri V.C. Rao (Manager, Assam, former Administrator, Shree Madhav)

- Metropolitan
- Shakti Insurance
- The Bengal Insurance
- Business

Trust with Trust

Shri R. Parthi, F.I.A. (Actuary, Madhav Mutual)

- Shakti Mutual
- Prudential
- Happy India
- Janaki

Shri A.L. Datta (Manager, New South)

- Shakti Mutual
- Prudential

Shri H.L. Sankar, F.I.A. (Actuary, Calcutta)

Madhav

Shri P.M. Sanyal, F.I.A. (General Manager, Export of India)

Five India General (Export)

Shri T.A. Sankar, F.I.A. (General Manager, Assam)

General Assurance Society (AGRS)

Madhav

Shri N.Y. Sankar, F.I.A. (Manager, United India Life)

- Prudential
- Prudential
- Janaki
- Prudential Life & General
- Madhav Life

Shri T.S. Srinivasan, S.D.A., F.I.A., F.C.I. (General Manager, Punjab)

- United India
- United India Prudential
- New Canada
- Shakti Mutual

Shri T.V. Sankar, F.I.A. (Manager, India Mutual)

- Indian Globe
- Vijaya
- Vijaya Prudential
- Madhav

Shri S. Sankar, F.I.A., F.C.I. (In-charge, Madhav Mutual)

- Andhra
- Hindustan Mutual

Shri P.S. Sankar, F.I.A. (Assistant Actuary, United India, former Administrator, Mysore Insurance)

- Prudential Life & General
- India Life & General

Madhav

Shri S.V. Sankar (General Life Superintendent, South India Fire & General)

Madhav

Shri S.V. Sankar (General Life Superintendent, South India Fire & General)

Madhav

Trust with Trust

Shri R. Parthi, F.I.A. (Actuary, Madhav Mutual)

- Shakti Mutual
- Prudential
- Happy India
- Janaki

Shri A.L. Datta (Manager, New South)

- Shakti Mutual
- Prudential

Shri H.L. Sankar, F.I.A. (Actuary, Calcutta)

Madhav

Shri P.M. Sanyal, F.I.A. (General Manager, Export of India)

Five India General (Export)

Shri T.A. Sankar, F.I.A. (General Manager, Assam)

General Assurance Society (AGRS)

Madhav

Shri N.Y. Sankar, F.I.A. (Manager, United India Life)

- Prudential
- Prudential
- Janaki
- Prudential Life & General
- Madhav Life

Shri T.S. Srinivasan, S.D.A., F.I.A., F.C.I. (General Manager, Punjab)

- United India
- United India Prudential
- New Canada
- Shakti Mutual

Shri T.V. Sankar, F.I.A. (Manager, India Mutual)

- Indian Globe
- Vijaya
- Vijaya Prudential
- Madhav

Shri S. Sankar, F.I.A., F.C.I. (In-charge, Madhav Mutual)

- Andhra
- Hindustan Mutual

Shri P.S. Sankar, F.I.A. (Assistant Actuary, United India, former Administrator, Mysore Insurance)

- Prudential Life & General
- India Life & General

Madhav

Shri S.V. Sankar (General Life Superintendent, South India Fire & General)

Madhav

Shri S.V. Sankar (General Life Superintendent, South India Fire & General)

Madhav



LIC enters the service of the country

LANDMARK IN HISTORY – THE START OF LIC OF INDIA

September 1, 1956, marked the beginning of the Life Insurance Corporation (LIC) of India, the now national life insurer. Its first Board meeting was held this very day, with four of 15 Board Members being Actuaries of the time. The first Managing Directors of LIC were Actuaries – L S Vaidyanathan and A Rajagopalan, who were also chosen as members of the Investment and Executive Committees respectively. The LIC's Executive Directors were D P Guddar and Actuaries K R Srinivasan and V H Vora – all of whom were full-time employees of the Corporation.

MESSAGE

Life insurance has a fairly long history in India and, in the course of these years, a number of great organizations were built up by private enterprise. And yet, it is true that, compared to many other countries, progress made in India was not great.

At the beginning of this year, the Government of India took a significant step in declaring that life insurance would in future be a State concern. Since then, many steps have been taken to give effect to this declaration. And, now, the time has come when the Indian Life Insurance Corporation is going to take birth.

Life insurance thus becomes one of the major State undertakings in India. It is an important step in our march towards a socialist society. Its objective will be to serve the individual as well as the State. The profit motive goes out of it and the service motive becomes much more dominant.

I trust that this Corporation will serve an ever-increasing number of our people and will do this work in the true spirit of service. We require life insurance to spread rapidly all over the country and to bring a measure of security to our people. The large number of those who will serve this Corporation should keep in mind this objective and seek to fulfill it in their work. But, essentially, this great enterprise will depend upon the goodwill and cooperation of our people. I have no doubt that there will be fortifying.

So, on the occasion of the inauguration of the Indian Life Insurance Corporation, I send my good wishes to all those connected with it and all those whom it seeks to serve.

Jawaharlal Nehru

New Delhi, August 24, 1956.

Pandit Jawaharlal Nehru's message prior to the inauguration of LIC



Yogakshema: LIC's historical building



The First Board Meeting
 The first meeting of Life Insurance Corporation of India Board was held, marking its coming into being, on Saturday, September 1st, 1956, at 11.00 A.M. in the 'Oriental' Building, Fort, Bombay.

Following members were present:

1. Shri H.M. Patel, ICS, Secretary, Ministry of Finance, Govt. of India
2. Shri Mohanram Hasban Prasad, Bombay
3. Prof. D.C. Karna, Pune
4. Shri Dhwan Mita, Calcutta
5. Shri S.M. Ramakrishna Rao, Bangalore
6. Shri Chakraborty Kumar Jain, Bihar
7. Shri Vallab Lalbhai Mehta, Ahmedabad
8. Shri Rajbans Swaraj, Madras, I.P.
9. Shri L.K. Dha, ICS, Joint Secretary, Ministry of Commerce and Industry, Govt. of India
10. Shri B.K. Kaul, ICS, Jt. Secretary, Ministry of Finance, Govt. of India
11. Shri L.S. Vaidyanathan
12. Shri A. Rajagopalan
13. Shri K.R. Srinivasan
14. Shri V.H. Vora



First Board Meeting of LIC in the 'Oriental' Building, Fort, Bombay on September 1, 1956

Mandate for More Frequent Actuarial Valuations

The importance of Actuaries in the life insurance business has been highlighted time and again. Nationalisation too indicated the same. The Government's reservations about high premiums and adverse expense experience, affecting the liquidity of some companies and their ability to provide bonus, led to an understanding of the importance of the Actuarial function in life insurance.

The Ordinance, along with the Finance Minister's explanation in Parliament, stressed on the need to limit premiums to

those warranted by Actuarial calculations. Furthermore, the Life Insurance Corporation Act 1956, Section 26 highlights that valuation of liabilities would be done by Actuaries of the company and the same would have to be submitted to Actuaries in the Central Government for approval.

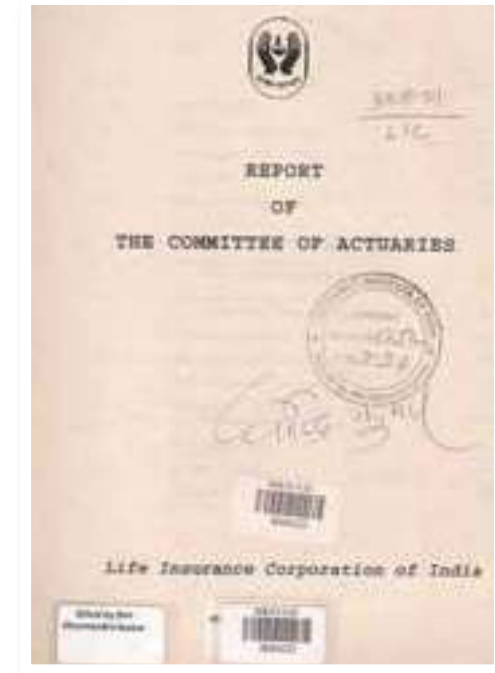
Sec. 26 THE GAZETTE OF INDIA EXTRAORDINARY 669
 26. The Corporation shall, once at least in every two years, cause to be made by actuaries into the financial condition of the business of the Corporation, including a valuation of the liabilities of the Corporation, and submit the report of the actuaries to the Central Government.

KEY CONTRIBUTIONS BY ACTUARIES IN THE EARLY YEARS OF NATIONALISATION¹

The post-nationalisation phase witnessed the creation of a series of committees by the Government to study and aid the industry in development, decision making, etc. Each committee had a significant presence of Actuaries in view of the expertise and knowledge that they brought to the table.

Senior Service Committee (Lal Committee), 1956

The Government appointed the Lal Committee towards the end of July 1956, to aid in the setting up of a proper hierarchy or seniority structure for the yet-to-be established Corporation, interviewing and grading interested officers and submitting a detailed report in this regard. The Committee consisted of eight members including two Actuaries, L S Vaidyanathan and A Rajagopalan.



Committee of Actuaries, 1966-68

In 1966, the LIC was keen on a proper analysis of premium rates offered to make necessary revisions in premiums. The task was assigned to a seven member Committee of Actuaries which included D D Markan (Chairman), S D Srinivasan, K R Srinivasan, V H Vora, M V Sohoni and A Rajagopalan, who was then OSD, Ministry of Finance. G H Damle, Controller of Insurance, was also included. In addition, two Actuaries from outside LIC, C S Anantapadmanabhan and N V Nayadu also attended some of the meetings. The report, submitted in 1968, took into consideration mortality studies performed between 1960 and 1963 by an Actuarial team, providing an exhaustive analysis and suggestions for reduction in premium rates and bonus levels offered.

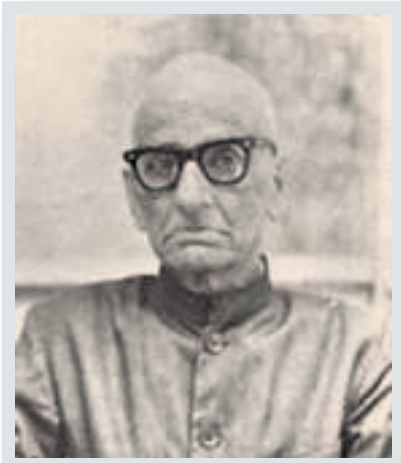


S D Srinivasan



K R Srinivasan

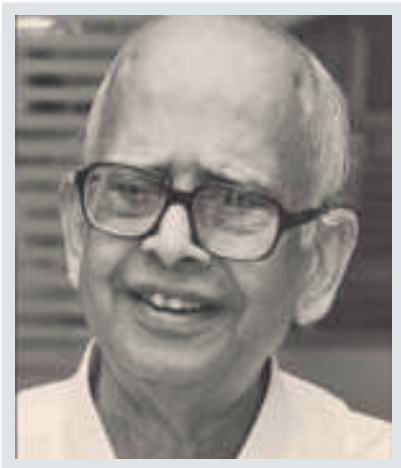
¹ Saga of Security, Story of Indian Life Insurance 1870-1970
 Tryst with Trust, The LIC Story



Prof G S Diwan

**Committee on Expense;
Morarka Committee, 1967**

The Government's concern on adverse level of expenses sparked the need to set up a committee in 1967 to study the causes of the same. The Committee, which included a Fellow Actuary member, Prof G S Diwan, submitted a report to Deputy Prime Minister Morarji Desai on April 30, 1969.



Era Sezhiyan

Era Sezhiyan Committee, 1979-80

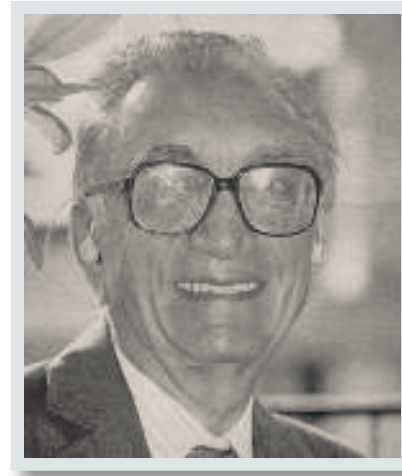
The Government appointed a seven member committee under the chairmanship of Era Sezhiyan, Member of the Rajya Sabha, to review the workings of the LIC. The team consisted of Actuaries such as A Rajagopalan, former Chairman, GIC and R M Mehta, former MD, LIC.



N V Nayadu

**Nayadu
Committee, 1971**

The LIC decided to appoint a committee to advise it on the role and power of central and zonal offices, Policyholder Service (PHS) functions through branch offices and the organisational set-up. A four member team was thus created and chaired by Actuary N V Nayadu with R M Mehta as a member.



R M Mehta

**Committee of
Actuaries, 1978-79**

The LIC appointed an expert committee of Actuaries, including S N Vaidya (Chairman), A Rajagopalan, R M Mehta and C M Sarma to examine the premium rates offered and to suggest any possible revisions to ensure equitable treatment of policyholders, alignment with LIC objectives, examination of valuation and bonus methods, etc. The report was submitted in June 1979.

**EARLY STUDIES/INVESTIGATIONS
CONDUCTED BY THE PROFESSION**



J T Ranadive

**Study by the Technical
Corporation Mission
(TCM), LIC, 1959-60**

The approval for sending a study team consisting of S D Srinivasan, Managing Director, LIC, R M Mehta, Secretary (Personnel), LIC, and J T Ranadive (Actuary), LIC, to the USA to study the latest methods of administration in the American and European life insurance industries was obtained in November 1959. It led to the creation of a special project and the team visited the USA between September and November 1960. On their return, they submitted a detailed report of advances in these countries and how those could be applied in India.



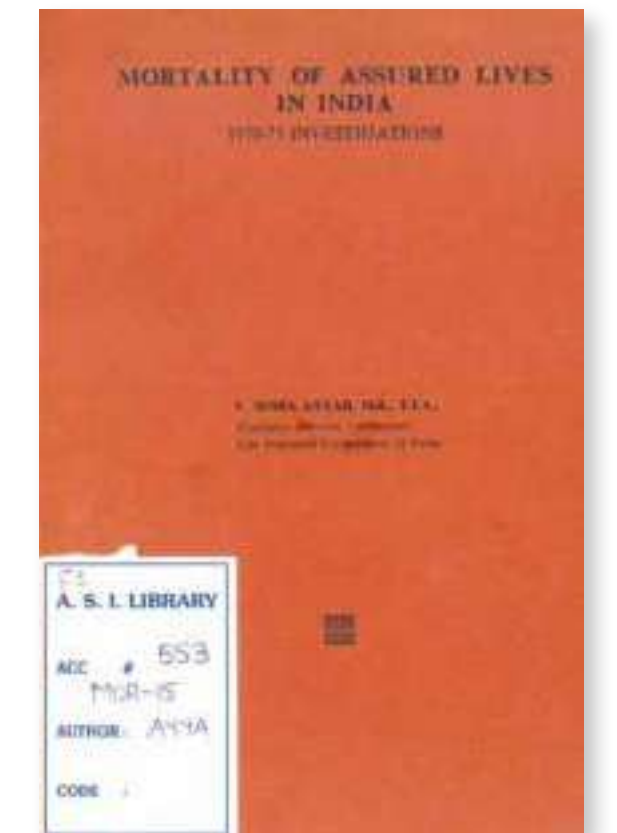
V H Vora

**Mortality Investigation,
1961-64**

V H Vora and D D Markan, along with their team of Actuaries, took on the task of investigating the mortality of policyholders over a period of three years – from 1961 to 1964. This was an important study as prior to this the only significant mortality study had been of the 1925-35 period. Also, there was a strong belief that mortality patterns and experience had changed since then. The table that was thereafter published was used for many years for Actuarial work.

Lapsation Studies, 1968

The Actuarial Department of LIC undertook the task to study and identify the causes of lapsation which they believed went beyond low quality of business and financial incapability. To have an idea of the underlying causes of lapsation, a sample survey was done through a questionnaire for a select sample of lapsed policyholders in 1968. The main aim of the study was to bring down lapsation experienced. It was found that indifferent policy servicing, incorrect assessment of the needs of policyholders were also reasons for lapsation.



Mortality Investigation 1970-73

The mortality study of 1961-64 was followed up with another in 1970-1973 by LIC's Actuarial team. The policyholders' experience studied in the 1960s were restudied almost a decade later to compare and analyse changes. It was revealing since deaths that had occurred, but had gone unreported, also came to light – providing a much more refined review of the mortality experience. It was also noticed that mortality rates had improved over the decade.

2ND CONTINUOUS MORTALITY INVESTIGATION									
Period of Investigation : 1970-73									
Duration : 1 and Over									
Class of Lives : Male Medically Examined Accepted at O. R. (Valuation Tables 1 to 6)									
Age	Exposed to risk	Actual deaths A	Expected deaths E	A—E		Cumulative (A—E)		\sqrt{E}	/A—E/ \sqrt{E}
				+	-	+	-		
16	2097		2.75		2.75	2.75	1.66	1.66	
17	5245	1	6.87		5.87	8.62	2.62	2.24	
18	8192	6	10.65		4.65	13.27	3.26	1.43	
19	11577	11	15.05		4.05	17.32	3.88	1.04	
20	15206	20	19.77	0.23		17.09	4.45	0.05	
21	19280	26	24.87	1.13		15.96	4.99	0.23	
22	24929	34	32.16	1.84		14.12	5.67	0.32	
23	32318	35	41.37		6.37	20.49	6.43	0.99	
24	39162	48	50.13		2.13	22.62	7.08	0.30	
25	45768	59	58.58	0.42		22.20	7.65	0.05	
26	52733	65	66.97		1.97	24.17	8.18	0.24	
27	59684	78	75.80	2.20		21.97	8.71	0.25	
28	64917	75	83.74		8.74	30.71	9.15	0.96	
29	71287	108	93.39	14.61		16.10	9.66	1.51	
30	78286	107	104.90	2.10		14.00	10.24	0.21	
31	87212	121	121.22		0.22	14.22	11.01	0.02	
32	93142	130	135.99		5.99	20.21	11.66	0.51	
33	98578	140	152.80		12.80	33.01	12.36	1.04	
34	102701	178	169.46	8.54		24.47	13.02	0.66	
35	105761	183	188.25		5.25	29.72	13.72	0.38	
36	108232	186	208.89		22.89	52.61	14.45	1.58	
37	109152	230	230.31		0.31	52.92	15.18	0.02	
38	107373	243	248.03		5.03	57.95	15.75	0.32	
39	107076	243	271.97		28.97	86.92	16.49	1.76	
40	105360	312	295.01	16.99		69.93	17.18	0.99	
41	104043	339	321.49	17.51		52.42	17.93	0.98	
42	101571	318	347.37		29.37	81.79	18.64	1.58	
43	99312	376	376.39		0.39	82.18	19.40	0.02	
44	95671	400	401.82		1.82	84.00	20.05	0.09	
45	89775	367	417.45		50.45	134.45	20.43	2.47	
46	88784	478	457.24	20.76		113.69	21.38	0.97	
47	85245	517	485.90	31.10		82.59	22.04	1.41	
48	80632	501	508.79		7.79	90.38	22.56	0.35	
49	76495	508	533.94		25.94	116.32	23.11	1.12	

GOVERNMENT TAKES OVER GENERAL INSURANCE (GI) – NATIONALISATION OF GI

Under the General Insurance Business (Nationalisation) Act, 1972, the general insurance industry was also nationalised and all business, including that of general insurance subsidiaries of LIC, was transferred to the Central Government in January 1973.

This was followed by an amalgamation of 107 insurers (55 Indian and 52 foreign) which were then grouped into four main companies, namely, the National Insurance Company Ltd., the New India Assurance Company Ltd., the Oriental Insurance Company Ltd. and the United India Insurance Company Ltd. General Insurance Corporation (GIC) was incorporated as a holding company of these four companies in November 1972. It began business in January 1973, and unlike the LIC, was responsible for decisions instead of the Government.

किसकी सं० बी० २२१ REGISTERED No. D. 221

भारत का राजपत्र
The Gazette of India

EXTRAORDINARY
भाग II—खण्ड 1
PART II—Section 1
प्रधिकार से प्रकाशित
PUBLISHED BY AUTHORITY

सं० 65] नई दिल्ली, बुधवार, सितंबर 20, 1972/भाद्र 29, 1894
No. 65] NEW DELHI, WEDNESDAY, SEPTEMBER 20, 1972/BHADRA 29, 1894

इस भाग में विचार, एक संख्या ही जाती है जिसमें एक अलग संकलन के रूप में रखा जा सके।
Separate paging is given to this Part in order that it may be filed as a separate compilation.

MINISTRY OF LAW AND JUSTICE
(Legislative Department)
New Delhi, the 20th September, 1972/Bhadra 29, 1894(Saka)
The following Act of Parliament received the assent of the President on the 20th September, 1972, and is hereby published for general information:—

THE GENERAL INSURANCE BUSINESS (NATIONALISATION) ACT, 1972
No. 57 of 1972
[20th September, 1972]

An Act to provide for the acquisition and transfer of shares of Indian insurance companies and undertakings of other existing insurers in order to serve better the needs of the economy by securing the development of general insurance business in the best interests of the community and to ensure that the operation of the economic system does not result in the concentration of wealth to the common detriment, for the regulation and control of such business and for matters connected therewith or incidental thereto.

Enacted by Parliament in the Twenty-third Year of the Republic of India as follows:—

CHAPTER I
PRELIMINARY

1. This Act may be called the General Insurance Business (Nationalisation) Act, 1972.

(8)

DIGITISATION AND AUTOMATION

The Technical Corporation Mission (TCM) was a significant study by Actuaries as it prompted the introduction of computers in LIC, the first insurance company in India to do so. The study highlighted the need to introduce automation and digitisation in the life insurance sector in India – just like in the USA and Europe.

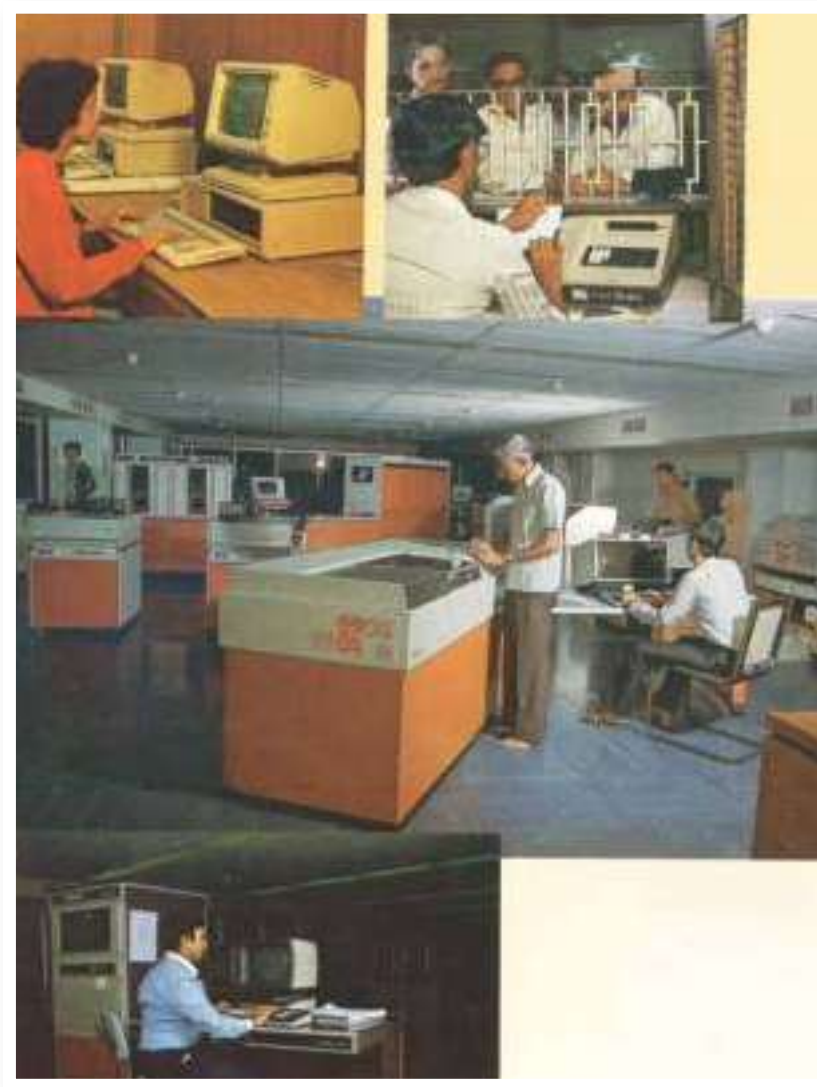
The computer department, called Electronic Data

Processing (EDP), was set up with IBM computers. J T Randive, an Actuary, was appointed as Manager, EDP.

The installation of the computers was in Bombay in 1965 and, from 1967, was used for multiple functions such as record maintenance, policy servicing, etc. However, Actuarial valuations began to be done on computer systems only in later years.



First use of computers in LIC



BEYOND INSURANCE

The Wealth Tax Act of 1957 required that Life Interest and Remainderman Interest under a trust be valued by an Actuary. It also required a figure certified by an Actuary to be included in the wealth of an individual when calculating his or her taxable wealth. A similar provision was present in Estate Duty Act, 1953. An Actuary was required to be a registered valuer under these Acts.

An interesting area of work for Actuaries during this time was evaluation of annuity type contracts between film producers and movie actors. In those days, movie actors demanded long-term regular payments from movie producers as part of the movie fee. This would provide them a running income like annuities. The producers would get these contracts evaluated by Actuaries.

The Payment Of Gratuity Act, 1972

The Payment of Gratuity Act and the Metal Box Company judgement of the Supreme Court emphasised on Actuarial valuations of gratuity liability of companies employing 10 or more employees.

Further, an amendment of the Income-tax Act, 1961 made it mandatory for companies to have an Income-tax Approved Gratuity Fund before December 31, 1974 – whereby 50 per cent of the Actuarial provision made in earlier years (before it became time-barred) was to be deposited before March 31, 1975 and the rest before March 31, 1976, along with ordinary annual contribution to this approved Gratuity Fund to continue receiving an income tax exemption for these Actuarial provisions.

The nationalisation of life insurance companies had reduced the demand for Actuaries. However, these Acts ensured a sustainable demand for Actuaries and helped the profession survive beyond insurance companies.

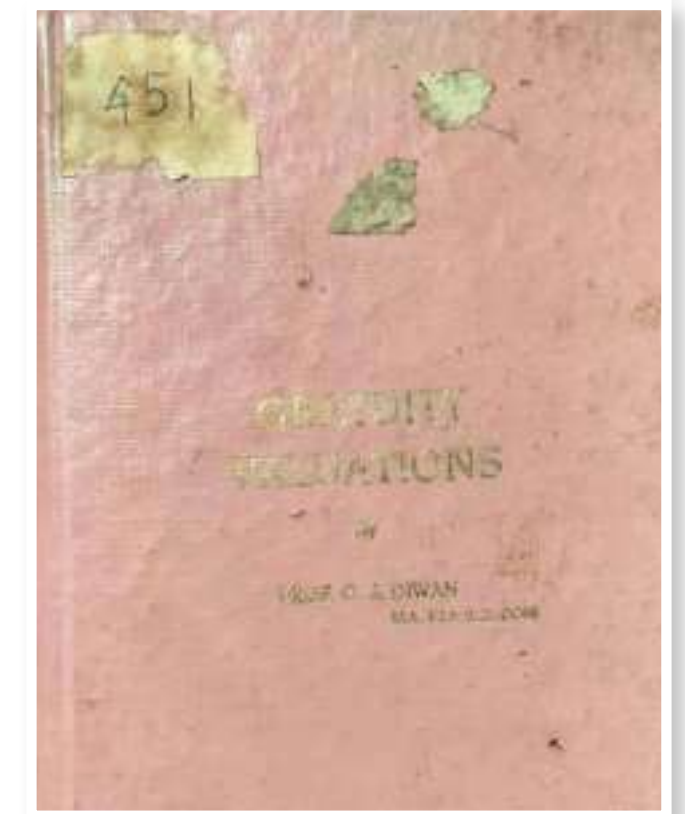
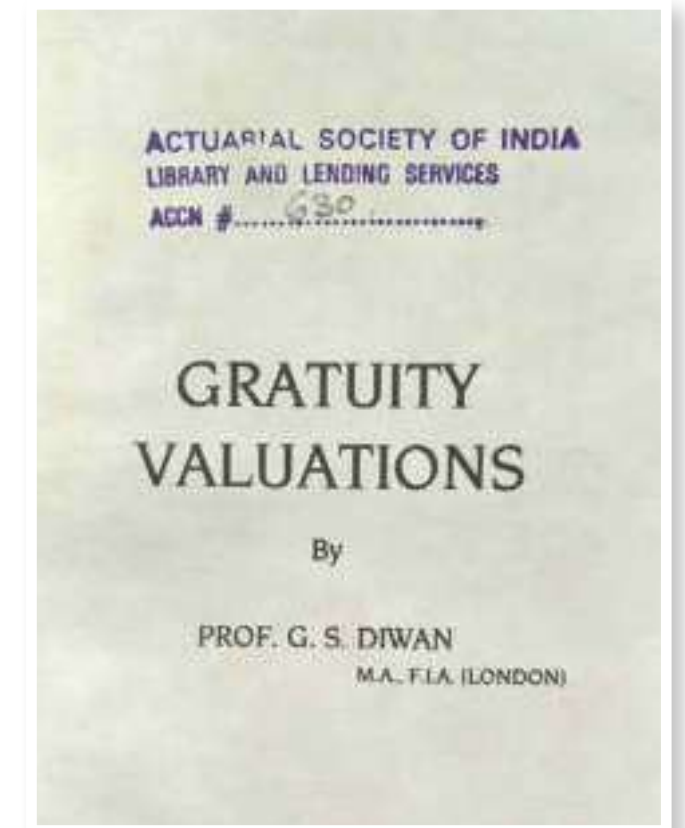


TABLE I.
NUMBER OF INDIANS WHO QUALIFIED AS FELLOWS OF THE INSTITUTE OF ACTUARIES ACCORDING TO YEAR OF QUALIFICATION.

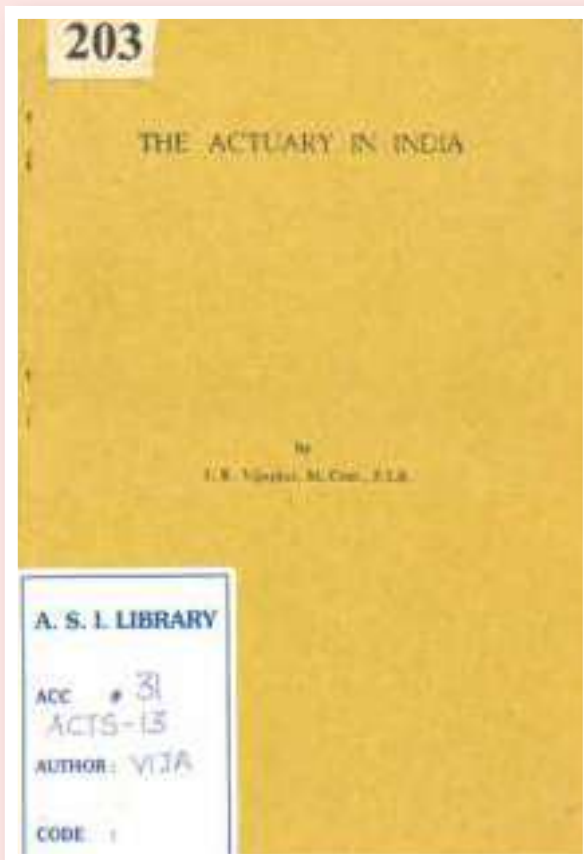
Year of qualification	No.	Year of qualification	No.	Year of qualification	No.
1934	1	1945	5	1954	10
1937	3	1946	6	1955	5
1939	1	1947	5	1956	8
1940	3	1948	6	1957	6
1941	1	1949	8	1958	8
1942	2	1950	8	1959	6
		1951	14	1960	4
		1952	8	1961	1
		1953	10	1962	3



Meeting at ASI addressed by B K Shah

TABLE II
NUMBER OF STUDENTS WHO PASSED PRELIMINARY EXAMINATION OF THE INSTITUTE OF ACTUARIES ACCORDING TO THE YEAR OF PASSING

Year of qualification	No.	Year of qualification	No.
1945	31	1957	31
1946	25	1958	16
1950	46	1960	27
1951	32	1961	34
1952	24	1962	40
1953	19	1963	26
1954	17		
1955	19		
1956	32		



BRAIN DRAIN – AN EXODUS OF ACTUARIES

Nationalisation of life insurance companies was a mixed bag of outcomes and although importance was given to the Actuarial profession, the merger of life insurance companies actually reduced the work of Actuaries.

Actuaries were majorly employed by the LIC. Since there was a decline in the number of clients, only a few continued with their consulting practices while some moved to other fields.

Apart from core Actuarial functions, Actuaries employed at LIC were involved in various functions such as Investment, Marketing, etc. To promote Actuarial students, as it was believed that Actuaries should be in top management to ensure effective growth, LIC granted special leaves and incentives to employees pursuing Actuarial studies.

However, this did not go down well with non-Actuarial Class I officers (almost 95 per cent) of LIC. There was a ‘movement’ of sorts led by non-Actuarial Class I Officers. In the book *The Actuary in LIC: Myth and Reality* J M Sawhney, Secretary, LIC of India Class I Officers (Bombay) Association wrote:

“Over the years the management of LIC has helped to push up Actuaries out of all proportions to its genuine needs by giving them accelerated promotions. Despite all big words, the management has failed to shed its bias for Actuaries.”

Unhappy with the additional benefits and faster promotions offered to Actuaries in LIC, the non-Actuarial Class I officers strongly opposed what according to them was a “biased” practice. As a result, on July 31, 1971, the Chairman of LIC withdrew all additional benefits and positions offered to Actuaries with retrospective effect. This decision massively reduced the requirement of Actuaries in LIC.

In 1994, the Malhotra Committee reported in Section 14.22 that: “At the time of nationalisation of life insurance, there were 67 Actuaries (Fellow of Institute of Actuaries, London) in the service of LIC. Their number has come down to eleven. This is because of the high cost of pursuing Actuarial courses of study, effort and time required to qualify as an Actuary and absence of commensurate rewards.”

The Malhotra Committee report was instrumental in the turn of events that came towards the end of the last century.

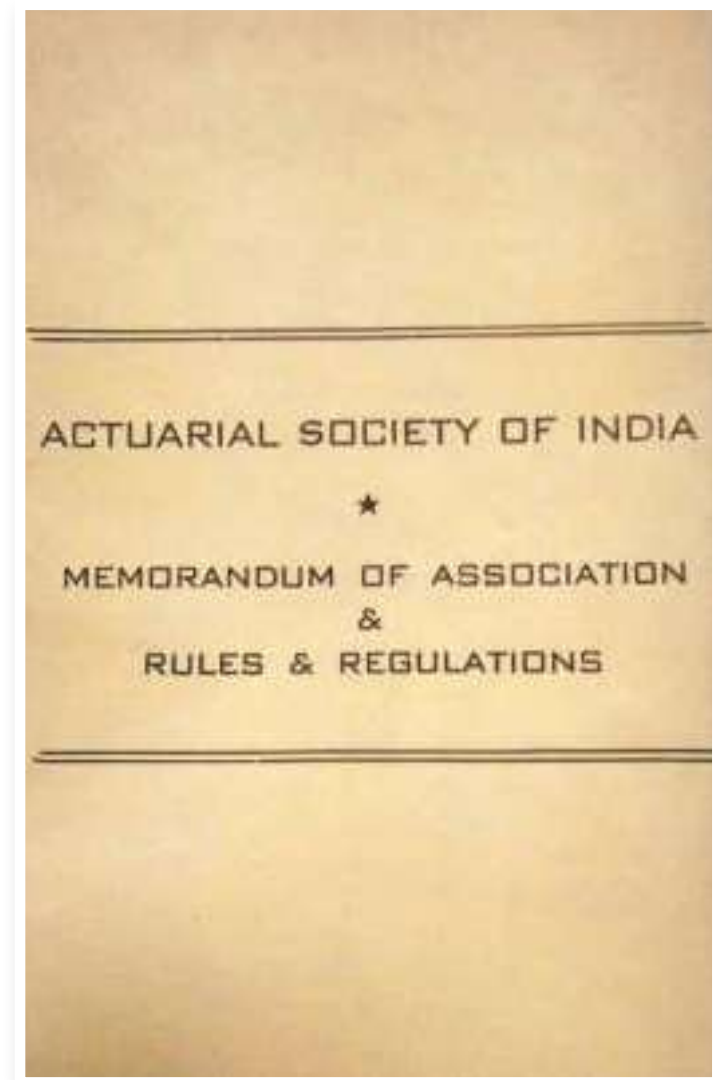
This period brought in many changes in the Actuarial profession and the insurance industry. Some of these changes resulted in major insurance reforms and provided the base for the profession as we know it today.

1982-1998

SETTING OUT ON THE JOURNEY

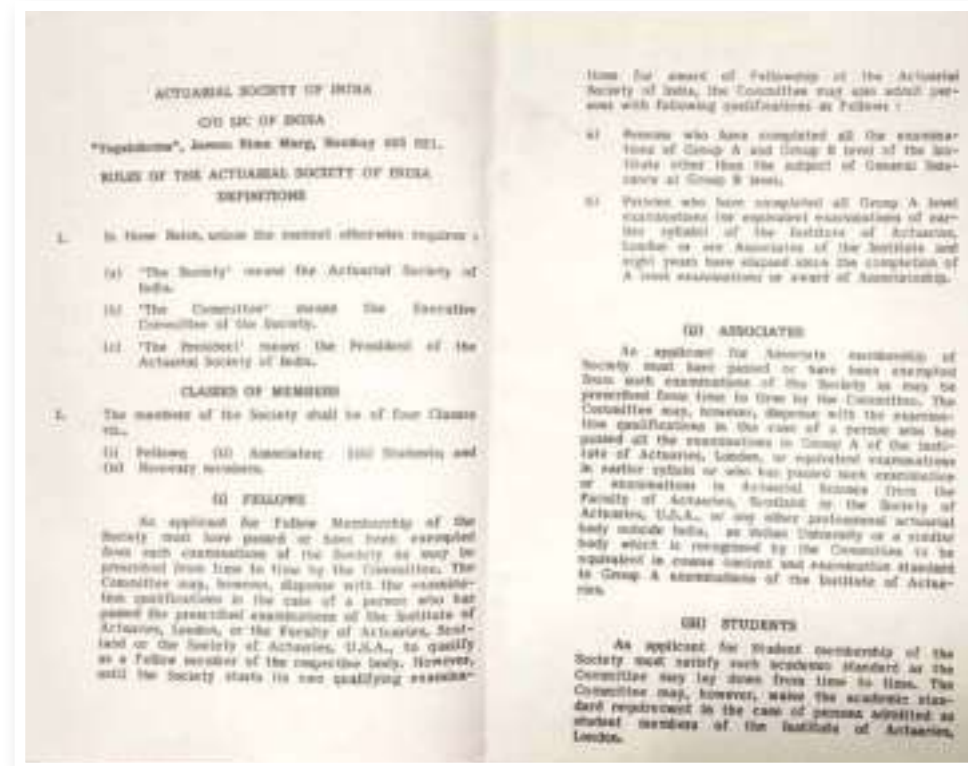
THE LEGAL IDENTITY

In order to formally establish the profession and with long-term growth in mind, the Actuarial Society of India (ASI) decided to take a huge leap. In September 1982, the Society drew up a Memorandum of Association¹ (MoA) to ensure systematic administration of activities of the ASI – copies of which were published and distributed among members of the ASI.



¹Memorandum of Association – ASI Library

Later that year, on December 14, 1982, after filing the MoA with the Registrar of Societies, ASI was formally registered under the Societies Registration Act XXI of 1860. A couple of months later, ASI also got registered under the Public Charitable Trust Act, 1950 on February 28, 1983. These legal identities enabled the ASI to set out on a new journey.



The Executive Committee

One of the most integral parts of the MoA was the formation of the Executive Committee (EC). It was decided that the Committee would consist of 12 Fellow members of the Society, elected by Associate and Fellow members. To function as a professional body, Actuaries such as M G Diwan, R K Daruwalla and R M Mehta formed the first Executive Committee (EC) and worked towards the growth of the Actuarial profession.

Certificate of Registration under the Societies Registration Act XXI of 1860



Certificate of Registration under the Public Charitable Trust Act, 1950



ANNEXURE - I

Sr. No.	Name and Address of the Member	Occupation
1.	Shri H. M. Mehta 18-B, Jeevan Asha 50-A, Peddar Road Bombay 400 022.	Company Director and Actuary.
2.	Shri V. Seshu Ayyar Executive Director (Actl.) L.L.C. of India, Central Office Yogeshwara, J.B. Marg Bombay 400 021.	Service
3.	Shri R.K. Daruwalla 41, Lalkasa House 684, Khureghat Road Dadar, Bombay 400 014.	Consulting Actuary
4.	Shri J.R. Vijaykar 1-E, Navroze Apartment 35, Bhulabhai Desai Road Bombay 400 024.	Service
5.	Shri N.K. Parikh F-78, Gujarati Society Nehru Road, Vile Parle Bombay 400 057.	Service
6.	Shri D. Sami Chief (FRIS) L.L.C. of India, Central Office Yogeshwara, J.B. Marg Bombay 400 021.	Service
7.	Shri D.K. Iyer Chief (O & M) L.L.C. of India, Central Office Yogeshwara, J.B. Marg Bombay 400 021.	Service

ANNEXURE - I

Sr. No.	Name and Address of the Member	Occupation
8.	Shri C.R. Ramnarayanan C-28/13 Jeevan Ashwasa Co-op Hsg. Society J.B. Nagar, Borivli (W) Bombay 400 103.	Consulting Actuary
9.	Shri V.D. Gadrey 101-3 Block, Kalas Parkhat Society Vidyanagar Marg, Santacruz (E) Bombay 400 028.	Consulting Actuary
10.	Shri M.C. Chakrasarti Retirement Benefit Services P-22 Bondel Road, 6th Floor Calcutta 700 013.	Consulting Actuary
11.	Shri V. Gowindan Asst. Secretary (Actuarial) L.L.C. of India, Central Office Bombay 400 021.	Service
12.	Shri V. Rajagopalan A.O., EDP Department L.L.C. of India, SOO Yogeshwara, J.B. Marg Bombay 400 021.	Service

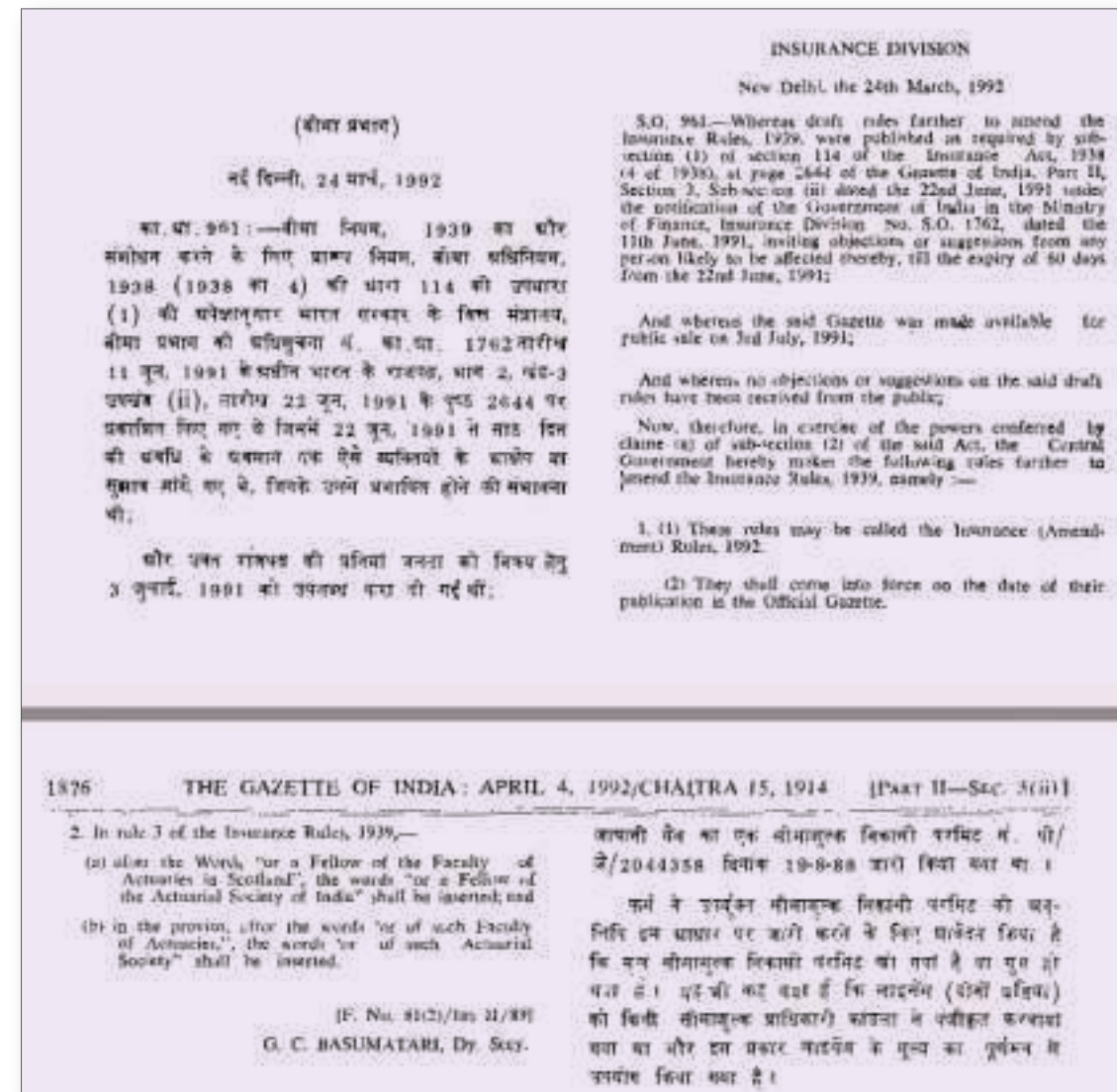
Members of the first Executive Committee

Indian Actuarial Examinations

Until 1989, members of the ASI were admitted on the basis of examination conducted by the Institute of Actuaries, London (IoA). In 1983, the ASI formed an Education Committee with the objective of introducing an Indian qualification in the Actuarial profession. Six years later, in 1989, the ASI started conducting its own Actuarial examinations for Associateship. The Fellowship examination also started in 1991. Subsequently, on March 24, 1992, the Government of India officially recognised the Fellowship of Actuarial Society of India by a Gazette notification on Amendment of Rule 3 of the Insurance Rules, 1939 to include a 'Fellow of the Actuarial Society' in the definition of the word 'Actuary'.

In the year 1996, Meena Sidhwani and R Padmaja qualified as the first two Fellows of the Actuarial Society of India. Meena Sidhwani is an example of great courage as despite being differently abled, she qualified as the first Fellow of ASI. In fact, the Meena Sidhwani Award is the symbol of ASI's appreciation of her exemplary attitude.

Tuition course and study material for examinations of the IoA, London is provided through the Actuarial Education Company (ActEd). In 1998, the IoA provided the same material free of cost and free of copyright for use and distribution to Indian students within India for ASI examinations.



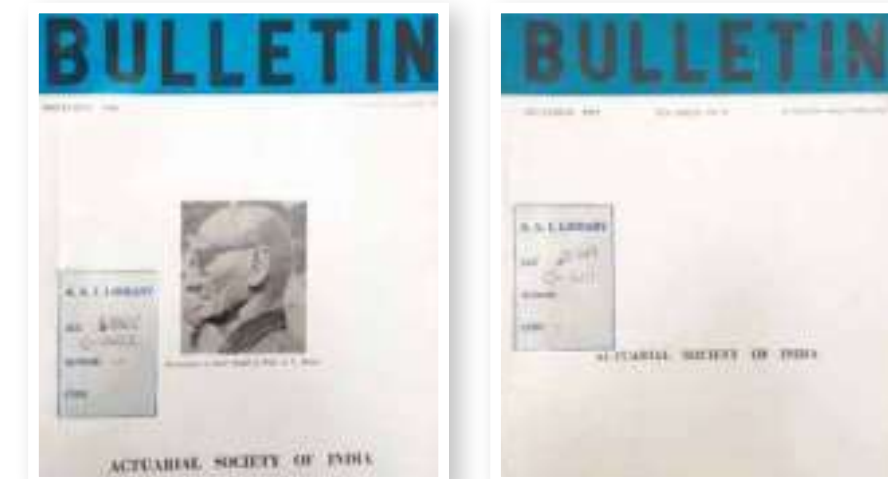
Gazette notification recognising 'Fellow of the Actuarial Society' in the definition of 'Actuary'

The Actuary India Magazine

Ever since the establishment of the ASI in 1944, its activities were periodically recorded and reported in circulars and reports. Its first ever publication, the *Bulletin*², covering news and various activities was published in December 1980. However, it was stopped after a few issues in 1981.

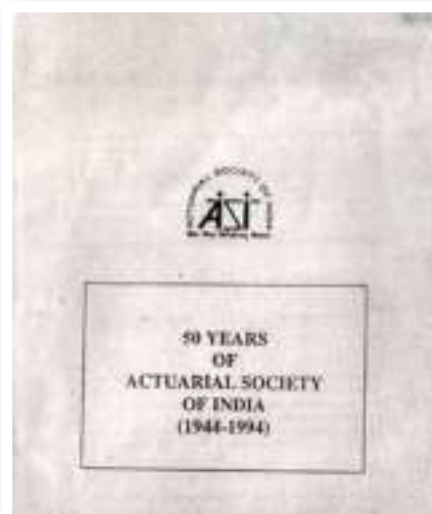
In an EC meeting on May 28, 1987, K P Narasimhan took the responsibility to restart *Bulletin*. However, a more formal publication *The Actuary India*³ was started only in 1994. It was intended to serve as a medium of communication for ASI members. *The Actuary India* became an important platform for Actuaries to express their views on Actuarial matters such as developing an understanding of regulations, Actuarial methodology, update on new developments, etc. Many important articles which gave expression to the profession, were part of the magazine.

Incidentally, 2019 was the year when the magazine completed 25 years.



² Bulletin – IAI Library

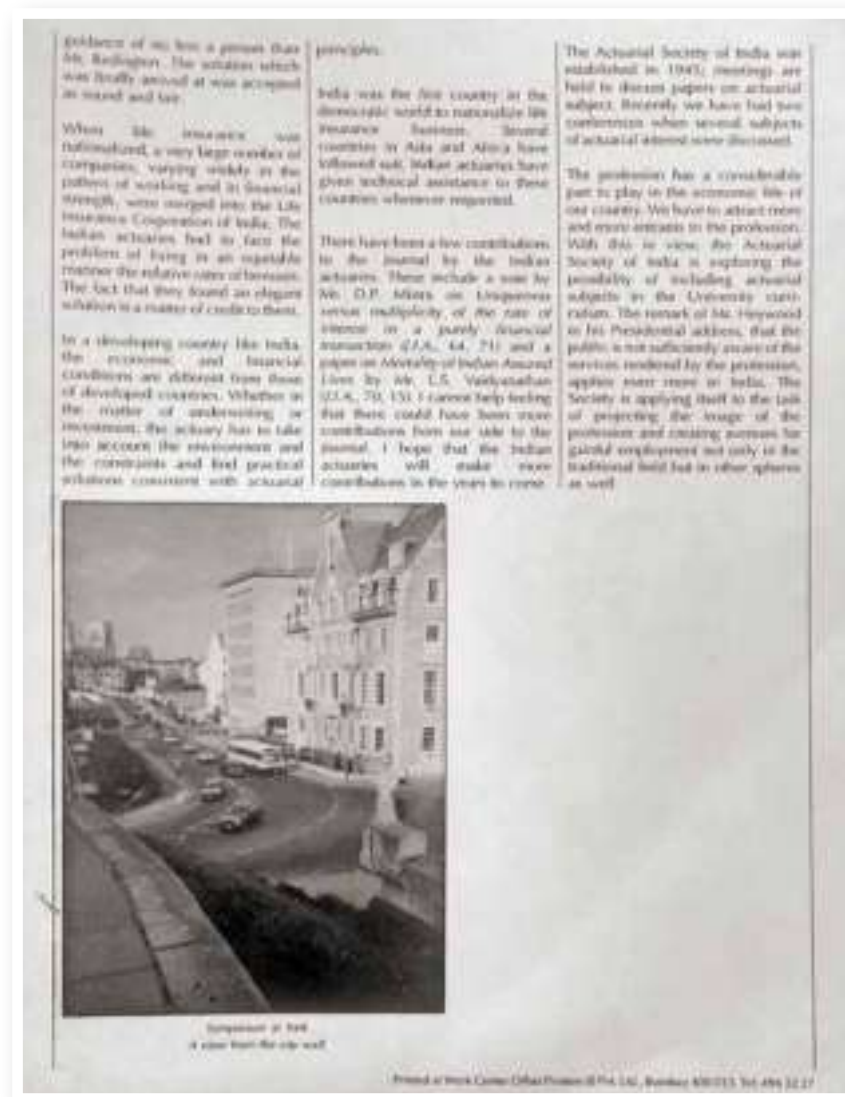
³ The Actuary India – IAI Library



FIFTY YEARS OF ASI

The year 1994 marked 50 years of the ASI. During these years, the Actuarial profession went through several highs and lows. ASI members contributed to many Government initiatives, helped in shaping the insurance industry (nationalisation and other endeavours), introduced many global practices in India, worked in investment and employee benefits, and participated in national and international conferences.

On the occasion of its 50th anniversary, the ASI released a booklet which featured a list of past presidents and an article on the Actuarial profession in India by S Rangarajan.



Article on Actuarial profession in the booklet released on the 50th anniversary of the ASI

OTHER SIGNIFICANT EVENTS⁴

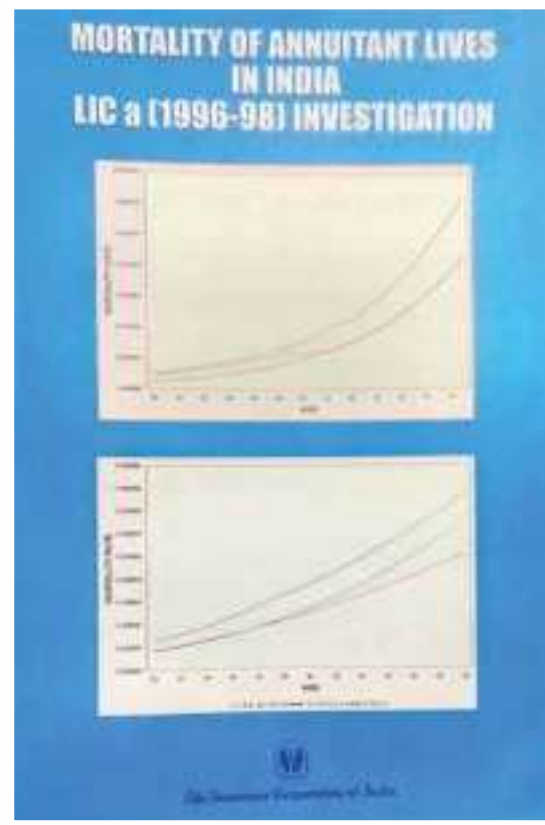
- The Memorandum of Professional Conduct and Practice passed by the general body meeting of ASI on October 10, 1987 became effective from January 1, 1988.
- In July 1988, the Centennial Celebration Committee invited members of the ASI to participate in the centennial celebrations of the Society of Actuaries, USA, in 1989.
- On September 1, 1991, Hugh Scarfield, president of the Institute of Actuaries, London presented gold medal to R M Mehta and mementos to other members for completing 50 years as Fellows of the Institute of Actuaries, London.
- Actuaries continued to contribute to government initiatives. C R Thakore represented the ASI in a committee that periodically reviewed the working of the BSE index.
- In August 1997, the ASI prepared the first draft of the Institute of Chartered Actuaries of India Act, 1997. On the IRDAI's feedback, a second version of the Institute of Actuaries of India Bill, 1997 was sent to IRDAI in November 1997.
- In November 1997 a decision was taken to introduce General Insurance – beginning from 1999.

⁴ Minutes of meetings of Executive Committees, *The Actuary India* magazine



A reportage on H L Jain, Actuary, Employees' State Insurance Corporation, addressing an international conference in Rome in 1984

AGE	MORTALITY RATE	EXPECTATION OF LIFE
20	0.00010	56.50
21	0.00011	56.40
22	0.00012	56.30
23	0.00013	56.20
24	0.00014	56.10
25	0.00015	56.00
26	0.00016	55.90
27	0.00017	55.80
28	0.00018	55.70
29	0.00019	55.60
30	0.00020	55.50
31	0.00021	55.40
32	0.00022	55.30
33	0.00023	55.20
34	0.00024	55.10
35	0.00025	55.00
36	0.00026	54.90
37	0.00027	54.80
38	0.00028	54.70
39	0.00029	54.60
40	0.00030	54.50
41	0.00031	54.40
42	0.00032	54.30
43	0.00033	54.20
44	0.00034	54.10
45	0.00035	54.00
46	0.00036	53.90
47	0.00037	53.80
48	0.00038	53.70
49	0.00039	53.60
50	0.00040	53.50
51	0.00041	53.40
52	0.00042	53.30
53	0.00043	53.20
54	0.00044	53.10
55	0.00045	53.00
56	0.00046	52.90
57	0.00047	52.80
58	0.00048	52.70
59	0.00049	52.60
60	0.00050	52.50
61	0.00051	52.40
62	0.00052	52.30
63	0.00053	52.20
64	0.00054	52.10
65	0.00055	52.00



Mortality of Annuitant Lives in India Investigation LIC-1996-98 by P C Gupta, G N Agarwal and Meena Sidhwani. This was the first mortality investigation of annuitant lives by the LIC.

OPENING UP OF THE INSURANCE SECTOR

The Mukherjee Committee⁵

Formed by the Government of India, on December 7, 1994, to examine issues related to 'solvency margin requirements' and 'method of valuation of assets and liabilities of insurance companies', the five-member Mukherjee Committee significantly had three Actuaries – R Ramakrishnan (former President, ASI), K P Sarma and P I Majmudar.

The committee which submitted its report on May 5, 1995 highlighted the importance of the role of Actuaries in valuation of liabilities in the insurance industry and in reinsurance arrangement for a life insurance company, in addition to the role of Actuaries in life offices.

It also recommended the ASI to come up with a proper code of conduct so that guidelines could be issued for gratuity and pension schemes. Last but not the least, it put forward the importance of a system of Appointed Actuaries and how an independent department headed by a Government Actuary could help various Ministries and public sector bodies with the Actuarial aspects of their respective departments.

The Regulatory Authority, does not possess the appellate authority in any financial right. An appellate authority but retains over the status, required to carry out the threshold duties, established in the guidance notes issued by the professional body.

Being vulnerable to three different authorities is not as difficult a task as it appears on paper. In normal times, there need not and will not be any conflict of interests. But such conflicts may arise in abnormal times. The term 'abnormal times' need not necessarily mean 'adverse periods'. Conflicts of interest can arise even during such periods, caused by rising raw material prices. An actuary may find it more difficult to convince the management about the financial stress arising out of them in business, since the concept of insurability which is a peculiar aspect of the life insurance industry.

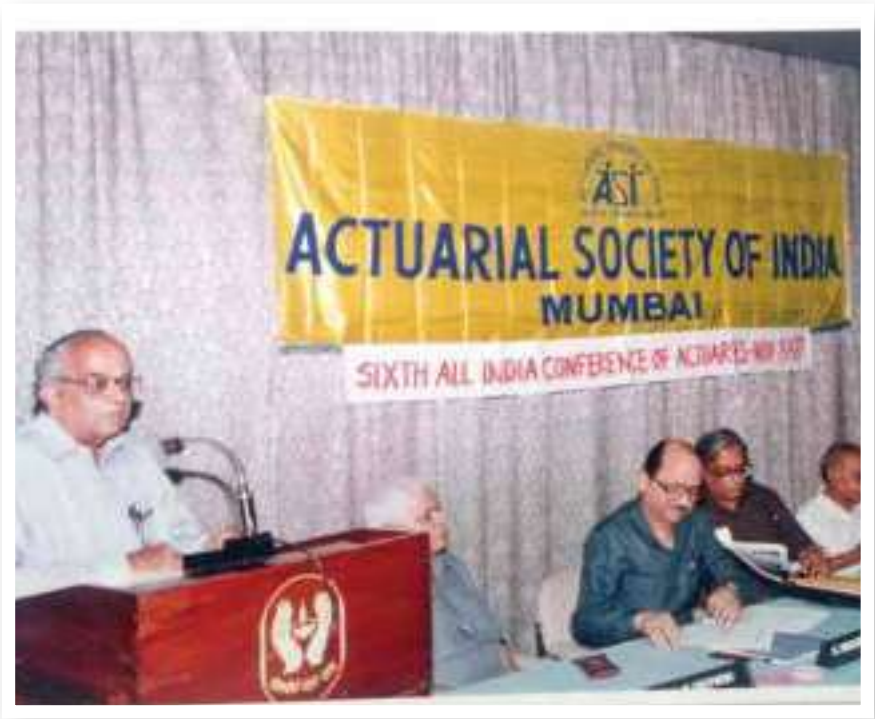
In those countries where this system has been introduced, the appointed actuary is conferred with wide ranging powers and responsibilities. One such responsibility is that relating to his duty to report directly to the Regulatory Authority.

When the appointed actuary finds that the financial position of the company on the course of which proposed to be taken by a company, will be against the interests of policyholders, he has to advise the company, in writing, about the danger confronting it and suggest also remedial measures. The UK regulations require the appointed actuary to inform the S.I. Department of Trade & Industry, under advice to his company, if his advice is ignored by the company or if his recommendations are not acted on fully. Similar provisions exist also in the Canadian and Australian Legislations. The basic principle behind these provisions is that the actuary has the right, indeed a duty, to go over the heads of a management which is unwilling to recognize that there is a problem.

While it is not only desirable but also essential to introduce the Appointed Actuary System, so that an actuary can be continuously associated with the developments in a life office, it is not advisable to expect him to go directly to the regulatory authority over the heads of the management. In this connection, the actuary will generally be an employee of the company and, as an employee, he will find it difficult



The 4th All India Conference of Actuaries, November 1994



The 6th All India Conference of Actuaries, November 1997



Role of Actuary in General Insurance

17-42. Role of actuary in the field of general insurance business is gradually being recognized and actuarial techniques are increasingly in use in the conduct of general insurance business.

Services of an actuary are being utilized mainly in respect of loss reserving and premium reserving. Often the actuary is required to report on the financial soundness of a general insurance company. This would call for reporting on other areas like premium and contract adequacy and solvency requirements.

Role of actuary in general insurance is well defined in USA and Canada where the actuary is required to certify technical reserves. In UK, the profession has produced guidelines for the members preparing actuarial reports in general insurance.

Government Actuary

17-44. While on the subject of appointed Actuary, it is necessary to make mention of a unique feature of the UK insurance system, i.e. the office of the Government Actuary.

The Government Actuary holds an independent Governmental position, that is, directly under the Secretary of State for the Home Department and provides a consultancy service to Ministers, to Government departments and to other public sector bodies and to various Governments, on all actuarial matters.

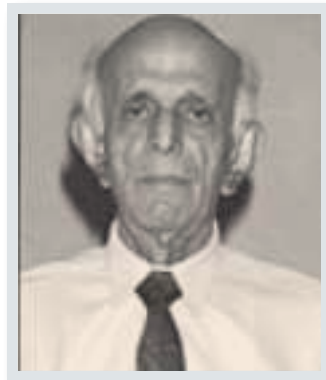
Mukherjee Committee recommendations

The Malhotra Committee⁵

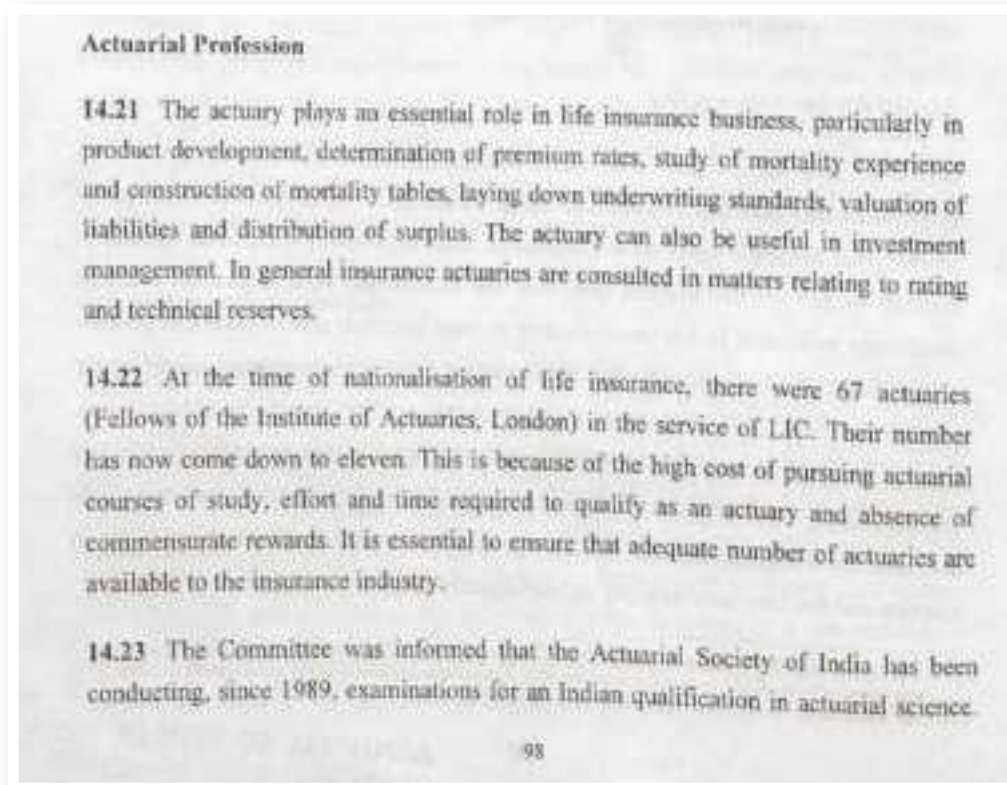
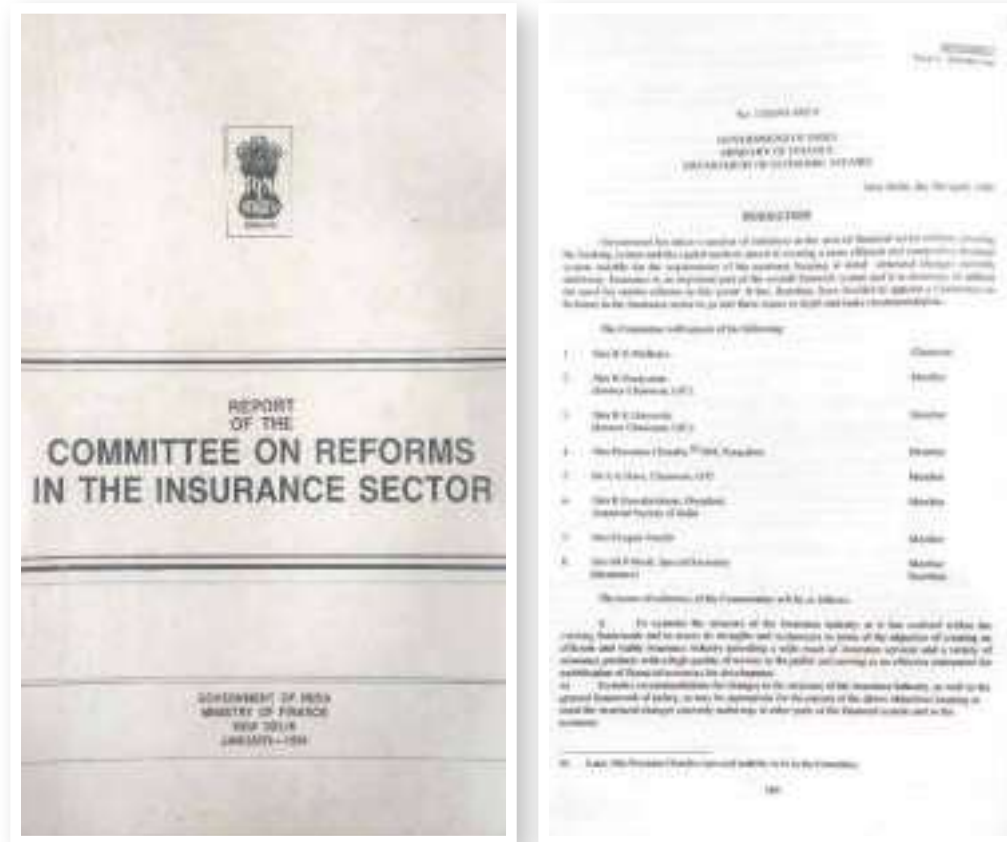
By the year 1991, the Government of India had begun planning economic reforms in the country, including those for the insurance sector. The process of reopening the insurance business to private sector participation was initiated when the central government formed a committee in 1993, spearheaded by former Finance Secretary and Governor of the Reserve Bank of India, R N Malhotra.

The Malhotra Committee, which also included two Actuaries, comprised the Chairman R N Malhotra, R Narayanan, R K Daruwalla (Past President, ASI), Prasanna Chandra, Dr S A Dave, R Ramakrishnan (President, ASI), Deepak Parekh and M P Modi.

The report emphasised the importance of Actuaries in the insurance industry and the need to ensure that adequate number of Actuaries are available for the sector.



R Ramakrishnan



⁵ IAI Library

Credit: The Legacy of a Leader: New India Assurance - 1919 Onwards



R N Malhotra (middle), R Ramakrishnan (third from left), R K Daruwalla (fourth from right), Deepak Parekh (third from right) with other members of the Malhotra Committee

Of the many recommendations given by the Malhotra Committee, a few directly concerned the Actuarial profession:

- LIC to publish revised mortality table and review 'without profit' premium rates periodically, at least once in three years.
- Setting up of a multi-member statutory body, the Insurance Regulatory Authority (IRA),



R N Malhotra, the Chairman of the Malhotra Committee

similar to SEBI. IRA should have a full-time chairperson, two full-time and some part-time members. One member should have a strong GI background and another life insurance background, preferably with Actuarial qualification.

- The insurance industry to extend necessary financial assistance to ASI.
- Amendment of Rule 3 of Insurance Rules, 1939 so as to define only 'Fellow of ASI' as an Actuary.

However, its most significant recommendations (although they did not concern the Actuarial profession) were:

- Allow the private sector to enter the insurance industry and no single company to be allowed to transact both life and general insurance.
- Permitting foreign companies to enter, given that they are required to float an Indian company for that purpose.

These recommendations paved the way for the creation of what is now the Insurance Regulatory and Development Authority of India (IRDAI). It also allowed private as well as foreign investors to enter India's insurance market. Although formation of IRDAI and privatisation did not have any immediate impact on the Actuarial profession, its impact in the insurance sector marked the beginning of a new era for the Actuarial profession. It enthused the profession to rise again.



A key challenge early on was to attract talented candidates to join this profession. I used to visit colleges in Bangalore to recruit bright maths/stats graduates as actuarial trainees for our company. Another challenge was getting international recognition for the Indian exams. Apart from the challenges in securing mutual recognition arrangements, the members also had to secure accreditation of the overseas employers.... Ten years later, I was pleasantly surprised one day to hear about the high standards of the Indian actuarial exams through some Australian actuaries.

– Raju Seetharaman, Former Executive Committee Member

April 19, 2000 - It was the day on which IRDA borne to regulate the insurance industry in India. Before that, life insurance business was transacted by LIC of India only. IRDA recognized that an insurer shall not function without an appointed actuary. It directed the insurers to keep the appointed actuaries as their employees, so that they could be part of the activities of the insurer.

– K Subrahmanyam, Council Member, IAI



It was mere serendipity that I entered the actuarial profession in the year 1991....I had the fortune to occupy the front seat and witness its growth through infancy, childhood, adolescence and now adulthood....However,... We need to continue building upon existing skills, equip our members with new skills....This decade will be an era where 'ABCD'—artificial intelligence, block chain, cloud and data, would become the alphabets of the future.... An exciting future beckons!

– Hema Malini , who worked with IRDAI

Early 2000, a palpable sense of exuberance and hope had set in within the Indian actuarial community as the insurance industry opened up. In the professional body, there was a change of guard with young (-ish?!) actuaries becoming more involved and taking on leadership roles. We were all excited to be a part of what we saw was a defining moment for the Indian actuarial profession. No one talked of challenges then; all we saw were opportunities and there was no dearth of them.

– S Madhusudhanan former Executive Committee Member



1999-2005

A KINK IN THE GRAPH

INSURANCE REGULATORY AND DEVELOPMENT AUTHORITY OF INDIA (IRDAI)

Based on the recommendations made by the Malhotra Committee, the Government of India, in December 1996, introduced the Insurance Regulatory Authority Bill (IRA Bill) which was later renamed as the Insurance Regulatory and Development Authority Bill, 1998. On enactment, the Insurance Regulatory and Development Authority of India Act, 1999 came into being in December, 1999. The Act effected the establishment and incorporation of an authority to be called 'Insurance Regulatory and Development Authority' (IRDA). The IRDA was constituted on April 19, 2000 and began functioning on the same day itself with N Rangachary as its first chairperson and a team of four whole-time members and two part-time members. Section 3 of the Act requires appointment of "at least one person... having knowledge or experience in...Actuarial Science", in the authority. Thus, the position of Member Actuary¹. The emphasis on Actuarial profession was clearly specified.

The Act further strengthened the role of Actuaries in insurance companies by modifying the Insurance Act, 1938 in the following ways:

- The life insurance companies transacting in India were now required to have an investigation into its financial condition by an Actuary "every year", instead of every two years
- Every insurer was required to submit "abstract of the report of the Actuary"
- The IRDA could "employ an auditor or Actuary or both for the purpose of assisting him in any investigation"
- Life insurers were required to furnish statement of the required solvency margin "certified by the Actuary approved by the Authority"

The IRDA opened up the Indian Insurance Market for private sector participation in August 2000.

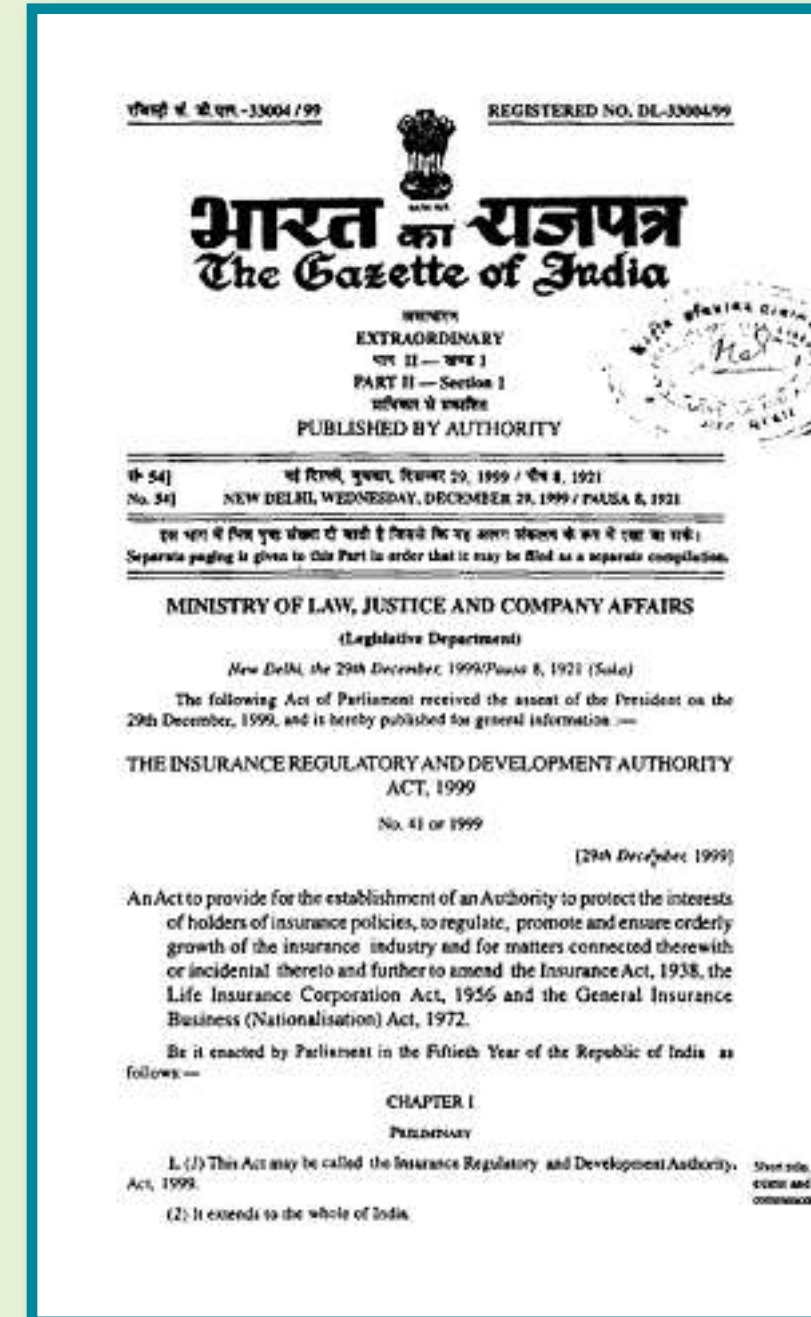


N Rangachary, first chairperson of the IRDA

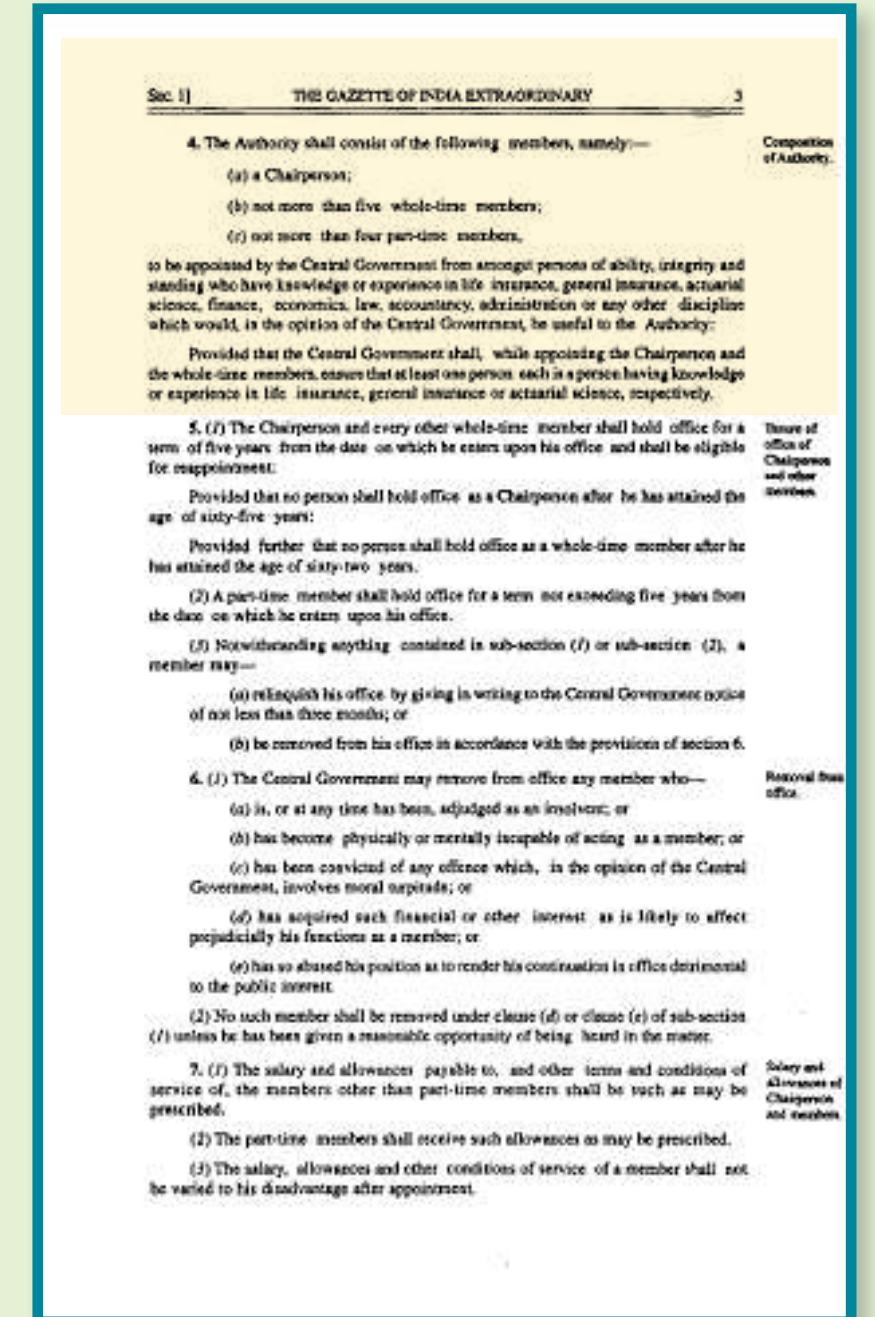


J Hari Narayan, former chairperson of the IRDA

¹ https://shodhganga.inflibnet.ac.in/bitstream/10603/204874/8/08_chapter%204.pdf



IRDA Act, 1999



The Authority has the power to frame regulations under Section 114A of the Insurance Act, 1938. IRDA issued IRDA (Appointed Actuary) Regulations and IRDA (Assets, Liabilities and Solvency Margin of Insurers) Regulations in 2000.

The IRDA (Appointed Actuary) Regulations, 2000 required “an insurer registered to carry on insurance business in India shall....appoint an Actuary, who shall be known as the ‘Appointed Actuary’”. Being “a Fellow Member of the Actuarial Society of India” (which later on became Institute of Actuaries of India under Actuaries Act, 2006), and possessing “a Certificate of Practice issued by the Actuarial Society of India” were two of the most important eligibility criteria under these regulations. In addition, this person was required to be approved by the IRDA.

The regulations also defined the powers and responsibilities of an Appointed Actuary. Some of the key responsibilities of the Appointed Actuary were:

- “rendering Actuarial advice to the management of the insurer, in the areas of product design and pricing, insurance contract wording, investments and reinsurance”
- “ensuring the solvency of the insurer at all times”
- “complying with the provisions of the section 64V of the Act in regard to certification of the assets and liabilities”
- “complying with the provisions of the section 64 VA of the Act in regard to maintenance of required solvency margin”

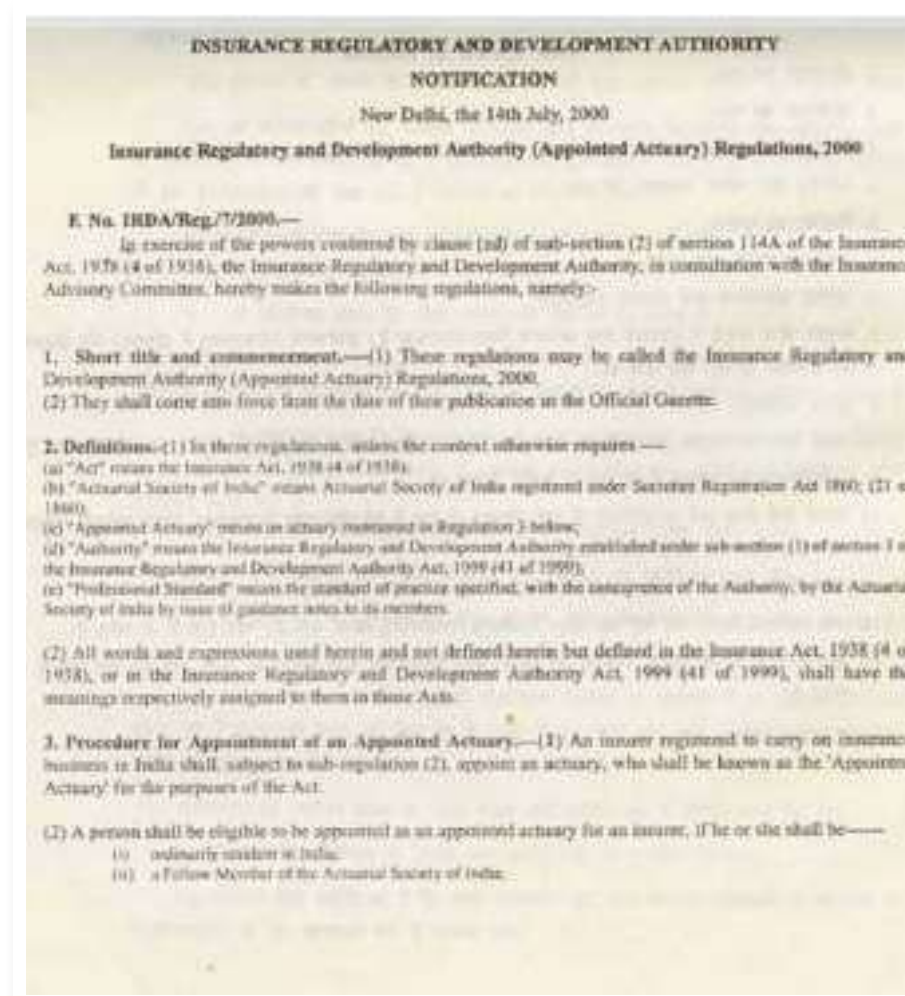
In addition, in life insurance companies, an Appointed Actuary was required to:

- “certify the Actuarial report and abstract and other returns”
- recommend “interim bonus or bonuses payable by life insurer to policyholders”
- ensure quality of policy data used for Actuarial valuations
- ensure that “the premium rates of the insurance products are fair”
- certify the mathematical reserves

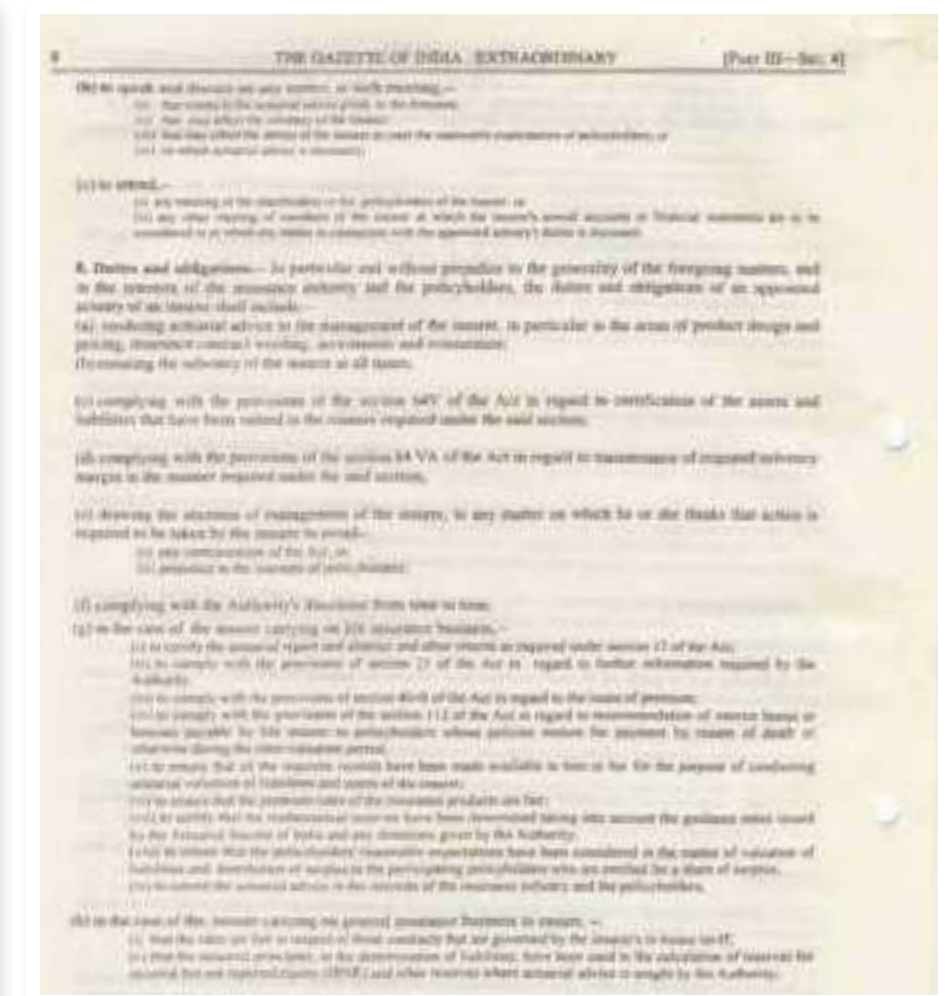
and, Appointed Actuary of general insurance companies needed to ensure that:

- “the rates are fair...”
- “the Actuarial principles, in the determination of liabilities, have been used in the calculation of reserves for incurred but not reported claims (IBNR) and other reserves”

The responsibilities of an Appointed Actuary meant that the insurers not just needed one Actuary but a team of members, who were fully aware of Actuarial principles and methods, to support him/her in carrying out these responsibilities. This increased the demand for Actuaries in insurance companies in India significantly.



IRDA (Appointed Actuary) Regulations, 2000

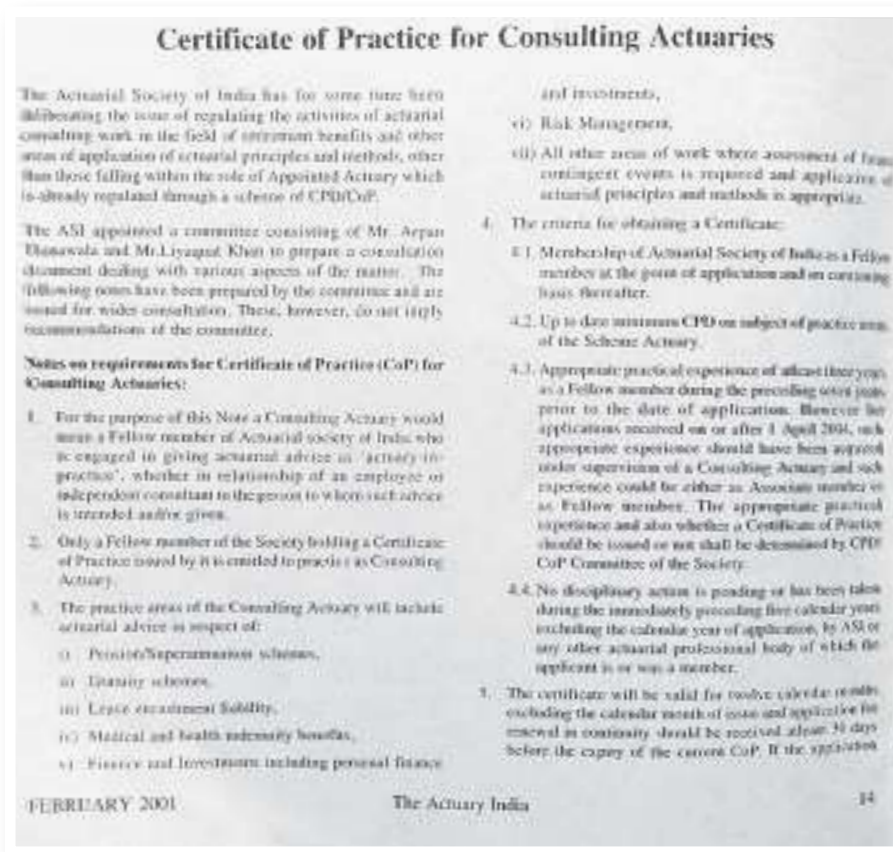
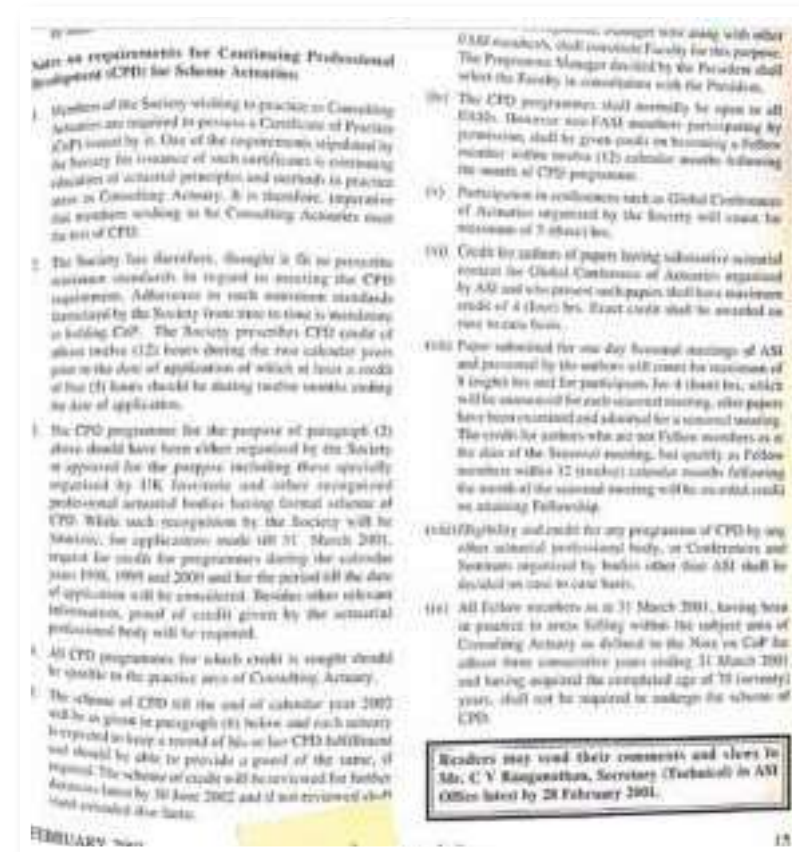


A NEW DAWN

The creation of the insurance regulator, opening up of the insurance industry for private sector participants and the new regulations, especially the newly formed 'Appointed Actuary System' created a spike in the demand for Actuaries in India. It was time for the Actuarial profession in the country to take a leap and welcome the new dawn.

The Actuarial Society of India (ASI) moved in tandem with the IRDA to keep all Actuarial related statutory and professional developments in coherence.

In response to the IRDA (Appointed Actuary) Regulations 2000, in February 2001, the first draft of the Continuing Professional Development (CPD) requirements and process of Certificate of Practice (CoP) issuance was published in *The Actuary India* magazine. The ASI on November 1, 2001, issued the Actuarial Practice Standard (APS) 1: Appointed Actuary and Life Insurance Business.



CPD announcement in the February 2001 edition of *The Actuary India* magazine

However, the ASI needed to attend to another major issue. As per the *Business Standard* dated April 21, 1997², out of 100 Fellow Actuaries in India, almost 75 had retired. With many companies knocking the doors of IRDA for approval to enter the insurance market, the available number of actively working Actuaries was too small to meet the demand. It is difficult to fathom that the number of actively working qualified Fellows in India at that time were less than the number of Actuarial employees working today in a medium-sized life insurance company. In addition, it was also required that the Actuaries working in these new insurance companies were well-equipped with the latest global trends and standards in insurance markets, and knew how to adopt them in India. Such attributes were not available in the Actuaries who had been working only in India.

Private sector opened with foreign participants in collaboration with Indian partners. Insurance expertise was brought in by foreign

Business Standard

India's Actuaries: At A Premium

BSCAL
Last Updated at January 27, 2013 21:07 IST

All these are actuaries who are assiduously being wooed by Indian and global players. There's American Insurance Group, J Rothschild Associates, Canada Life and many more. With the insurance sector on the threshold of reforms, actuaries have become hot property. Their skills relating to forecasting probable events and assessing financial implications have become dear. They design insurance products, formulate premium tables, and even advise on investments. Ironically, just when almost every corporate is showing interest in the sector, there are only a handful of practicing actuaries left. And their number is fast dwindling.

Till about 10 years ago, India had 130 actuaries. In comparison, there are 2,500 actuaries in the UK and 10,000 in the US. Down to 100 currently, their headcount here is fast depleting. More than 75 actuaries are over the age of 65. Of these, only 20 are practising and seven are employed by the LIC. Known as fellows, most of them are the alumni of the Actuarial Society of London. While the oldest living actuary A Rajgopalan is 89 years, Padmaja, at 26, is the youngest. And what's more, almost all have signed the muster at LIC. In the last 15-20 years, nearly 35 actuaries retired from the insurance monolith.

Strangely, even as the list of retirees was growing, for youngsters, post-graduate degrees in computers, finance and management took precedence over actuarial science. In the last five years, only six students qualified as actuaries. Says leading consultant Naresh M Thanawala, partner of Thanawala Consultancy Services, With

hardly any prospects for actuaries, there were few takers. It has been an outcome of the demand-supply syndrome. Actuarial science is not a dying art, but it has had little opportunity to be known, says M G Dewan, 66, who was earlier chairman of LIC. Adds R M Mehta, It is such a restricted domain that there are very few who know what an actuary actually is.

Ever since the insurance sector was nationalised in 1956, LIC has been the only source of employment for actuaries. Their role was restricted to life insurance. Even today, the six LIC subsidiaries including General Insurance Corporation, Oriental Insurance and New India Assurance do not have a single actuary. Says Mehta, Abroad they work for life insurance, pension funds, general insurance and finance management; here they are only used for life insurance.

This has meant working in a government organisation like the LIC which has limited career growth. And becoming an actuary was the only way to the top. Take, for instance, S P Subhedar, an actuary by accident. At the age of 18, when he was told about the profession as a career prospect, Subhedar made a beeline for the dictionary. An actuary was defined as a clerk who calculates insurance premium. Nevertheless, once in LIC, he soon realised that pursuing actuarial science would give a boost to his career. He retired as managing director in 1995.

It was also one of the options for students majoring in maths. Padmaja, who became a full-fledged actuary last year, had a choice for post-graduation.

First Published: Mon, April 21 1997. 00:00 IST

The cutout of the *Business Standard* article on April 21, 1997, republished in their website on January 27, 2013

participants, while Indian participants brought in their brand image. The ASI had to seek Actuarial resources, particularly from those countries where these foreign partners came from. In order to provide adequate Actuarial resources, ASI signed Mutual Recognition Agreements (MRAs) with Actuarial bodies of these countries so that Actuaries from those bodies can practise in India. This resulted in a strong foundation of insurance companies on core Actuarial principles. In addition, this period saw a flurry of young students taking up the profession. By 2005, ASI had 203 Fellows, 130 Associates and over 3500 student members against 146 Fellows, 87 Associates and just 442 student members in 1999.

² https://www.business-standard.com/article/specials/india-s-actuaries-at-a-premium-197042101028_1.html



MoU with IoA on May 9, 2001

Mutual Exemption Policy and Mutual Recognition Agreement

With an increase in requirement for Actuaries in India and across the globe, it was necessary for the ASI not just to bring in Actuaries to India but also align its education and professional standards to global levels. Efforts were being made to enter into mutual agreements for subject exemptions and fellowship levels.

The first step towards the alignment started with signing a Mutual Recognition Agreement (MRA) and Memorandum of Understanding with Institute of Actuaries, London (IoA)³ on May 9, 2001. Two years later, on November 4, 2003, Mutual Exemption Arrangements between ASI and Institute of Actuaries Australia (IAAust) was also signed. The agreement stated that students of ASI shall be given exemptions for the Part 1 of IAAust on passing 100 series from ASI.



MRA signed between ASI and IoA on February 17, 2004

A landmark event took place on February 17, 2004 in New Delhi, when ASI signed three Mutual Recognition Agreements – one each with the Institute of Actuaries Australia, The Institute of Actuaries, London and The Faculty of Actuaries in Scotland (FoA) at Fellowship level. This, in effect, meant that the professional bodies mutually recognise each other's fellowship at equal level.⁴

On May 28, 2005, an MoU was also signed between Bangladesh Insurance Association (BIA) and ASI.

In addition, ASI admitted Morris Chambers, Nigel Masters, P R Swarup, Dr G Gopal and N Rangachary as honorary members, an evening before the third GCA on February 14, 2001.



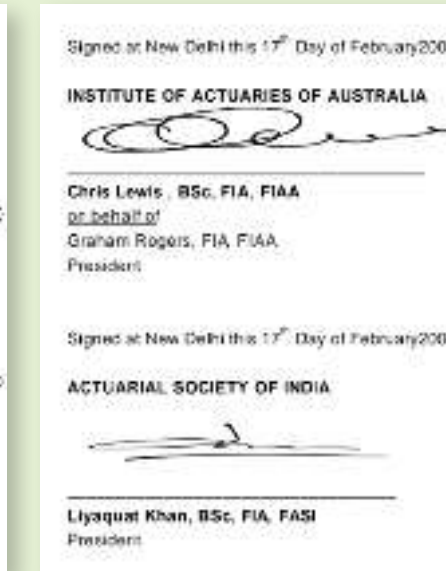
MRA signed between ASI and IAAust on February 17, 2004



MRA with IoA



MRA with IAAust



MRA with FoA

³ The Actuary India magazine – April 2001
⁴ The Actuary India magazine – February 2004



MoU between BIA and ASI on May 28, 2005



Honorary Fellowship being awarded to Morris Chambers



Honorary Fellowship being awarded to P R Swarup



Honorary Fellowship being awarded to Nigel Masters



Honorary Fellowship being awarded to N Rangachary



Honorary Fellowship being awarded to Dr G Gopal

BEGINNING OF THE GLOBAL CONFERENCE OF ACTUARIES (GCA)

Motivated by IRDA Executive Director (Actuarial) K Subrahmanyam's idea to hold global meets for exchange of Actuarial thoughts and to inculcate best practices into the Indian Actuarial profession, the IRDA, under the leadership of its Chairperson, N Rangachary, hosted the first Global Conference of Actuaries (GCA) in 1999 on the platform of the Federation of Indian Chambers of Commerce and Industry (FICCI). Derek Stott, then Head, Prudential UK in India, came forward to sponsor the event. This allowed Actuarial professionals from around the world to interact, share their knowledge and develop mutual learning ground. The GCA became a signature conference event of the profession, leading to significant outcomes such as the 'Appointed Actuary System'.



Attendees of the first Global Conference of Actuaries – K Subrahmanyam, K P Narasimhan, President of the ASI, N Rangachary, Chairman, IRDA, Stuart Wason, President-elect of the Canadian Institute of Actuaries (CIA), and Shriram Mulgund



Press coverage of the 1st GCA in various newspapers

ASI LIBRARY

The ASI Library was inaugurated by Dr Bruce T Porteous, FFA, FIAI who was then working with Standard Life, UK and had come over to India for the joint venture with HDFC group, on November 15, 2000, in the presence of Liyaquat Khan (President), Education Board Members and the staff. The library was funded with Rs 3 lakh donated by Standard Life UK.

In those early days, the profession was struggling and relied heavily on the senior members of the profession to keep it alive... incentives for young Indians to enter the profession were not high. We tried to help in those early days by writing articles for The Actuary India, providing funds to help develop an actuarial library and it is great to see how far the thriving Indian profession has come.

– Dr Bruce T Porteous

Similarly, Danny Ramjit, first Appointed Actuary of Max New York Life (now Max Life) also contributed significantly to the cause of the ASI by presenting a cheque of Rs 5 lakh.

ASI'S WEBSITE

A few months later, with the help of GE Capital and under the leadership of Sunil Sharma, the Society's website – www.actuariesindia.org was launched in January 2001.



Snapshot of ASI website as on January 3, 2001



Dr Bruce T Porteous inaugurating the ASI Library on November 15, 2000

BEGINNING OF THE ACTUARIAL OFFSHORE CENTRES

The exponential growth in demand for Actuaries in India was not only a consequence of the IRDA Act, 1999, but also due to the fact that lots of global companies started opening their offshore centres in India. The first Actuarial offshore centre in India was started by GE Capital in Gurgaon under its wholly owned unit GE Integrated Business Solutions Pvt Ltd under the leadership of Raman Roy, who is the father of KPOs in India. It started with the visit of GE Financial Assurance, Inc. Chief Actuary, Cliff Lange to India in 1998. Cliff Lange met the members of ASI (located in Delhi) and shared his vision to set up an offshore Actuarial centre in Gurgaon, India.

Sunil Sharma, current President of IAI and Sanchit Maini were the founding members of the 'Actuarial Centre of Excellence' for GE Financial Assurance in India. These two

Indian Actuarial professionals were sent to GE Financial Assurance headquarters in Richmond, Virginia, USA to understand product development and pricing process. Subsequently, they transitioned the product development support process to India and multiplied the team size by hiring students from public sector life insurer, Indian Statistical Institute and Delhi School of Economics.

One major contribution of this team to the Actuarial profession was to develop a website for the ASI in the year 2001 at no cost to the profession. Subsequently, the team grew to support Liability Valuation of Life Business, Life Insurance Profit Testing, Experience Analysis and Rating in GI. Since then, Actuarial offshore centres across the country have become the largest employer of Actuarial professionals in India.



Team photo at GE Capital



Sanchit Maini



Sunil Sharma

THE KPN COMMITTEE, 2005⁵

On March 7, 2005, IRDA constituted the KPN Committee on provisions of The Insurance Act, 1938 – to examine the provisions relating to investments, shareholders and policyholders’ funds, sufficiency of assets, insurance surveyors, tariff advisory committee and recommend changes that are warranted in the statutory framework. They were also assigned the task to indicate any sections of the Act that needed to be amended, in light of the developments taking place in the insurance sector.

This committee was headed by K P Narsimhan (former President, ASI). The 11-member committee included three more Actuaries – Liyaquat Khan, S P Subhedar and N M Govardhan.

The key recommendations of this committee were mainly amendments to The Insurance Act, 1938, such as:

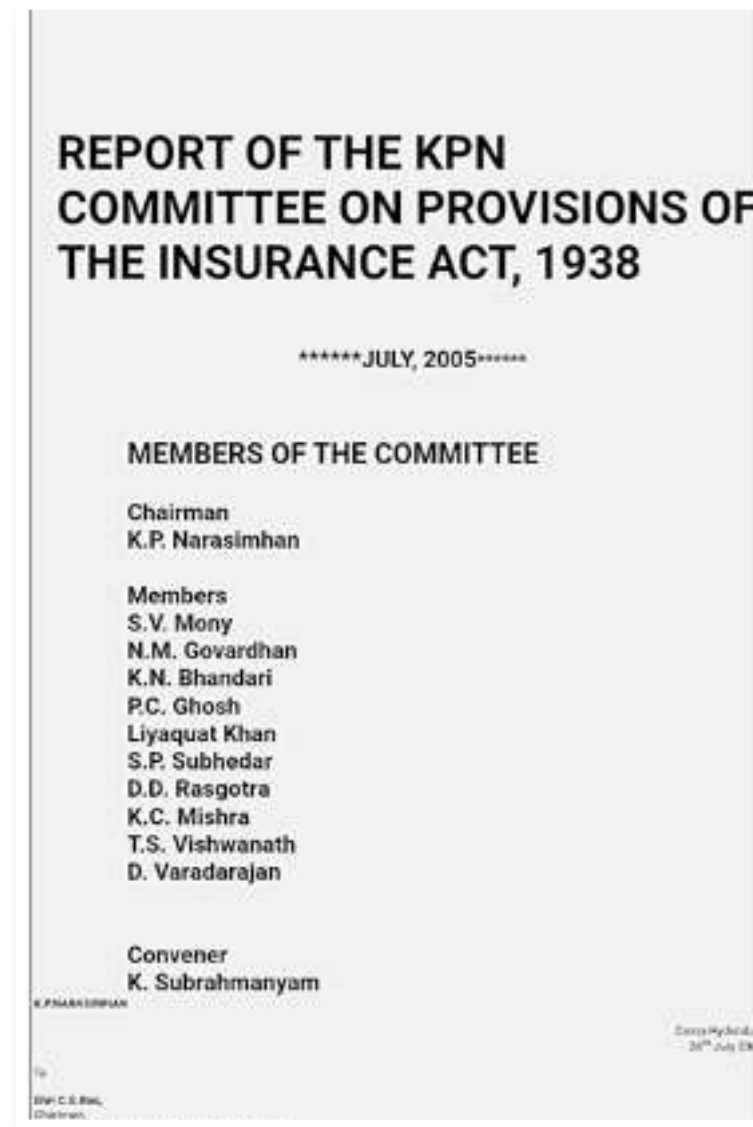
- Amendments to provisions relating to Investments such as “Every insurer shall invest...controlled investible funds in the manner...twenty-five per cent of the said sum in Government securities, a further ...twenty-five per cent... in Government securities or other approved securities and the balance in any of the approved investments...”
- “Requirement as to Capital - No insurer carrying on the business of life insurance, general insurance or re-insurance in India...shall be registered unless he has (i) a paid-up equity capital of rupees one hundred crores, in case of...life insurance or general insurance; or (ii) a paid-up equity capital of rupees two hundred crores, in case of...reinsurer”
- “Make it mandatory for every insurer to engage the services of an Appointed Actuary: Every insurer

should appoint an actuary, who shall be known as Appointed Actuary, in accordance with regulations made by the Authority and the scope of his duties and responsibilities shall be as may be considered expedient by the Authority”

- Abolish the system of licensing of the surveyors
- Law to prescribe a “...minimum qualification necessary for eligibility to work as a surveyor...”
- The Government, the IRDA and insurance industry should promote establishment of an institute of surveyors on self-sustaining basis
- Establishment of Life Insurance Council, General Insurance Council and the Technical Advisory Committee
- “...rate making should be ultimately left with the insurers”
- Recommendations regarding the appointment of insurance agents
- Amendments to definition of ‘General Insurance Business’ and ‘Life Insurance Business’
- Suggestion for introduction of adjudicatory mechanism
- Changes in grievance redressal mechanism
- “Every policy of life insurance shall contain the formula as approved by the Authority for calculation of guaranteed surrender value of the policy”

These recommendations became the basis for the amendment to The Insurance Act, 1938 in 2015.

⁵ IRDAI website and IAI Library



K P Narasimhan



N M Govardhan

THE S P SUBHEDAR COMMITTEE⁶

Internationally, the International Association of Insurance Supervisors (IAIS) and International Actuarial Association (IAA) had done considerable work for laying down guiding principles for prudential supervision of insurance entities.



It was, thus, desirable to embed the principles initiated by these two bodies to ensure a comprehensive review of insurance laws.

The S P Subhedar Committee on Comprehensive Review of Insurance Laws was formed on October 5, 2002 with S P Subhedar (Chairman), Liyaquat Khan (President), R C Rao, Nick Taket, David Muiry and A R Prabhu completing the review.

Major issues such as roles and responsibilities along with support to Appointed Actuary, relationship between auditors and Actuaries, Actuarial certification, etc. were discussed.

“What I do know is that the rebirth of the Actuarial profession in India is due to the constant tireless efforts of S P Subhedar who recognised very early in the insurance sector liberalisation process that actuarial science and recruitment of students were both vital to the health of the industry in the long term. N Rangachary of IRDA was a strong supporter of such rebirth and there was much assistance from Prudential Corporation Asia in Hong Kong through the efforts of Garth Jones.”

– Memoir by Derek Stott, Representative, Prudential Assurance Group, UK

⁶ IAI Library

D BASU COMMITTEE REPORT ON ELECTION PROCESS REVIEW⁷

On January 1, 2003, ASI constituted a committee for the purpose of reviewing election procedures and processes and to make suitable recommendations so as to ensure transparency, objectivity and higher level of member confidence.

The committee constituted of D Basu as Chairperson and N K Shinkar and D R Iyer as members. The committee submitted its report on February 11, 2003, which was considered by the Executive Committee of ASI in its meeting held on March 4, 2003.

Some of the key recommendations by the D Basu Committee were:

- Executive Committee should nominate Secretary General of ASI as the Returning Officer
- Each outer cover of the ballot paper to be signed by the Returning Officer
- A brief resume of the candidate (in not more than 120 words) should be sent along with the ballot paper
- As and when ballot papers are received, they should be inserted in a metallic ballot box, so that no official in ASI would know who has exercised their voting rights and on the appointed day in presence of RO and two scrutineers, the signatures will be verified and the ballots will be shuffled and the votes will be announced.
- Any member who has at least 5 years of experience as Fellow of Actuarial Society of India is qualified to contest in the election to the Executive Committee.
- The election process will start immediately after March 31 of every year, in addition a tentative schedule was also provided.
- The Hon. Secretary will announce the list of successful candidates arranged alphabetically at the time of AGM

- The task of electing the new president should be entrusted to the incoming committee members and the outgoing president ceases from his/her position once the AGM is over
- The new Executive Committee is to be presided over by the seniormost Fellow member of the Executive Committee. The committee shall decide the election of the President and the other office bearers.

All the recommendations except the '5-year experience' clause were accepted by the Society.



N K Shinkar



D R Iyer

THE NEW EXAMINATION SYSTEM⁸

The ASI adopted the Actuarial examination system of IoA in the year 2000. This helped in aligning Actuarial studies in India with those in the UK. Later in 2005, the IoA introduced a new structure for the Actuarial examination. The 2005 model of examinations implied more focus on core principles of Actuarial work and the ability to apply it in a variety of situations. The then existing 100, 200, 300 and 400 series were restructured as CT, CA, ST and SA series, and was in use till 2018.

Examination Pattern before 2000

- Associateship Examinations:
 - SUBJECT 1 – PROBABILITY AND STATISTICS – 2 PAPERS
 - SUBJECT 2 – MATHEMATICS OF FINANCE – 1 PAPER
 - SUBJECT 3 – LIFE CONTINGENCIES – 2 PAPERS
 - SUBJECT 4 – ECONOMICS & ACCOUNTS – 1 PAPER
 - SUBJECT 5 – APPLIED STATISTICS – 1 PAPER
 - SUBJECT 6 – MORTALITY – 1 PAPER
- Fellowship Examinations – All the above 6 subjects along with the following subjects:
 - SUBJECT 7 – INSTITUTIONAL INVESTMENT – 2 PAPERS
 - SUBJECT 8 – LIFE ASSURANCE – 2 PAPERS
 - SUBJECT 9 – RETIREMENT BENEFITS – 2 PAPERS
 - SUBJECT 10 – GENERAL INSURANCE – 2 PAPERS

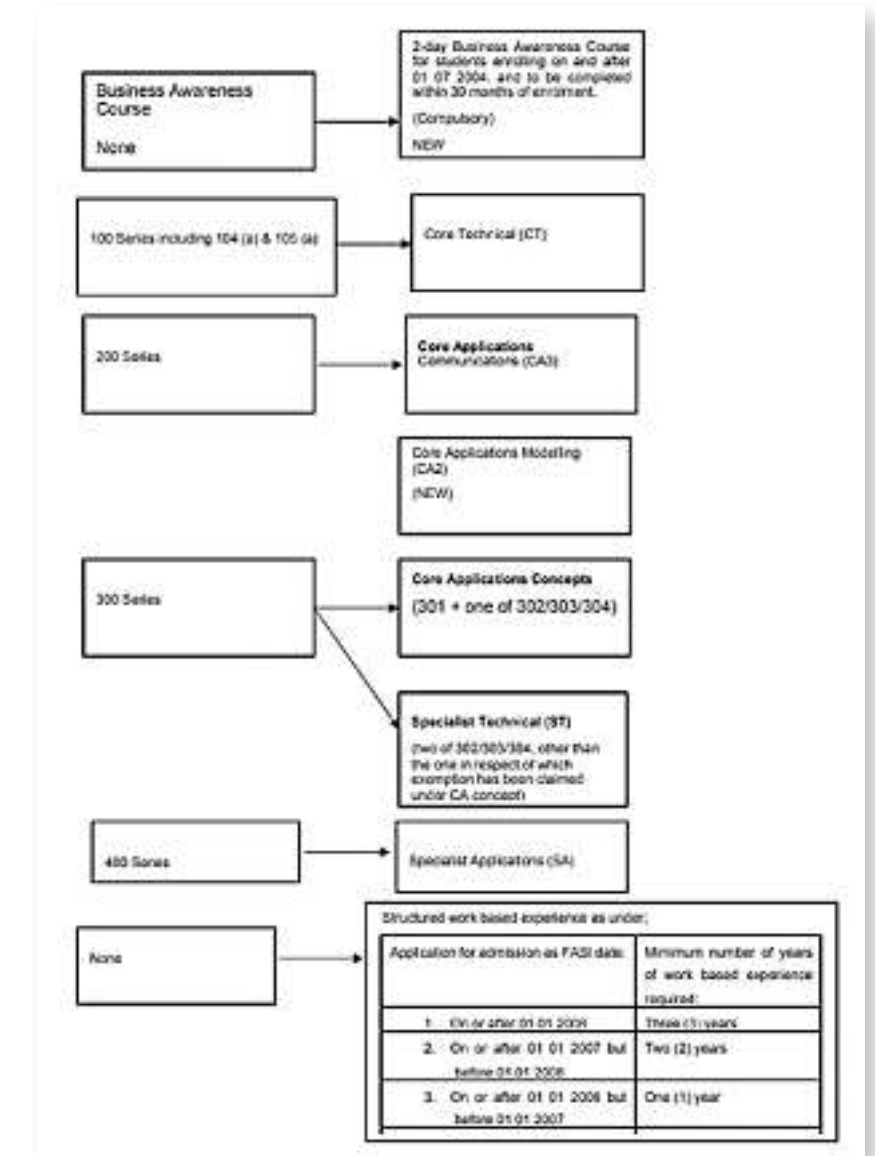
Examination pattern of ASI before 2000

- Series 100
 - SUBJECT 101 – STATISTICAL METHODS
 - SUBJECT 102 – FINANCIAL MATHEMATICS
 - SUBJECT 103 – STOCHASTIC MODELLING
 - SUBJECT 104 – SURVIVAL MODELS
 - SUBJECT 105 – INTRODUCTION TO PROBABILITY AND CORRELATION
 - SUBJECT 106 – ACTUARIAL MATHEMATICS – 1
 - SUBJECT 107 – FINANCIAL ACCOUNTING AND INSURANCE
 - SUBJECT 108 – ACTUARIAL MATHEMATICS – 2
 - SUBJECT 109 – ECONOMICS
 - SUBJECT 110 – FINANCE AND FINANCIAL ACCOUNTING
 - SUBJECT 111 – FINANCIAL COMPUTERS
- Series 200
 - SUBJECT 201 – COMMUNICATIONS
- Series 300
 - SUBJECT 301 – INVESTMENT AND ASSET MANAGEMENT
 - SUBJECT 302 – LIFE ASSURANCE
 - SUBJECT 303 – GENERAL ASSURANCE
 - SUBJECT 304 – PENSIONS AND OTHER BENEFITS
 - SUBJECT 305 – FINANCIAL ACCOUNTING
- Series 400 (2 Papers) – FELLOWSHIP
 - SUBJECT 401 – INVESTMENT AND ASSET MANAGEMENT
 - SUBJECT 402 – LIFE ASSURANCE
 - SUBJECT 403 – GENERAL ASSURANCE
 - SUBJECT 404 – PENSIONS AND OTHER BENEFITS

Note:

- All 100 and 200 series subjects are of one paper.
- Only one of the 300 series subject has to be taken.

Examination pattern of ASI from November 2000 onwards



Changes to the examination pattern by IoA in 2005. These were also adopted by ASI at the same time

⁷ IAI Library

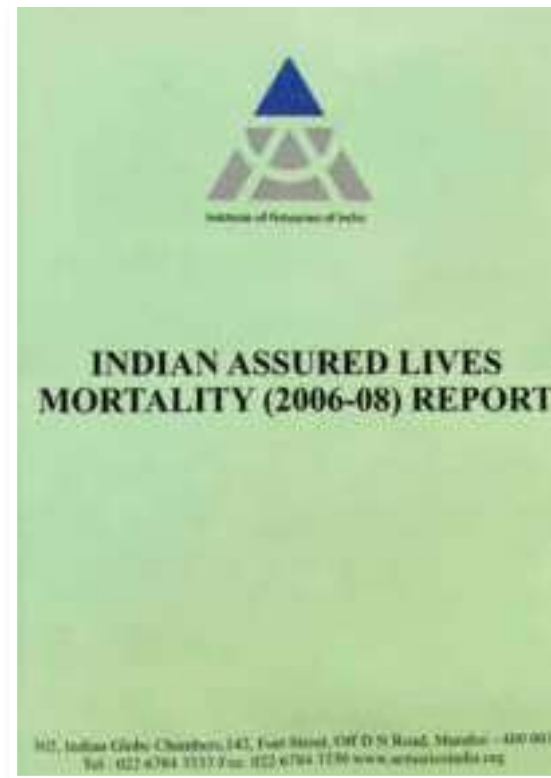
⁸ The Actuary India magazine, March 2005; IAI Library

THE MMIB⁹

On May 19, 2005, the Mortality and Morbidity Investigation Bureau (MMIB), a company under Section 25 of The Companies Act was created under the agreement signed between the ASI and the Life Insurance Council.

MMIB was established with a basic objective of studying the recent trends in and acquiring more data and information on mortality, morbidity and other risk-related contingencies in life insurance.

The first report of the MMIB called the 'Mortality of Assured Lives in India (2006-08)' was published under K P Sarma as CEO in 2010.



Indian Assured Lives Mortality (2006-08) Report

STAGE SET UP FOR THE ACTUARIES ACT, 2006¹⁰

On initiation by N Rangachary, the then chairman of IRDA (then IRA), ASI took up the drafting of the bill. In August 1997, a draft bill of the Institute of Chartered Actuaries of India Act, 1997 was prepared by ASI and a modified version of the same was received from IRA. Further, in October 1997, it was informed to the members of the executive committee that the latest version of the draft of Institute of Actuaries of India Bill, 1997 was being prepared by the legal adviser. The same was sent to IRA in November 1997. The draft was then submitted by ASI to the Government of India.

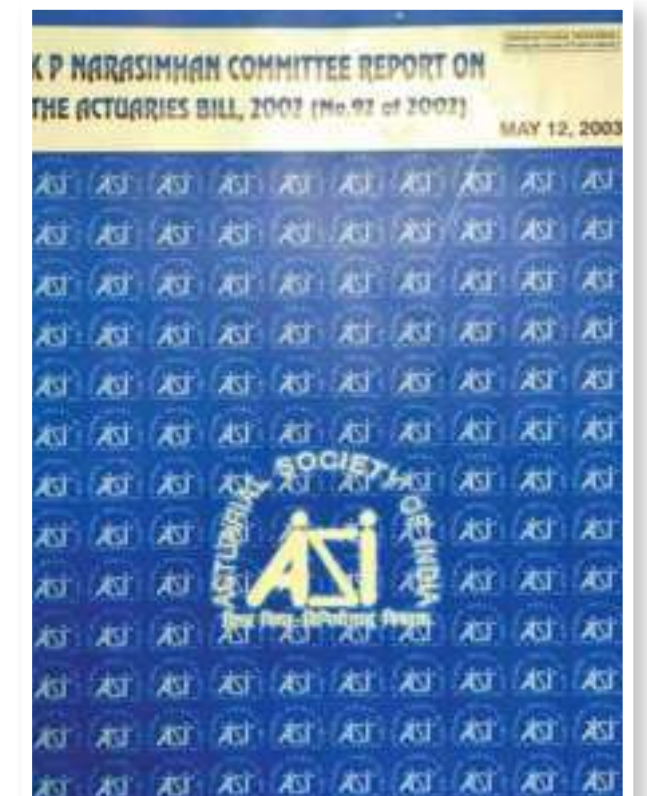
A couple of years later, a draft bill for ASI's comments was sent by the Ministry of Finance on June 28, 2000. However, it was substantially different from what was proposed by the ASI in 1997. The Society appreciated the gaps and a two-member committee consisting of K S Gopalkrishnan and Meena Sidhwani was appointed to study the draft sent by the Ministry of Finance and make recommendations. A revised bill with recommendations from the committee, was sent to the Ministry of Finance on September 1, 2000.

Meanwhile, for smooth transition, on February 26, 2002, the Ministry of Finance suggested to the ASI to pass a resolution enabling transfer of assets and liabilities of ASI to the new entity expected to be in place by the Act. The ordinary general meeting of ASI, held on March 30, 2002 passed this resolution.

In April 2002, the Ministry of Finance sent a draft of the bill to ASI. It was noticed that the recommendations made by the ASI in September 2000, were not taken into account. It was time for the ASI to take a stand and insist on a more robust and comprehensive bill, which was in consonance with international practices.

Subsequently, The Actuaries Bill, 2002 was introduced in the Lok Sabha on December 20, 2002 and was referred to the Standing Committee on Finance for examination by the Speaker of the Lok Sabha. To obtain a comprehensive study of issues involved so that a view can be taken, the ASI constituted

a committee with K P Narasimhan as Chairperson and JS Salunkhe, S P Subhedar and P A Balasubramanian as members. The committee submitted its report titled 'K P Narasimhan Committee report' on May 12, 2003. Meanwhile, the Standing Committee on Finance also sent a letter to the ASI seeking the view of its members on various aspects such as how the bill could strengthen the objectives of the ASI and also increase the scope of Actuaries.



INDIAN GLOBE CHAMBERS – THE NEW OFFICE

On September 3, 2005, ASI inaugurated its new office premises at Indian Globe Chambers, Fort Street, CST.



Inauguration of new premises of ASI by Atul Shukla, Chairperson LIC on September 3, 2005

⁹ EC Minutes and *The Actuary India* magazine, June 2005

¹⁰ Based on then President of ASI, Liyaquat Khan's letter dated May 13, 2003 to all members of the Society and his letters to the Ministry of Finance dated November 18 and 23, 2002, respectively.

ACTUARIES DAY CELEBRATIONS



Actuarial Day 2018 - Bangalore



Actuarial Day 2018 - Chennai



Actuarial Day 2018 - Mumbai



Actuarial Day 2018 - Gurugram



Actuarial Day 2019 - Gurugram



Actuarial Day 2019 - Hyderabad



Actuarial Day 2019 - Bangalore



Actuarial Day 2019 - Mumbai



Actuarial Day 2019 - Kolkata

2006-2019

THE JOURNEY REDEFINED



THE NEW IMAGE

The Actuaries Act, 2006 received the assent of the President of India on August 27, 2006. The Actuarial Society of India (ASI) got a new image as the Institute of Actuaries of India (IAI) and became a statutory body established under the Act for regulation of the Actuarial profession in India.

The provisions of the said Act came into force from November 10, 2006, in terms of the notification of November 8, 2006, issued by the Government of India through the Ministry of Finance, Department of Economic Affairs. As a consequence of this, the erstwhile ASI ceased to exist and all its assets and liabilities were transferred to, and vested in, the IAI constituted under Section 3 of the Actuaries Act, 2006.

The main objectives of the Institute according to Section 5 of the Act are:

- “to promote, uphold and develop the standards of professional education, training, knowledge, practice and conduct amongst Actuaries;
- to promote the status of the Actuarial profession;
- to regulate the practice by the members of the profession of Actuary;
- to promote, in the public interest, knowledge and research in all matters relevant to Actuarial Science and its application; and
- to do all such other things as may be incidental or conducive to the above objects or any of them.”

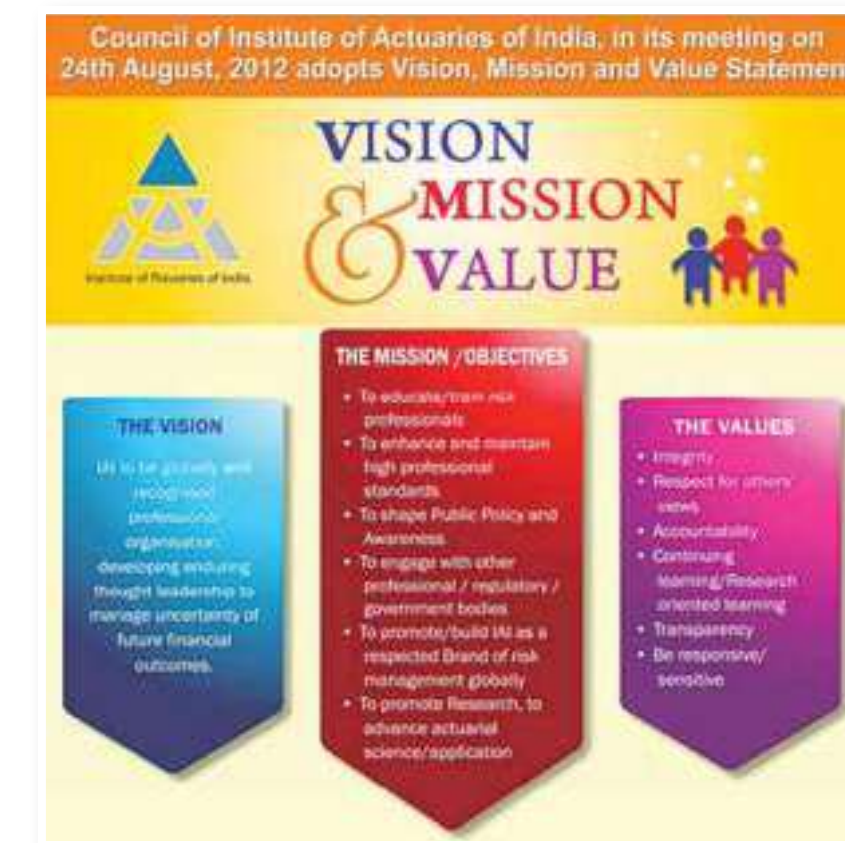


Gazette of India – The Actuaries Act, 2006

Vision, Mission and Value Statement

Since IAI as an institute is responsible for defining a clear strategy for the Actuarial profession's growth and welfare, it took up a 'strategy initiative' to define the Institute's vision, mission and values. A Strategy Initiative Task Force (SITF) was created, and two experts in the field – Prof Indira J Parikh (Ex-Dean, IIM Ahmedabad) and Prof J Ramachandran (Chair Prof Business Policy, IIM Bangalore) – were contracted. During 2011-12, in-depth deliberations were held, with consultants, council members, chair/secretaries of Advisory Groups, SITF members and senior IAI members specially invited to the discussions, as participants.

Based on the recommendations of these experts, on August 24, 2012, IAI adopted its 'Vision, Mission and Value' statement.



The Council

Section 12 of the Actuaries Act, 2006 mandated the creation of a 'Council' of the Institute for the management of its affairs and discharging functions assigned to it by or under the Act.

The Council would include a minimum of nine and a maximum of 12 Fellow members (members not guilty of any professional misconduct and to be elected by Fellow and Associate members of the Institute); a government nominated officer, not below the rank of Joint Secretary, to represent the Ministry of Finance; one person from IRDAI nominated by the Central Government and not more than two persons having knowledge in the field of life insurance, general insurance, finance, economics, law, accountancy or any other discipline, which in the opinion of the Central Government, would be useful to the Council.

The first Council meeting after the formation of the IAI was held on June 5, 2007.



First Council meeting

(L-R): S P Subhedhar, J S Salunkhe, K P Narasimhan



(L-R): T Bhargava, K K Wadhwa, K Sriram



(L-R): A G D Wagle (Secretary General), Heerak Basu (Hon. Secretary), K S Gopalakrishnan (Vice President)



(L-R): G N Agarwal (President) and G L N Sarma



(L-R): K Sriram, N H Thanawala, P A Balasubramanian

Committees

Various committees have been constituted as per requirements of Section 21 of the Actuaries Act, 2006, which addresses Professionalism, Audit, Finance and Administration, Education, Wider Fields, External Affairs and Research and Membership Approval.

A Disciplinary Committee has also been constituted as per Section 26 of the Act, to deliver on the Act and the Actuaries (Procedure for Enquiry of Professional and Other Misconduct) Rules, 2008.

A Quality Review Board has also been constituted under Section 43 of the Act.

Advisory Groups

The IAI has set up a number of Advisory Groups with experienced Actuaries to help, guide and advise on Examinations, Education, Professionalism, Ethics and Conduct, Life Insurance, General Insurance, Health Care Insurance, Pension, Other Employee Benefits and Social Security, Sustainable Development and Micro Insurance, Risk Management, Data Science and Analytics, International Financial Reporting Standard (IFRS) 17 [(Indian Accounting Standard (IND AS) 117)], Banking, Finance and Investments, Communication and Global Conference of Actuaries (GCA).

STRENGTHENING PROFESSIONAL STANDARDS

In its endeavour to maintain high professional standards, the IAI has laid down many practice standards to be followed by its members. Professional programmes and continuous learning are also essential requirements to keep members up to date with new developments.

Indian Fellowship Seminar (IFS)

Students who complete their Actuarial examinations and are qualified for admission as Fellow of Institute of Actuaries of India (FIAI) are required to attend IFS for assessment by members of Advisory Group on Professionalism, Ethics and Conduct (PEC). Senior Fellows are assigned the role of 'guides' to these young Actuaries to prepare and make presentations in the seminar.

The objective is to ensure that newly qualified members, before admission as a Fellow member, have adequate knowledge of Professionalism, Ethics and Practice Standards.



1st Indian Fellowship Seminar, December 1, 2003, Mumbai



2nd Indian Fellowship Seminar, December 16, 2004



6th Indian Fellowship Seminar, December 14, 2006



29th Indian Fellowship Seminar, June 2, 2008



31st Indian Fellowship Seminar, July 4, 2019



32nd Indian Fellowship Seminar, December 5, 2019

PCS, APS and GNs

As professionals responsible for the implementation of regulations as well as ensuring policyholders' interest, Actuaries have to abide by Professional Conduct Standards (PCS). PCS states the standards that any member of the Institute must abide by, both in spirit and letter, in discharging his/her duties. These standards are in addition to the basic specifications of professional misconduct, other misconduct as specified in the Schedule (in reference to Section 31, both Part I and Part II) in The Actuaries Act, 2006. It was initially introduced by ASI in 1987, and since then, has been revised in 2003 and 2009.

While performing Actuarial functions under various laws, regulations, and accounting standards, the erstwhile ASI had put in place Guidance Notes (GNs), which later on, in addition to the existing GNs, became Actuarial Practice Standards (APS). IAI issues and updates APS from time to time.

Continuing Professional Development (CPD)

Since the economic environment, insurance industry and other industries where Actuaries work are ever changing and growing, the Institute has always insisted upon the need for the Actuarial community to keep themselves informed and equipped for developments. To ensure the same, Actuarial Practice Standards (APS) 9 has been issued, defining minimum requirements for undertaking appropriate activities that address professional development needs and enhance members' learning in relevant Actuarial functions.

All Fellows need to adhere to CPD requirements as stated in APS 9. This is updated from time to time as per evolving needs.

The first CPD requirements were laid down in February 2001 by the ASI.

Certificate of Practice (CoP)

Every member practising as an Actuary should hold a valid Certificate of Practice (CoP) as per Section 9 of the Act. It is important that anyone who offers to perform or performs services involving the application of Actuarial techniques related to any of the Actuarial Practice Standards or who provides any type of opinion or certificate under any of the APS, should hold a CoP.

The members holding CoP should be aware of all the provisions under the Actuaries Act, 2006, rules and regulations issued under the Act, Actuarial Practice Standards, Guidance Notes and other guidance (e.g. Professional Conduct Standards) issued by the Council. CoP holders are required to spend more hours on continuing professional development and they need to have a minimum level of experience.

The first CoP requirement was listed in February 2001 by the ASI.

Other Conferences, Seminars and Webinars

IAI has diligently supported the professional growth of its members by increasing awareness of issues plaguing various Actuarial functions and ensuring the capacity building of its members to meet those challenges.

Various advisory groups conduct 'Current Issues' and 'Capacity Building' seminars/workshops in the field of Life, General and Health Care Insurance, Retirement Benefits and IFRS 17. Advisory groups also conduct seminars on Data Science and Analytics, Enterprise Risk Management (ERM),

Banking Finance and Investment, Professionalism Ethics and Conduct, and Global Conference of Actuaries (GCA). IAI regularly calls upon expert speakers from all over the world for this purpose.

With growing digitisation and spread of Actuaries all over the country, in 2019, IAI started free webinars for members on various issues like Data Science, Analytics in Banking and Opportunities for Actuaries in the Insurance Industry – beyond Actuarial function, etc.

ACTUARIAL PROFESSION'S ETHICS

Professional Conduct Standards (PCS)
v3, effective: December 1, 2009

APS 1: Appointed Actuary and Life Insurance Business
effective: November 1, 2001; amended on July 1, 2011

APS 2: Additional Guidance for Appointed Actuaries and Other Actuaries Involved in Life Insurance
effective: April 1, 2003; amended on July 1, 2011

APS 3: Financial Condition Report
effective: April 1, 2003; amended on July 1, 2011

APS 4: Peer Review of Appointed Actuary's Work in Life Insurance
effective: August 28, 2004; amended in July 2011

APS 5: Appointed Actuary and Principles of Life Insurance Policy Illustrations
effective: January 1, 2004; amended on July 1, 2011

APS7: Appointed Actuary (AA) and Principles for Determining Margins for Adverse Deviation (MAD) in Life Insurance Liabilities
effective: March 31, 2008; amended on July 1, 2011

APS 9: Continuing Professional Development (CPD) and the Actuary
effective: April 1, 2005; amended in CPD year 2018-19

APS10: Determination of the Embedded Value (EV) of Life Insurance Companies Incorporated in India and Regulated by IRDA for the Purpose of Initial Public Offering (IPO)
effective: December 8, 2012; amended on March 28, 2015

APS 15: Pension Fund Terminology
effective: January 1, 2012

APS 20: Actuarial Practice for Social Security Programmes
effective: April 1, 2005; amended on January 1, 2012

APS 27: Employee Benefits
effective: January 1, 2018

APS 33: Peer review of AA's work in General and Health Insurance/Reinsurance
effective: December 1, 2017

GN 22: Reserving for Guarantees in Life Assurance Business
effective: March 31, 2014

GN6: Management of Participating Life Insurance Business with Reference to Distribution of Surplus Classification of Guidance Notes
effective: March 31, 2014

GN 29: Guidance Note on Valuation of Interest Rate Guarantees on Exempt Provident Funds under AS15 (Revised)
effective: April 1, 2011

GN28: Other Employee Benefits
effective: April 1, 2011

Guidance Note (GN) 31: On Financial Condition Assessment Report for General Insurance Companies
effective: March 2, 2013

INITIATIVES FOR ACTUARIAL STUDENTS

Actuarial Common Entrance Test (ACET)

Earlier, the Institute's criterion for admission as a student member was based on age, qualification and marks. But there was a lot of influx of students who did not progress much with the examinations.

To ensure enrolment of dedicated students, the Actuarial Common Entrance Test (ACET) was started in 2012 at the initiative of the then ASI president, Liyaquat Khan. It is conducted twice a year. To promote ACET, Liyaquat Khan

visited various universities of India, particularly in the remote parts of the country like Tezpur, Guwahati, Srinagar, Thiruvananthapuram, etc.

Young Actuaries Connect

Young Actuaries Connect was introduced in 2011 to encourage and counsel Actuarial students on career growth and various aspects of becoming FIAI. The first connect was held in Mumbai on December 3, 2011. Till date, eight such meetings have been held across various cities like Gurugram, Bengaluru and Mumbai.



We faced many challenges, in particular quite a few in working out the implementation of the Actuaries Act 2006. Setting up the Mortality and Morbidity Investigation Committee with the Life Insurance Council was a big challenge and this was possible only because of the perseverance, negotiation skills and vision of the then leadership. Overcoming the teething troubles and setting the Disciplinary Committee in motion was another major task that was accomplished well



K S Gopalakrishnan

Several actuarial professionals involved themselves voluntarily in the activities of IAI which included examination, training, CPD and professionalism seminars/workshop/conference and initiation of APS/GNs.



P A Balasubramanian, FIAI



2nd IAI Connect, August 25, 2012/Gurugram



3rd IAI Connect, August 20, 2014/Mumbai



4th IAI Connect, August 22, 2015/Mumbai



7th Young Actuaries Connect, December 5, 2018/Bengaluru



5th Young Actuaries Connect, October 28, 2017/Gurugram



8th Young Actuaries Connect, May 17, 2019/Gurugram



6th Young Actuaries Connect, October 14, 2017/Navi Mumbai

Classroom and Online Training for Student Members

With the objective of helping student members better understand subjects and help them in their journey of becoming Fellow, the IAI has, from 2015 started online coaching (live sessions) for core principles (core technical) subjects at subsidised prices – besides conducting classroom workshops on modelling tools like Excel and R.



Looking for best job opportunities in Actuarial?
Log on to Actuarial Job Portal and get access to best of the openings.

The Actuarial Job Portal (AJP) is live now. Update and activate your profile today, for employers to reach out to you for the best of the job openings.

Login now using your membership ID and update your profile.

Actuarial Job Portal

Early on, the IAI used to list 'Actuarial Job Opportunities' on its website. On the 2nd Actuaries Day on August 21, 2019, IAI launched the Actuarial Job Portal (AJP) to overwhelming response from members.

CELEBRATING THE PROFESSION

The Indian Actuarial profession declared August 21, the birth anniversary of L S Vaidyanathan (the first Fellow Actuary of India and the first President of the ASI) as Actuaries Day. The first Actuaries Day was celebrated in five locations in India – Mumbai, Bengaluru, Chennai, Delhi and Hyderabad in 2018 with an essay competition on 'The History of Actuarial profession in India'. Badges to mark the day were made available to members at their workplaces.

The second Actuaries Day was celebrated in 2019 across the earlier five cities, and also in Kolkata. It has now become an annual celebration.



ANOTHER FEATHER IN THE CAP: MRA SIGNED WITH CAS

In November 2015, the IAI entered into a mutual recognition agreement with the Casualty Actuarial Society (CAS), United States of America. The agreement was signed by CAS President Robert S Miccolis and IAI President Rajesh Dalmia on November 5, 2015, in Bangkok (Thailand) at the 19th Asia Actuarial Conference.

REINSURERS¹

The Insurance Laws (Amendment) Bill, 2015 promoted reinsurance business in India by allowing foreign reinsurers to open branches in India. While General Insurance Corporation of India (GIC Re) is the national reinsurer, in late 2016, the IRDAI issued licenses to six foreign reinsurers to conduct business from India.



¹ https://www.irdai.gov.in/ADMINCMS/cms/NormalData_Layout.aspx?page=PageNo3045&mid=3.3.9

GROWTH OF ACTUARIAL AVENUES

INSURANCE, REINSURANCE AND ADVISORY

Since the opening of the insurance sector to private players in 2000, the insurance industry in India has grown manifold. From six life and general insurers in 2000, there are now 58 life, general and health insurers and seven reinsurers – they being one of the major employers of Actuarial resources.

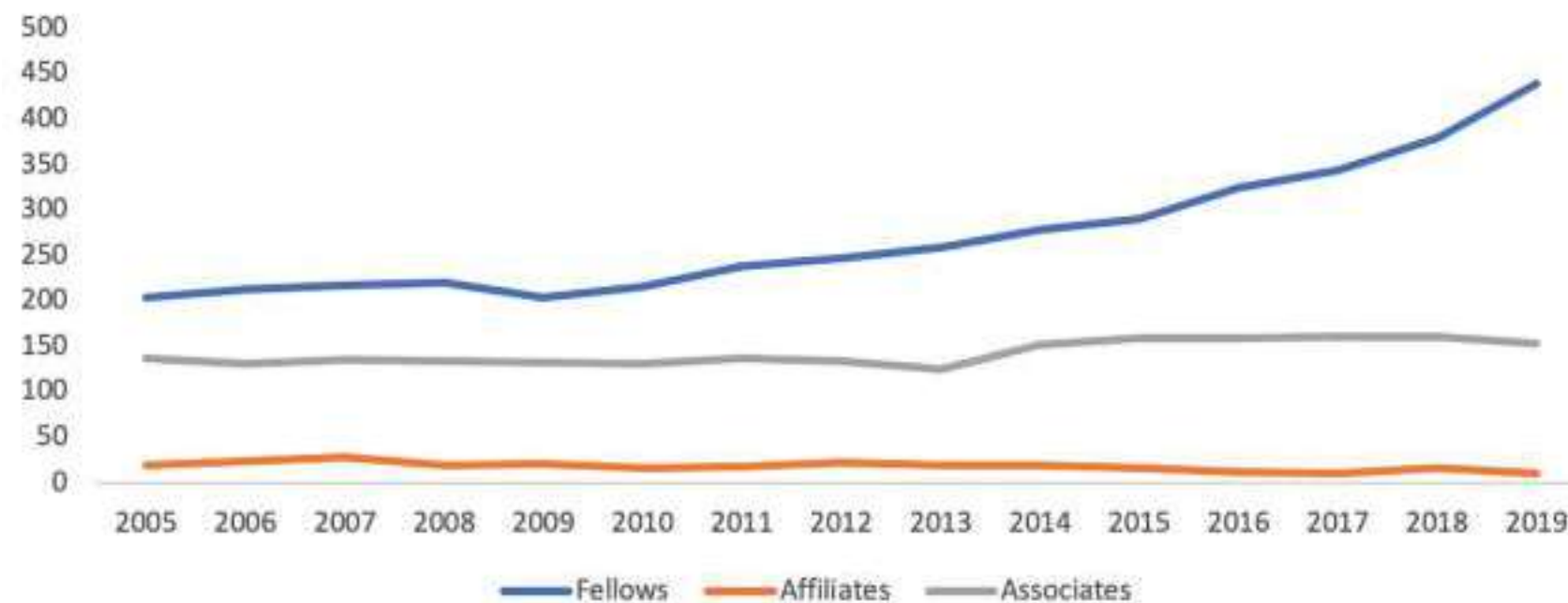
With amendments in the Appointed Actuary Regulations in 2013, the position was made in-house as well as full-time for all non-life insurers. There were further revisions to the Appointed Actuary Regulations in 2017 and 2019.

Similarly, the practice of 'Peer Review' for life insurers, present since 2004, was made an Actuarial Practice Standard (APS 33) for non-life insurers from FY 2018-19.

Besides working for insurance companies, Actuaries have contributed through advisory roles in the IRDAI and government. Actuaries have been part of various committees (or working groups) such as Committee for Review of Draft IRDAI (Minimum Information for Inspection or Investigation) Regulations 2018, Working Group for Recommendations for Loss Prevention and Minimisation in General Insurance Industry in December 2019, and have advised on setting 'Motor Third Party' insurance premium rates.

The number of 'Fellows' grew from 227 in 2006 to 454 in 2019

Associates, Affiliates and Fellows over the years



From 2000, IRDAI mandated a full-time Appointed Actuary for life insurance companies while non-life insurance companies had the choice of appointing Appointed Actuary on a consulting basis

Global Actuarial Talent Hub

With many companies setting up their back-end offices in India, the country has become a global hub of Actuarial resources. India has also emerged as an Actuarial talent supplier to other countries such as the UK, the US, Hong Kong, Singapore, Thailand, the Philippines and Vietnam – as many Indian Actuaries have taken up crucial roles in these countries.

Beyond Boundaries

Since 2000, there have been examples of Indian Actuaries going beyond the core role of Appointed Actuary. In 2014, K S Gopalakrishnan was appointed MD and CEO of AEGON Religare Life Insurance. In 2017, G L N Sharma became the CEO of Hannover Re. There are many others in the same league such as Nick Taket, who served as General Manager-Finance and Appointed Actuary for HDFC Standard Life

Insurance Company in 2002, Peter Akers, who was Appointed Actuary and Chief Financial Officer of Birla Sun Life Insurance, Satyan Jambunathan, EVP, Senior Vice President and now CFO at ICICI Prudential Life Insurance Company and Anurag Rastogi, Member of Executive Management, Chief Actuary and Chief Underwriting Officer, HDFC ERGO General Insurance Company.

New Pastures

In addition to traditional roles, Actuaries have now become important contributors in Risk Management, Data Analytics, Finance and Accounting, Business Development, Investments, Expense Management, Asset and Liability Management, Innovation and Research, Mergers and Acquisition and in the Pension and Annuity Market. New developments such as implementation of IFRS 17, Risk Based Capital, Insure Tech, Fin Tech, Advanced Data Analytics and Predictive Modelling have increased the demand of Actuaries.

History is about human beings and the events which made a difference to the evolution of human society and, in our context, to the evolution of the Actuarial profession.

History shapes itself over a period, which is beginning less and endless.

The history of the Actuarial profession will continue to shape itself and, at some point, it is hoped that it will be written again.

The 75-year history ends now.

Till date, only three Indians have been inducted into the prestigious Insurance Hall of Fame of the International Insurance Society. It is a matter of great pride that two of them are Actuaries – B K Shah and Prof G S Diwan, who were inducted in 1984 and 2008 respectively.

LEADERS WHO MADE IT

L S VAIDYANATHAN¹ (1893-1962)

Lalgudi Swaminath Vaidyanathan, the first Indian Fellow of the Institute of Actuaries, London, was also the first President of the Actuarial Society of India (ASI). Vaidyanathan also served as the President of the Indian Life Assurance Offices' Association (I.L.A.O.A.).

After finishing his early examinations in India in 1924, the Bombay University scholar proceeded to England to study Actuarial Science, qualifying as Fellow in 1926. On his return to India, he joined the Oriental Government Security Life Assurance Company Ltd (Oriental).

During a tour of Europe and America after attending the International Congress of Actuaries in Rome, he had become familiar with various technologies of the times – which he would later introduce in Oriental.

While at the Oriental, L S Vaidyanathan also took up the part-time assignment of teaching Actuarial Science at Mumbai's Sydenham College of Commerce and Economics. In fact, the growth of the Actuarial profession in the early years was largely due to his missionary zeal.

In 1931, the Government entrusted him with the task of investigating into the mortality of Indian population based on the census data. His Actuarial report, which was annexed to the Census of India, 1931, distinguished itself by the sheer extent of knowledge, ingenuity and enthusiasm that it reflected.

His later investigations into the mortality of Indian assured lives, based on his experience at Oriental, contributed significantly to Indian life insurance. His paper on this investigation, submitted to the Institute of Actuaries,



London, was published in JIA Vol. 70 and was awarded the Sir George Hardy Memorial Fund prize.

His contribution in framing a comprehensive legislation – the Insurance Act, 1938 – was appreciated by the then Law Minister, Sir N N Sircar. Later, Vaidyanathan also played a very significant role in shaping the Insurance Amendment Act, 1950.

In 1943, he was appointed the Superintendent of Insurance (later renamed Controller of Insurance). In 1946, he returned to the Oriental as Chief Executive. During this period, he led the movement for rationalisation of the taxation system applicable to life insurers and superannuation funds. Following the nationalisation of the life insurance business, he retired from the Oriental in September 1956. While Custodians were appointed for other companies, Vaidyanathan's post was left untouched in recognition of his services.

In LIC, he was appointed as Managing Director – a post that he continued to occupy for the remaining years of

active service, which lasted until 1958. He breathed his last on February 25, 1962, his contribution standing tall in the Actuary world.

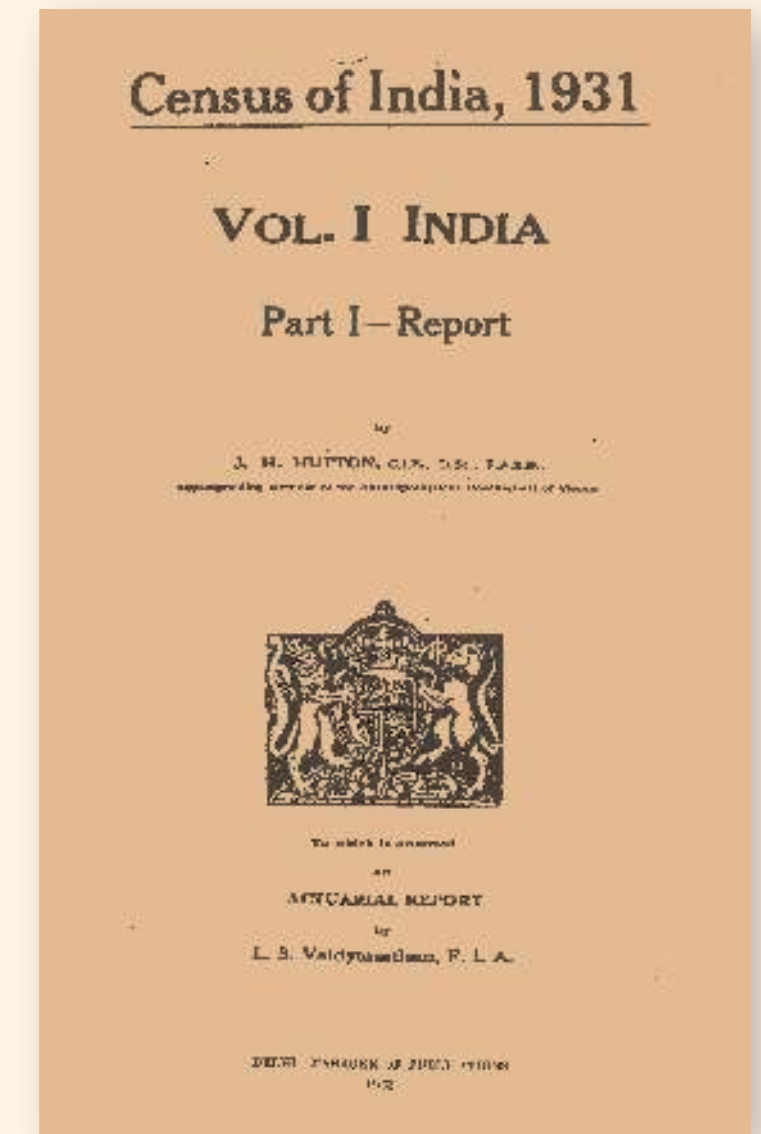
In the words of K R Srinivasan, then Chief Actuary of the Oriental and Custodian of New India:

“When the history of Indian insurance for the last two decades comes to be written, Mr Vaidyanathan's name will be in letters of gold, for inspired by the singular purpose of propagating adoption of fair and correct practices in life insurance administration in India, he strove to eradicate evil wherever he found it, fought injustice wherever it was perpetrated, and upheld sound traditions fearlessly and selflessly.”

In 2018, the Institute of Actuaries of India decided to celebrate his birthday, August 21, every year as the Actuaries' Day in his honour.

“The most remarkable achievement of the profession during its early days was the study of mortality experience Oriental 25-35 by L S Vaidyanathan FIA, the first big exercise before nationalisation. This is also seen as the earliest and a very great actuarial effort of the time. Not only was the duration of study a decennium, but the study itself extended to multiple sub-groups based on sex, race, regions and religious communities. From current standards while the data may have been inadequate for a stratified study, it served the purpose of the investigation in a manner then envisaged and the study received international acclaim.

– A. V. Radhakrishnan, AIAI



¹ Excerpts from Late M G Diwan's tribute to L S Vaidyanathan

B K SHAH² (1906-1995)

The first Indian-born Actuary to be inducted into the Hall of Fame of the International Insurance Society was Babubhai Kasturchand Shah, in 1984.

B K Shah was educated at Sydenham College, Bombay. After passing the Fellowship of the Institute of Actuaries, London, he joined the Hindustan Cooperative Insurance Society Limited as an Actuary and then moved to New India Assurance in 1936.

He headed New India Assurance's Actuarial department, until he became the General Manager in 1946. In 1954, he was appointed Managing Director, remaining in that position until 1971.

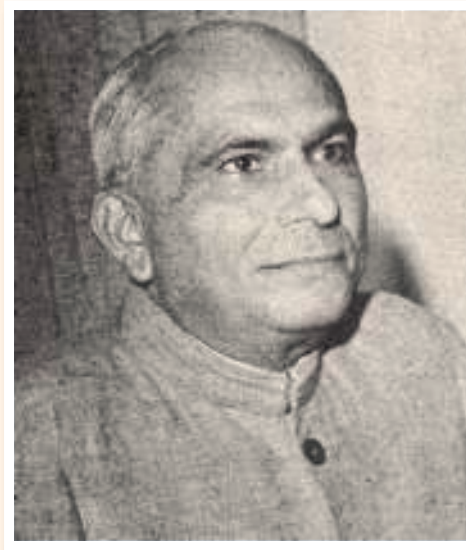
With exemplary vision and enterprise and unorthodox and dynamic approach, B K Shah took New India Assurance to the forefront of the Indian insurance industry. He is credited with transforming the company and taking it to the top tier twice – first after he took over as General Manager in 1946, and second, in 1956,

post-nationalisation of the life insurance sector, when the majority of New India's business came under the umbrella of the LIC.

At New India Assurance, Shah developed a new model of administration by streamlining procedures, shortening lines of communication and decentralising operations. He devised an efficient system to provide autonomy to inspectors (claims and policy issuance) by giving them cars/bikes to commute and on-spot policy issuance while at the same time putting enough checks to ensure absence of any wrongdoing. He introduced the technology of the times in operations.

His other pioneering initiatives were setting up of an investment department and emphasising on expense management, which ultimately was also regulated and resulted in acceptance by life insurers for statutory control of expenses of management.

Further, he introduced the Machinery Breakdown Insurance in India, in cooperation with Munich Re in 1951. He also got the underwriting of Indian marine hull business transferred from the United Kingdom to India. He started credit insurance on an all-India basis, thus expanding the



Indian insurance market to full capability in serving the needs of the Indian public and business sectors.

New India, under his stewardship, penetrated into every segment of Indian society. It established offices for direct writing in about 45 countries and operated in close cooperation with local insurers. New India also started trading internationally in reinsurance.

He developed the concept of Anatomy of Risk, built up consciousness among managers to identify sensitive points of risks and invented methods to minimise losses. He developed strategies and techniques of selecting, training and motivating hundreds of youths every year. All along the course of his leadership in New India Assurance, he continued to employ Actuaries at senior levels and in key positions – even after the life insurance part of the business merged with LIC in 1956.

Some of the Actuaries who served New India even after LIC of India came into being were R K Daruwalla, who became the second Chairman of the GIC of India and President of ASI and N H Thanawala, who also later became ASI President. The National Insurance Academy, Pune has a special room named after him.

Once the process of nationalisation of general insurance started, Shah was appointed Custodian of New India in May 1971. This was a departure from normal practice of appointing Custodians from other companies – an acknowledgement of not only the size of New India but the professional credibility of B K Shah.

Nationalisation of general insurance in 1971 came as a personal shock for the second time for B K Shah; the first shock was when the life insurance business was nationalised, taking away a significant part of New India's portfolio.

He took the company through the process of being handed over to a Board constituted by its new owner, General Insurance Corporation of India (GIC) and laid down office on the last working day before New India was nationalised on January 1, 1973.

B K Shah was perhaps the first Indian *Business Actuary* in the true sense. According to R Thyagarajan, Founder, Chairman, Shriram Group, “*New India Assurance became the leader because of B K Shah's vision.*” His achievements are a perfect example of how much more Actuaries can achieve.

² <https://www.insurancehalloffame.org/laureateprofile.php?laureate=30>
<https://www.newindia.co.in/portal/NIA100/noe.html>

PROF G S DIWAN³ (1901-1987)

Professor Govind Shrinivas Diwan or Babu, as he was fondly called, was the second Indian-born Actuary to be inducted in the Hall of Fame of the International Insurance Society in 2008.

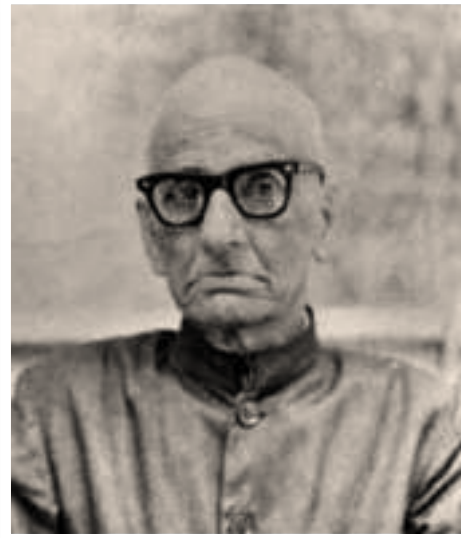
Prof Diwan became Associate in 1933 and Fellow of the Institute of Actuaries, London in 1942. His career spans over six decades, during which he achieved excellence in teaching, government service and consulting. He was an active member of the Actuarial Society of India (ASI) and honoured on many occasions for his contribution to the development of the profession. He received the Society's gold medal in 1980 for his contribution – most notably in academics and promotion of Actuarial education in India.

Considered the best teacher of his subject, the kind-hearted Prof Diwan often taught students for free. The Diwan-Agashe book on *Differential Equation*, written by him and one of his students, is considered one of most challenging books on Mathematics. His book on Gratuity Valuation was also prescribed as reading material for ASI Fellowship examinations.

Apart from his academic career of more than 30 years, Prof Diwan also worked for

the Government of Bombay as a non-life insurance consultant. He was also consultant on Life Office Valuations, Valuations of Life Interests, Gratuity Valuations, etc.

In 1951, he became the Insurance Officer for the insurance fund set up by the Government of Bombay to handle increasing requirement for insurance coverage for its properties, trade, goods and transport. Later, the Government also invited him to head the Insurance Department of Gujarat State.



In 1962, he was appointed non-Executive Director of the Board of the newly formed Deposit Insurance Corporation. During his directorship, he conducted a detailed investigation into the past experience (1951-52) of bank failures and losses caused to depositors as a result. This became the basis for setting premiums and terms in future.

Noble of heart, he always felt that nationalisation of life insurance (which he supported) was unfair to many with-profit policyholders. Not only did he make the public aware about it, he also went on to file a lawsuit on their behalf.

Prof G S Diwan always advocated that the ASI should conduct its own examination – which the Society eventually did in 1989, soon after his death. On February 26, 2010, a corner of Mumbai's 5 Road of Hindu Colony and Sir Bhalchandra Road in Dadar East, was named Prof Govind Shrinvas Diwan Chowk.



Gold medal being awarded to Prof G S Diwan by R M Mehta⁴

³ <https://www.insurancehalloffame.org/laureateprofile.php?laureate=139>
www.dsacted.com

⁴ K A Pandit's commemorative book for the 75th year; www.dsacted.com

R M MEHTA (1915-2004)

Another significant contributor to the Actuarial profession and insurance industry was R M Mehta. He was appointed as the Secretary of the Joint Committee of Custodians (JCC) in 1956. He was part of Life Insurance Corporation of India (LIC)'s three-man delegation under the Technical Cooperation Mission (TCM) scheme which went to the USA to study the latest trends in life insurance.

During its eighth biennial Actuarial valuation in 1971, when LIC was faced with the tough task of balancing the need to strengthen financial management and declare higher bonus rates, R M Mehta was appointed member of a government committee to recommend solutions.

In 1972, he was appointed the Managing Director of LIC⁵. Three years later, after retiring as Managing Director, he created the National Insurance Academy, along with the R K Mahajan, the then Controller of Insurance, Government of India, in 1975. He served as President of the Insurance Institute of India (III) from 1971-73 and in 1976 was also appointed as the Deputy Chairman of the Board of Education of III.⁶

He was a member of the Era Sezhiyan Committee that was appointed by the Government in 1978 to review the structure and working of the LIC. It was this Committee that suggested splitting LIC

into five independent corporations for improving efficiency – although this recommendation was not executed.

He was also elected President of the ASI in 1979⁷. During his tenure, ASI became a member of the International Actuarial Association and R M Mehta was elected as the representative of India. The Board of Insurance Institute of India decided to award medals (separately for life and non-life) in the Fellowship examinations – effective from October 1987.

R M Mehta received the Medal for Life in recognition of his outstanding contribution and service to the cause of insurance education and training in India. In 1993, he was a major contributor to the formulation of ASI's response to the Malhotra Committee. In 2000, he also donated a sum of Rs 1 lakh to the ASI in memory of late Professor G S Diwan.

Liyaquat Khan, in his President's column⁸ of the September 2005 issue of *The Actuary India* magazine, described R M Mehta as "the one who diligently kept the profession going during very difficult days".



⁵ *Tryst with Trust - The LIC Story*
⁶ <https://www.insuranceinstituteofindia.com/downloads/Forms/III/Important-Notice/History/MILESTONES.pdf>
⁷ *Bulletin*, December 1980
⁸ *The Actuary India* magazine, September 2005

from the president



Dear friends
Lump in the throat.
 Voice choked. Thoughts in reverse flight through the memory lane.
 Eyes full of tears, not flowing down but holding on as though to facilitate the flight of thoughts through the memory lane.
 As I sat down to pen this column on a subject entirely different, call came from S P Subhedar that two days earlier he breathed his last.

Its months now that the desire to visit him had been nagging and persisting: Friends had informed me that he was hard of hearing for quite some time and when visited, was prone to being emotional and could cry. Equally strong desire not to see him pained held me back. Some time in 1997, after coming back to India, I had visited him. Signs of ageing and incapacity to hear effectively were evident. We discussed matters actuarial and affairs of ASI, a subject of mission of his life.

Then the air was full of expectation with the day of opening of insurance industry to private sector clearly seen in the visible horizon. He too like many of us was, hopeful of resurrection and growth of Indian actuarial profession. A bit of a paradox for someone who held on to nationalized life insurance era in LIC and dedicated his entire career to it!

Year 1993 saw him fully involved in ASI's endeavor to formulate a response to the Malhotra Committee on reforms in insurance sector. I had the fortune to lead that endeavor and interact with him along with R K Danwalia and others. Much that went in ASI's memorandum to the Malhotra Committee had his imprint.

Year 1975, time before and immediately after his retirement from LIC as Managing Director, he dedicated himself along with (late) R K Mahajan, the then Controller of Insurance, to creation of National Insurance Academy. It was a fruition of a desire of his that any professional, actuarial including, research and development was highly constrained within the framework of LIC and thus an independent institution for the purpose was necessary.

Year 1978 – 80 saw him as an active member of the Government appointed Era Sezhiyan Committee to review structure and working of LIC. The Committee recommended splitting LIC in to five independent Corporations and also made number of recommendation for strengthening actuarial management of these proposed entities.

Almost concurrent to the functioning of the Era Sezhiyan Committee, he was a member of the committee of Actuaries (1978 – 79) with S N Vaidya as Chairperson to review the premium structure of LIC plans.

Year 1971, as a member of the N V Nayudu committee his contribution was evident when the committee recommended abolition of Zonal Offices and strengthening Divisional offices with creation of position Divisional Actuary for better financial management.

The eighth actuarial valuation of LIC as at 31- 03-1971 (biennial then) saw some kind of a explosive situation thrown up when the Chief Actuary recommended through a report which we would now call Financial Condition Report wanting LIC to strengthen its actuarial/

financial management and control loss making sales. Surely the resultant bonus rate was under pressure. Pressure rather a bit too much for the first non-bureaucrat recently appointed Chairman who wanted higher bonus with all rosy picture to be declared. The Government appointed committee to find a way out, has him as its member with the Chief Actuary too as a member and this paved the way for the Chairman to agree to implement number of recommended measures.

His commitment to his country, India and the organization he served, LIC, was unparalleled.

Jan. 1971, on the eve of my departure to work in London Branch of LIC, I went to take his blessings. With serene, calm and radiant face said he, go work hard, pass the Institute exams become a fellow (FIA) and come back to serve your motherland.

May 1973, I become FIA and on return back to LIC in India, I go to meet him, says he, "I am happy you came back to serve your motherland." The three years in between were tumultuous for actuaries working in LIC. The Chairman under obvious pressure had abolished actuarial incentive scheme, promotions in terms of the scheme were blocked for future (I was affected for one promotion at least) monetary benefits were recovered retrospectively (I too had to pay back), actuaries formed an association and went to court of Law against L. I. C. He, even though a Managing Director funded the cause by donating a sum large from those days' standards. All of us did.

Year 2000, he donated a sum of Rs. 100, 000/- to ASI in the memory of (late) professor G S Diwan, whose 100th birth anniversary fell that year.

Amazing!

R M Mehta, FIA; FASI, born 26- 07-1915 left for heavenly abode on 4th February, 2004.

Mehta Sir, with lump in the throat and tears in the eyes I look up to the sky and pray GOD to have you closer to him as one who fulfilled his assigned role well in this world.

Mehta Sir, when I do this I know I am not alone.

Remembering Roots and invoking blessings

Deep rooted in our Indian culture is our sense of gratitude to our forefathers that we display and invoke their blessings. It was thus in the firmness of things that the Executive Committee in its meeting held on 13th August 2005 dedicated the four rooms in the new office to L S Vaidyanathan, very first President of ASI when it was created in 1944, G S Diwan the very icon of Indian actuarial education, R M Mehta, the one who diligently kept the profession going during very difficult days and B K Shah, the insurance corporate giant of whom every Indian actuary should be proud of. While doing so we the current generation of actuaries dedicate our humble efforts to progress the cause of Indian actuarial profession to these giants and invoke their blessing to all that we do.

I end this column with a deep sense of satisfaction that I have in having had the opportunity to contribute my small bit as President of the Society.

17th 09 2005. Is the day when I lay down office as President immediately after the 25th AGM.

Good bye and Khuda Hafiz.

Liyaquat Khan

Obituary of R M Mehta by Liyaquat Khan, President ASI, published in the February 2004 issue of *The Actuary India*

Much earlier in the early Seventies, R M Mehta as the MD of LIC was instrumental in implementing incentives for Actuarial studies (by way of additional perquisites and promotion) and the developments in this regard is part of history which senior members of the profession are well aware of.

– P A Balasubramanian, FIAI, while recalling the contribution of R M Mehta

President's Column on September 2005. IAI (then ASI) dedicated four rooms in its new office in the Indian Globe Chambers in the name of four Actuaries – L S Vaidyanathan, G S Diwan, B K Shah and R M Mehta.

N V NAYUDU (1912-1997)



In 1935, after acquiring a B L degree, N Varadarajulu Nayudu went to England to work with Atlas Assurance Co., London. He qualified as an Associate in 1937 and as a Fellow of the Institute of Actuaries, London in 1939.

Thereafter, for five years, he held the post of Assistant Superintendent of Insurance, Government of India, after which he joined United India in 1945. In 1938, as the new Insurance Amendment Bill remained pending before the Legislative Assembly due to uncertainties in the political situation, a Sub-Committee was constituted by the Insurance Advisory Committee in 1944⁹ to consider all insurance problems relating to post-War India. With N V Nayudu as a member of this post-War Sub-Committee, it urged concerted measures to acquaint the public with the benefits of insurance. Another suggestion was the amalgamation of small Provident Societies and companies with high expense ratio with some stronger units.

N V Nayudu was also part of the Committee formed to review the report submitted by the Cowasjee Jehangir Committee. The report submitted by this Committee eventually became the Insurance Amendment Act, 1950. He also served as President of the South India Insurance Offices' Association and the Indian Life Assurance Offices' Association (I.L.A.O.A).

In 1948, he went abroad to study the working of the Metropolitan of New York and in the same year also took part in the centenary celebrations of the Institute of Actuaries, London.

N V Nayudu was made Managing Director of LIC, with effect from August 1967, and would make significant contribution in shaping what LIC is today. He also served as President of the ASI.

⁹ <https://archive.org/details/in.ernet.dli.2015.224568/page/n225>

A RAJAGOPALAN (1911-2006)¹⁰



One of the architects of the nationalisation of the life insurance industry included one of LIC's first Managing Directors, A Rajagopalan. He entered the Actuarial profession after graduation, and with the objective of acquiring practical experience, joined the Oriental. His stint in the Oriental was short-lived as he left the company to join the Government of India, as Assistant Actuary. When the Department of Insurance was created, he became the Assistant Superintendent of Insurance and in 1951 was promoted to Controller of Insurance. A Rajagopalan was an officer of the Indian Administrative Services (IAS); so, after his term as Controller of Insurance, he became Additional Secretary in the Union Finance Ministry.

It was A Rajagopalan who prepared the ground for the nationalisation of life insurance. His thorough and detailed knowledge of the industry was invaluable in guiding Custodians during the interim period of nationalisation. As the first Managing Director of LIC, he handled the Personnel and Actuarial portfolios – a pillar of strength for the Corporation. In 1961, he proceeded to Ceylon (now Sri Lanka) on deputation under the Colombo Plan, to advise the Government of Ceylon who had by then nationalised their life insurance industry. Following the nationalisation of General Insurance Companies in 1972, he was appointed the first Chairman of the General Insurance Corporation of India (GIC). He also served as the President of the ASI.

R K DARUWALLA (1921-2013)¹¹



Rusi Kaikhushroo Daruwalla graduated in Commerce from Sydneham College, Mumbai in 1943. After graduation, he joined the New India Assurance Company Limited in a clerical capacity, and through sheer hard work rose to become the Manager of New India Assurance Company Limited in 1961. R K Daruwalla became a Fellow of the Institute of Actuaries, London in 1958. In 1973, when the general insurance business was nationalised, he was assigned the role of Managing Director, General Insurance Corporation (GIC). He became the Chairman of GIC in 1979 and retired in 1981. He set GIC on an endeavour to achieve Rs 2000 crore premium income by 1990. On retirement from GIC, he joined Thanawala Consultancy Services as a partner, continuing his association with the firm until 2001. R K Daruwalla served on the Executive Committee of the Actuarial Society of India for many years in the 1980s and also was its President during 1982-1984.

¹⁰ Coffee-table book on GIC; *The Actuary India* magazine, April 2003

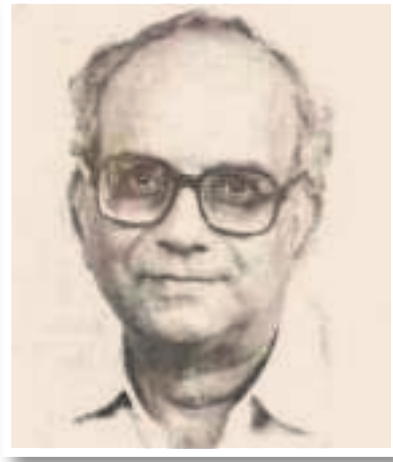
¹¹ Excerpts from an obituary on R K Daruwalla in *The Actuary India* magazine, June 2013; Coffee-table book on GIC; IFOA Directory

K P NARASIMHAN (BORN IN 1932)

K P Narasimhan qualified as the Fellow of the Institute of Actuaries, London in 1962¹². He started his career with the erstwhile Oriental Government Security Insurance Co. Ltd in 1955. In October 1990, he became Managing Director of LIC¹³ and, two years later, in 1992, was appointed as its Chairman¹⁴.

He served as the President of ASI from 1998 to 2000, prior to which, from July 1997, he was the Vice President. It was under his presidentship that the Global Conference of Actuaries was initiated in 1999. After his term as the president of ASI was over, from August 2001, K P Narasimhan served as Chief Editor of *The Actuary India* magazine until

February 2009. During his editorship, the magazine began to be published every month instead of in every two months. He also chaired two crucial committees – the Committee on Actuaries Bill, 2002 and the Committee on Provisions of the Insurance Act, 1938. The latter was the basis for the amendment of the Insurance Act, 1938 in 2015.



N RANGACHARY¹⁵ (BORN IN 1938¹⁶)

Known for his simple sartorial taste – a spotless white shirt and white pants – and the trademark *tilak* across his forehead, former Insurance Regulatory and Development Authority Chairman, Nambi Rangachary¹⁷ could possibly be the most down to earth regulator in the financial system. It was N Rangachary, who in 1997 prompted the Actuarial Society of India to come up with a professional structure and get formally institutionalised under an Act of Parliament, now known as The Actuaries Act, 2006. The Global Conference of Actuaries (GCA) was also initiated under his encouragement.

He is a Fellow Member of the Institute of Chartered Accountants of India, Institute of Cost and Works Accountants of India and Institute of Company Secretaries of India. He holds a National Diploma in Commerce from the All India Institute of Technical Education, New Delhi. Since 2001, he is also an Honorary Fellow Member of the Institute of Actuaries of

India. The Actuarial Society of India, now IAI, admitted him as an Honorary Fellow Member in recognition of his contribution to the cause of the Actuarial profession.

He has about 45 years of experience in insurance and financial services. He joined the Indian Revenue Service in 1960 and was appointed as Chairman of the Central Board of Direct Taxes in 1995. He retired from this position in July 1996 and then appointed as the Chairman of the Insurance Regulatory and Development Authority (IRDA) in August 1996, the then called Insurance Regulatory Authority (IRA). After IRDAI Act 1999, he was appointed the first Chairman of IRDA.¹⁸ The credit for privatisation of the Indian insurance industry goes to him, even though he never claims so.



DR ELIZABETH (LIS) MARY GOODWIN¹⁹

Lis Goodwin was the Head of Mathematics, Statistics and Computing at the Sir John Cass College in London. She worked in Her Majesty's Inspectorate of Education, overseeing higher education and further education establishments. She was a Fellow of the Royal Statistical Society and also served on the Council of the Institute of Mathematics and its Applications, UK.

Although Lis is not an Actuary, she joined the Institute of Actuaries, London in 1992 as Chief Education Executive. Her role was educating and training Actuaries (in UK) – both at the initial qualification stage and then post qualification, during Continuing Professional Development (CPD).

It was in this capacity that she did much for the Indian Actuarial profession. Her first visit to India and the then Actuarial Society of India (ASI) was in October 1995 when she interacted with various students and Fellow Members of ASI. Over the next 10 years she visited India multiple times. There were a lot of developments in the Actuarial profession in the UK during this period, especially the revision of examination pattern (twice), which she oversaw.

During her visit to India in 2000, Lis Goodwin explained the “IoA’s philosophy behind course content, and revisions thereto in the context of a uniform global syllabus” to ASI members. In 2002, she presented a paper on ‘Strategy for Actuarial Education in India’. She closely looked at ASI’s education and examination system and provided guidance. She also took various examiner workshops to guide ASI examiners and make them aware about the changes in the UK. She was instrumental in facilitating IoA’s study material for use by ASI students.

The Mutual Recognition at Fellowship level with IoA and FoA, mutual exemptions of subjects up to S 300 (now SP) level and helping ASI achieve mutual recognition at Fellowship level with IAAust are few of the significant milestones she deserves credit for.

In May 2000, she was given the IoA President’s award.



My first visit to India and the then Actuarial Society of India (ASI) was in October 1995.... The insurance market in India was changing and so also were the career journeys that Actuaries were following. The highlight of my association with the ASI was the signing of the mutual recognition agreement with the UK Institute and Faculty in 2004, while Mr Liyaquat Khan was President. I personally witnessed the growth of the ASI during this period. I enjoyed meeting the students and the qualified Actuaries.... I send the now Institute of Actuaries of India my congratulations on the first 75 years and my best wishes for your next 75 years.

– Lis Goodwin

Visit by Lis Goodwin



¹⁹ https://www.business-standard.com/article/finance/n-rangachary-holding-the-key-to-cdsi-s-growth-110082500024_1.html

¹² *Tryst with Trust – The LIC Story*

^{13, 14} LIC Library

¹⁵ <http://orientgreenpower.com/rangachary.asp>

¹⁶ <https://www.rediff.com/money/2003/jun/10ranga.htm>

¹⁷ <https://www.bseindia.com/bseplus/annualreport/504084/5040840319.pdf>

¹⁸ <https://www.oecd.org/finance/financial-markets/25820019.pdf>

Fellowship being awarded to Meena Sidhwani



Fellowship being awarded to R Padmaja



PROFESSIONAL ACTUARIAL EDUCATION

CHANGING GEARS TO GROW

THE STORY OF ACTUARIAL EDUCATION

A professional institute is recognised mainly by its integral activities – the primary among which are education and accreditation of its members.

The professional involvement of Actuaries in India began with the Life Insurance Act, 1912, when Actuaries who qualified from the Institute of Actuaries, London (IoA) and the Faculty of Actuaries, Scotland (FoA) started Actuarial work for life insurance companies in India within the framework of The Indian Life Insurance Companies Act, 1912.

The earliest record available from 1929 show three Fellow members and eight Associate members of IoA or FoA, working for insurance companies. There is no record of evidence of conduct of examinations by the IoA or FoA in India. But, it is quite likely that examinations were conducted by these two bodies for their members working in India, as it has been a regular practice for several decades now.

Although the Actuarial Society of India (ASI) was created in 1944, Actuarial examinations for ASI members and their accreditation as Actuaries remained under IoA and FoA.

Since it was necessary to promote Actuarial Science as a subject, in 1977, the University of Bombay (now Mumbai University), decided to introduce it as an optional subject across the Undergraduate Science, Commerce

and Arts streams. Efforts were also made to convince other universities to conduct courses at the Graduate and Postgraduate levels – with course content equivalent to the then ‘A Group’ of examinations of the IoA.

In the earlier days, the IoA used to conduct preliminary examinations for entrance to the Actuarial profession. In 1975, this responsibility was handed over to the ASI and, in this sense, it was its first experience in holding an Actuarial examination. Gaining experience from this, the ASI conducted examinations for Associate membership for the first time in the year 1989, followed by examinations for Fellowship in the year 1991.

The first two members to become Fellows of ASI after examinations were Meena Sidhwani and R Padmaja, in the year 1996.

The opening of the insurance sector to private sector participation in the year 2000 forced the ASI to relook its system of examination and accreditation to ensure global standards and adequate supply of Actuaries in India.

Dr Elizabeth (Liz) Goodwin, the then Chief Executive Officer (Education) at



Meena Sidhwani and R Padmaja with IoA and ASI presidents

IoA visited ASI in October 2000 to look at its infrastructure and functioning. She also conducted the prestigious Examiners Seminar twice – once in January 2003 and again in September 2004. Since then, the ASI has been conducting many such seminars for its panel of examiners.

The ASI signed a Mutual Recognition Agreement (MRA) on February 17, 2004 with three global professional Actuarial



Dr Liz Goodwin speaking at the 2nd Examiners Seminar

bodies – Institute of Actuaries (London), Faculty of Actuaries (Scotland) and Institute of Actuaries of Australia. This itself facilitated the availability of Fellow Members of these bodies to work in India, which in turn helped the growth of the ASI in terms of assistance as examiners, paper-setters, etc.

Simultaneously, an agreement was signed with the IoA, under which examinations of each body were mutually recognised up to a certain level of subjects and IoA provided funding for paper-setters/examiners from the UK and study material from ActEd, the study material supplier in London.

The ASI, which became Institute of Actuaries of India (IAI), under the Actuaries Act, 2006 introduced an entrance

examination system in 2011 called Actuarial Common Entrance Test (ACET). The purpose was to ensure the quality and commitment of students entering the Indian Actuarial profession. ACET is conducted twice a year.

On November 5, 2015, an MRA was signed between IAI and Casualty Actuarial Society, USA.



1st Examiner's Seminar of ASI



MRA signed between CAS and IAI, November 2015

The UK Institute sent the study materials in zip floppy which could not even be read on an ASI computer. The material consisted of more than 25000 pages. Outside agencies had quoted Rs 10 per page for giving one copy. Study materials could not be distributed at affordable cost. The matter was discussed in the EC meeting as well. I made my own calculation – cost of paper, ink cartridge, wastage etc. and, came to a conclusion that it could be managed at Rs 4.5 per page...

– A P Peethambaran, Former Secretary General of ASI

With a view to encourage students, the ASI instituted the Excellence Achievement Awards in 1989 – almost at the same time as it began to hold Actuarial examinations. This gained momentum and a large number of Academic Excellence Awards in various subjects were created after 2002 – when the examination system, in terms of curriculum and study material, were aligned with that of IoA. These awards continue to encourage students to excel.



The RGA Academic Excellence Award



The Shree K A Pandit Consulting Actuary Memorial Trophy



The Tata AIA Life Insurance Academic Excellence Award



Fellowship awards in AGFA 2019

Following are the Academic Excellence Awards given by the IAI as on January 31, 2020. These awards are presented during the Actuarial Gala Functions and Awards (AGFA) ceremony at the annual Global Conference of Actuaries in February.

- Meena Sidhwani Memorial Academic Excellence Award for students who achieve Fellowship within 4.5 years
- Principal Financial Group Award for students who achieve Associateship in three years
- Awards for scoring the highest marks

Sr. No	Name of the Awards	Subject	Name of Subject
1	Smt Vidhya Wati and Smt Santosh Kumari Memorial Scholarship Prize	CM1	Actuarial Mathematics
2	Shri Atma Ram, Shri Chhaju Ram and Smt Parvati Devi Memorial Scholarship Prize	CB1	Business Finance
3	Shri H V Krishnamurthy Prize	CS1	Actuarial Statistics
4	Shri R Krishnaswamy Prize	CS2	Risk Modelling and Survival Analysis
5	Shri R M Joshi Prize	CB2	Business Economics
6	Shri G S Diwan Centenary Commemoration Prize	CM2	Financial Engineering and Loss Reserving
7	The Future Actuary Prize	CP1	Actuarial Practice
8	Shri R Krishnaswamy Memorial Prize	CP2	Modelling Practice
9	J R Joshi Prize	CP3	Communications Practice
10	Shri G S Diwan 100th Birth Anniversary Memorial Education Prize	SP1	Health and Care
11	Late Shri Janardan Pundalik Nerurkar Prize	SP2	Life Insurance
12	Shri K A Pandit Memorial Prize	SP4	Pensions and Other Benefits
13	Shri Kamal Kumar Noranglal Podar Prize	SP5	Investment and Finance
14	Late Shri D Basu Prize	SP6	Financial Derivatives
15	Shri G S Diwan 100th Birth Anniversary Memorial Education Prize	SA1	Health and Care
16	Shri G S Diwan Memorial Prize	SA2	Life Insurance
17	Late Shri K P Sarma Memorial Prize for the Meritorious in General Insurance	SA3	General Insurance
18	Canada Life Scholarship Endowment Prize	SA4	Pensions and Other Benefits
19	Shri G S Diwan Memorial Scholarship Prize	SA6	Investment

In addition, Academic Excellence Award for higher subjects (CP, SP and SA) have been instituted by various companies.

- ACET Award, instituted by the Parikh Parivar Prize Fund and the (Late) A S Gupta Prize Fund, has been constituted for students scoring the highest marks in April/October ACET examination.



7th GCA: February 15-16, 2005 | 8th GCA: March 10-11, 2006 | 9th GCA: February 12-13, 2007

GCA

TOGETHER TOWARDS TOMORROW

1st GCA: February 12-13, 1999 | 2nd GCA: February 24-25, 2000 | 3rd GCA: February 15-16, 2001 | 4th GCA: February 14-15, 2002
5th GCA: February 19-20, 2003 | 6th GCA: February 18-19, 2004

1999: A year of immense excitement and anticipation for the insurance sector! The Insurance Act, 1938 was to be amended to incorporate the opening of the insurance business to private participation.

The Insurance Regulatory and Development Authority of India (IRDAI) Act, 1999 was put in place to create the Insurance Regulatory and Development Authority to regulate the sector – in anticipation of competitive insurance entities playing a role in India's vast economic space.

Section 25 of the IRDAI Act facilitated the creation of an Insurance Advisory Committee to ensure that various regulations are put in place. The Committee comprised two Actuaries of the day – S P Subhedar, Ex-Managing Director of Life Insurance Corporation of India and Liyaquat Khan, the then Vice President of the Actuarial Society of India.

A person who turned out to be a visionary by any standard was given charge of the destiny of India in the new insurance sector – N Rangachary, who joined as first Chairperson of IRDAI. Rangachary decided to learn more than he knew about Actuaries and their role in regulating the insurance business and the only way to do so was to organise a conference on Actuarial matters. Such a conference had to be global in nature, facilitating Actuaries from across the world to assemble in one place, present papers/presentations and debate all matters that relate to development and regulation of the insurance industry.

The IRDAI, thus, encouraged and ensured the beginning of Global Conference of Actuaries (GCA), the first one in February 1999 on the platform of FICCI and in association with the Actuarial Society of India (ASI). However, the holding hands were those of Rangachary and his small team of Actuarial staff within the newly established IRDAI, led by K Subrahmanyam, Executive Director-Actuarial.



Inaugural Panel – B K Chaturvedi, K P Narasimhan, G Krishnamurthy, Amit Mitra, N Rangachary, Graham Clay, D Chakraborty



N Rangachary addressing the attendees

The young team under K Subrahmanyam – Hema Malini, P K Thapliyal, Ajay Chaturvedi and others – did all the work in the name of the ASI.

Thus, begins the story of the Global Conference of Actuaries and after 22 years, we are celebrating the 21st GCA and 75 years of the Actuarial profession in India, the Actuarial Society of India having been established in 1944.

The GCA has become a brand associated with the Indian Actuarial profession and has pushed streaming of forces that led to the emergence of regulations and the business lines that have evolved in all sectors of insurance: Life, General, Health and others, including Finance and Investment. Major forces that have played a role in this are global reinsurance groups such as Swiss Re, Munich Re, Gen Re, Scor Re, Hanover Re and others; and have contributed by not only sponsoring the events, but also by providing global level speakers.

Some of the subject areas that substantially contributed via deliberations in the GCA and travelled to the IRDAI are: the System of Appointed Actuary, the Strengthening of Incurred But Not Reported (IBNR) concept, Asset Liability

Management, Product Design and Solvency. The fruition of new ideas as it happened over pegs on the side of cultural programmes had the flavour of international best practices while embedding it with the realities of the Indian market.

The shift in the subjects of deliberations at the GCAs over 21 years tell stories of the direction in which the insurance business has shaped itself in India.

The first GCA deliberations centred around the 'Role of Actuary' and 'Solvency Margin Requirements'. The 21st GCA discussions are scheduled on 'Climate Change Risks and Role of Actuaries', 'Predicting Insurance Outcomes' and 'Changing Demands on the Profession'. Discussions on topics such as International Financial Reporting Standards (IFRS), Data Science Application, etc. were discussed early on in the GCAs – much before they became prominent concerns in the market. The paradigm shift in discussions reflects the journey of the Actuarial profession in the last 22 years.

History is about people and events and the GCA has both. It is blessed to be associated with prominent personalities.

Of course, we have our own global conferences annually, for the last 20 years, with participation by overseas actuaries and actuarial bodies. It is not too much to wish for the first International Congress of Actuaries to be hosted in India by the IAI.

– V Rajagopalan, FIAI



N Rangachary and P Chidambaram at the 5th GCA



Y V Reddy (centre) at the 8th GCA



10th GCA: February 7-8, 2008 | 11th GCA: February 12-13, 2009 | 12th GCA: February 18-19, 2010 | 13th GCA: February 20-22, 2011 | 14th GCA: February 19-21, 2012 | 15th GCA: February 17-19, 2013 | 16th GCA: February 17-18, 2014 | 17th GCA: February 2-3, 2015 | 18th GCA: February 1-2, 2016 | 19th GCA: January 30-31, 2018 | 20th GCA: March 4-6, 2019



AGFA





AGFA Awards



AGFA 2011



AGFA 2013



AGFA 2014



AGFA 2016



AGFA 2017



AGFA 2015



AGFA 2019

FUTURE OUTLOOK OF THE PROFESSION

BY SUNIL SHARMA, PRESIDENT, IAI

There is a very popular saying that an Actuary is not an Actuary if he/she is only an Actuary. As the Indian Actuarial profession completes 75 years of its journey, it must continue to expand its horizon, while strengthening its core. The Institute of Actuaries of India (IAI) has set up certain big and brave goals to be achieved over the next few years:

- Well-recognised profession amongst public, government and other professional bodies
- Target 30,000 student members by 2022
- Target 750 qualified Actuaries by 2022
- India-specific study material
- Leadership in
 - Data Science and Analytics
 - Risk Analytics – Insurance, Banking and Finance
 - Enterprise Risk Management beyond Insurance

The education, training and experience that Actuaries acquire help them to make financial sense of the future, using Actuarial modelling techniques. Actuaries are trained to model long-term uncertainties. Globally, Actuaries play a critical role in

the Solvency II framework, to determine risk-based capital required to withstand risks facing insurance companies.

Insurance penetration in India, at 3.69 per cent, is at a much lower level compared to the global average. There is significant potential for expansion of the Indian insurance market. Due to historic reasons, we have lesser number of Actuaries working in general insurance in India, and there is significant potential to grow the number of Actuaries and students here.

Besides expansion of the insurance market, the situation is also an opportunity for the Actuarial profession to engage in wider areas like Banking, Data Science and Risk Management.

Banking and NBFC organisations face risks similar to insurance companies. Similarly, Basel III is an international regulatory accord set up by the Bank of International Standard (BIS) that introduced a set of reforms designed to improve regulation, supervision and risk management, within the banking sector globally. Actuaries can play a critical role in the assessment of Minimum Capital Requirement and Solvency Ratio as required under Basel III using Actuarial modelling techniques.

Besides traditional areas of insurance and pensions, Actuaries have been playing significant roles and can contribute to Indian financial services in:

- Market Risk Assessment
- Credit Risk Modelling and Development of Score Card
- Balance Sheet Management and Provisioning
- Capital Management
- Group Risk Management
- Reporting
- Product R&D and Pricing
- Customer Analytics and Value Management

By virtue of their training and examinations, Actuaries have core competency around data and Data Analytics. During their core technical examination process, they acquire expertise in Probabilities, Statistics, Applied Statistics, Distribution Models, Econometrics and Stochastic Modelling techniques to solve complex problems. At its core, Actuarial analysts are the best suited Data Science and Analytics professionals to deal with the large available data in the financial services industry – be it insurance, banking, NBFC or micro-finance institutions.

United Kingdom has a Government Actuary's Department (GAD) to support effective decision-making and robust reporting within government as the first choice provider of Actuarial and specialist analysis, advice and assurance. GAD type of opportunities may be explored in India to support the government in decision-making relating to life insurance, health, agriculture and social security schemes.

In summary, there are plenty of opportunities for Actuaries in the future. We just need to grow the number of Actuaries in India to explore such opportunities.

I have been extremely fortunate to have been consulting in the Indian life insurance sector since 1997... it has been great to see the Actuarial profession grow and to develop and provide professional support and guidance to support the growth of the sector. The profession now forms a pivotal role in helping to shape Actuarial standards, at times working closely with the IRDAI... Underpinning everything is the need to continually reinforce the need to adopt the highest standards of professional excellence, which will then lead to a greater recognition of the Actuary profession within India and from outside of India.



Richard Holloway,
Managing Director South
East Asia and India, Life,
Milliman

The Institute has evolved considerably over the last 75 years for the benefit of the citizenry. I look forward to the future growth of the Institute and a continued expansion of its influence.



Heerak Basu, Consulting
Actuary, Milliman India

APPRECIATION FOR COMMITMENT

Staff members who have been with IAI for more than 5 years as on January 31, 2020



Gururaj Nayak



Ravindra Mastekar



Ulhas Pokharkar



Gauri Kothari



Neelima Kadam



Bhakti Bait



Bharat Solanki



Binita Rautela



Prajakta Bhosle (Vijaya)



Milan Ghosalkar



Sandeep Mahajan



Vinod Kumar



Larry Barretto



Ghanasham Tirpankar

Shortage of manpower, finance and computer facility were stumbling blocks. Internet had just come up but had not reached ASI. After joining ASI, I got Mr. Sathyanarayanan, Mrs. Anitha and later in 2000 Mr. Gururaj..... We used to have very frequent sitting to review progress.... Vijaya and Neelima were very cooperative and helped, in matters outside computerization.

– A P Peethambaran, Former Secretary General of ASI

IAI OFFICES



Pre-May 1996
LIC of India, Central Office, Yogakshema



May 1996-September 2005
Actuarial Society of India, 3rd Floor, Khadi Gramudyog Bhavan, 286, Dr D N Road, Fort, Mumbai 400001



September 2005- July 2017
302, Indian Globe Chambers, 142, Fort Street, Off Dr D N Road, Mumbai 400001



July 2017 onwards
Unit No. F 206, 2nd Floor, Tower II, Seawoods Grand Central, Sector 40, Nerul Road, Navi Mumbai 400706

EXPERIENCE ANALYSIS

PRODUCT DEVELOPMENT **RISK ANALYTICS**

VALUATION OF ASSETS AND LIABILITIES

RISK MANAGEMENT **BANKING** **BIG DATA ANALYTICS**

CLIMATE CHANGE **MORBIDITY** **NEW BUSINESS UNDERWRITING**

REGULATORY COMPLIANCE **REINSURANCE** **SOLVENCY MONITORING**

ASSET LIABILITY MANAGEMENT

PUBLIC POLICY

SHAREHOLDERS' REPORTING

PERSISTENCY EXPENSE **BONUS DISTRIBUTION** **ANALYTICS** **PREDICTIVE** **CLAIMS UNDERWRITING** **INVESTMENTS** **PRODUCT PRICING** **ACTUARIAL MODELLING**

ACTUARIES

CAPITAL MANAGEMENT **INVESTMENT BANKING** **PENSION BENEFITS**

VALUATION OF RETIREMENT

ACTUARIAL MARRIAGE

A lawyer, an accountant, and an actuary are arguing over whether it is better to have a married spouse or an unmarried lover. The lawyer says a lover because it is legally easier to disentangle yourself from a lover. The accountant says a spouse because you can get tax deduction with a spouse. The actuary says it is better to have both because you can lie to each of them, telling each that you are with the other, and then go to the office to do some work.

BEING A GOOD
ACTUARY
IS 3% TALENT
97% NOT BEING DISTRACTED
BY THE INTERNET

WHAT DID GOD SAY
WHEN HE CREATED
ACTUARIES?

HE SCRATCHED HIS HEAD AND SAID,
"GO FIGURE!"
THEY TOOK IT LITERALLY

ACTUARIAL 2+2
HOW MUCH IS TWO PLUS TWO?

A MARKETING VP WILL SAY "22"
AN ACCOUNTANT WILL SAY "4.00"
A MATHEMATICIAN WILL SAY, "I CAN
DEMONSTRATE IT EQUALS 4 WITH THE
FOLLOWING PROOF...."

AN ACTUARY WILL ASK
"WHAT DO YOU WANT IT TO
EQUAL?"



Actuarial Exams