

8th Young Actuaries Connect

Ramada Gurgaon Central

17th May, 2019

Opportunity in Insurance areas

Puneet Sudan, FIAI (Founder, Paramount Consultants)

Saigeeta Bhargava, FIA (Lead & Associate Director, PwC)



Insurance



- **Insurance** is a contract of *indemnity*, represented by a policy, in which an individual or entity receives financial protection or reimbursement against losses from an **insurance** company.

Common terms used in Insurance



Types of Insurance

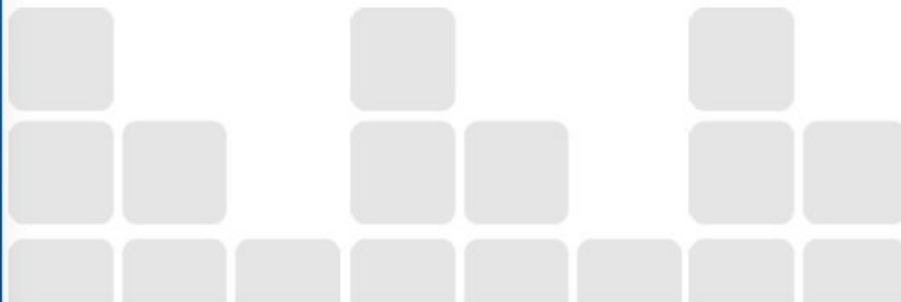
- **Life Insurance:** As the name suggests, life insurance covers your life. It is an insurance contract, which covers the life-risk of the person insured.
- **General insurance:** It covers non-life assets - such as your home, vehicle, health, travel – from floods, fire, thefts, accidents and man-made disasters.

Types of Insurance

- **Health Insurance:** A Health Insurance policy reimburses the insured for medical and surgical expenses arising from an illness/injury that leads to hospitalization.



General Insurance



Major Products in General Insurance



What's Covered in Policy?



LEGAL
LIABILITY



Key Areas in GI



- **Pricing & Modelling :**
 - Pricing is a key driver of property and casualty (P&C) insurance profitability and hence a primary actuarial responsibility.
- **Reserving**
 - Actuaries apply statistical techniques to assess the likely outcome of general insurance liabilities and the provisions that are needed for reporting purposes

**Why different
companies charge
different rates for
same coverage?**



Key Areas in GI

- **Capital Modelling**
 - actuaries projects both the liability and assets of insurers to assess solvency and future capital needs.
- **UW & Portfolio optimisation**
 - actuaries work with the Underwriters to assess the profitability of the portfolio and optimize it to maximize the profits.

Why do we need to change the portfolio? What are the changes deriving this decision?



Key Areas in GI



- **Reinsurance optimisation**
 - An Insurance company makes decision regarding the reinsurance strategy based on its risk appetite.
 - The key decisions to make include:
 - What to buy?
 - How much to buy?
 - Associated costs and Benefits.

Emerging Opportunities



- New Tech driven products –
 - Usage based Insurance- Giving more scope for IoT, Analytics and Data science professionals.
- Travel product –
- Insurance Analytics –
 - Consumer Behaviour
 - Fraud Detection
 - Customer Scoring

Life Insurance and Pension

Products of Life Insurance



Need ????

Financial
Issues on
Death/
Retirement

**NOT
TODAY**

Term
Assurance

Endowment
Assurance

Whole Life
Assurance

Annuity

Unit Linked

Risks in Life Insurance

Life insurance business exposes a company to various micro and macro risks. The objective of a company is to effectively manage these varied risks and generate growth opportunities by exploring these risk

Mortality Risk

- Actual Deaths greater than expected death
- Leads to higher pay-outs particularly in initial years of contract

Persistency Risk

- Higher or lower lapses than expected
- Higher surrender pay-outs or lapses in initial years leading to failure to recoup initial expenses

Expense risk

- Actual expenses greater than expected expenses
- Leads to losses or reduction in bonus for participating contracts

Investment Risk

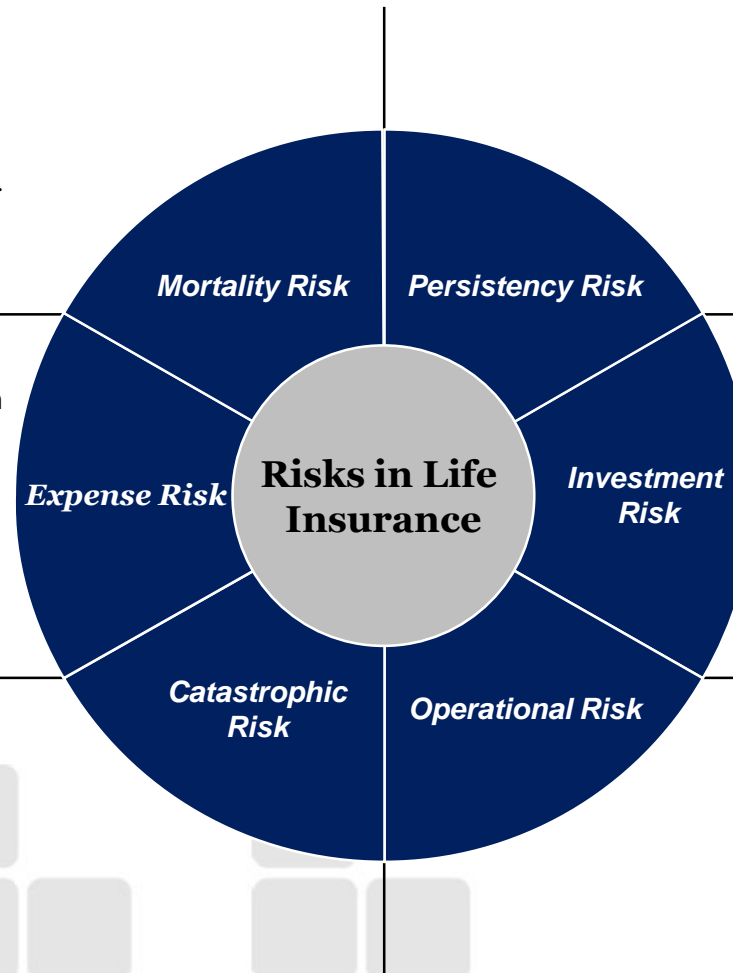
- Poor investment returns leading to failure to generate guaranteed returns
- Results in poor bonus rates or loss of reputation

Catastrophic risk

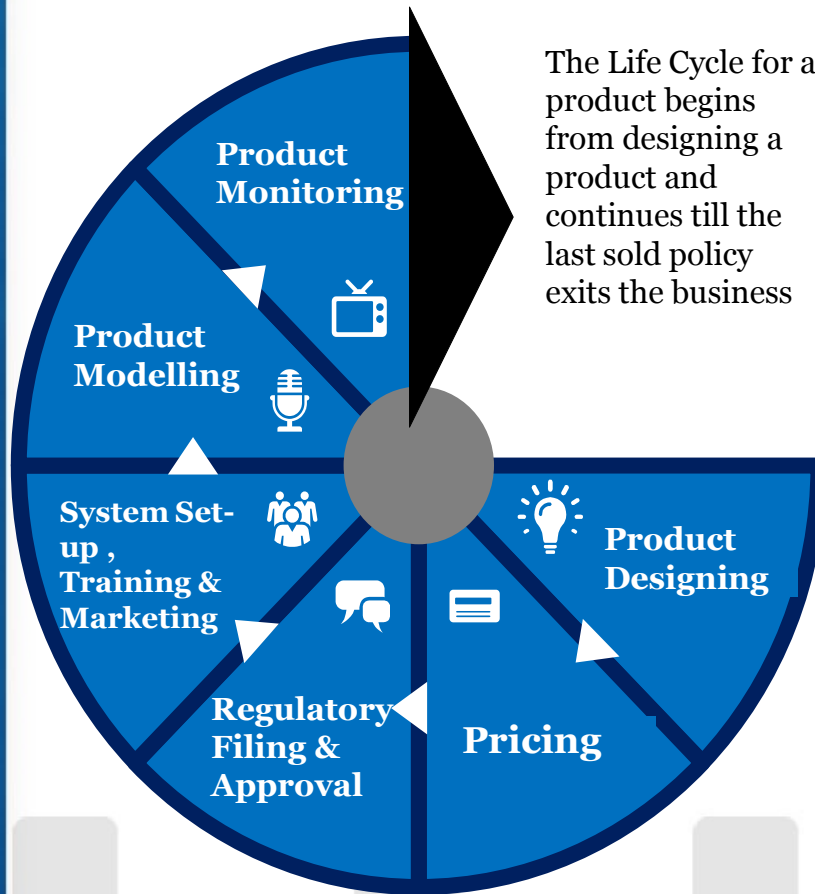
- Risk of single event resulting in accumulation of losses
- E.g. Deaths due to an epidemic

Operational risk

- Risk of failure of system, processes and people
- Difficult to quantify and identify
- E.g. Fraud by employees, power failure etc.



Insurance - Key Areas



Reporting

Regulatory

- Annual/Quarterly reports
- Accounting - IFRS 17, IGAAP

Shareholder

- Embedded Value
- Asset Liability Management
- Management Reports

Embedded Value

- Present value of future profit from the existing business plus the shareholder's current net worth
- Key Indicator of company's growth and profitability

Regulatory Reports

- Details relating to new business and existing business
- Details of statutory reserves/liabilities
- Solvency details

IFRS 17

- New global accounting standard for insurance and reinsurance contracts
- Introduces comparability and transparency of insurance financial statements
- Compliance to IFRS 17 is will require actuaries in a large numbers

Consultancy - Areas of Work



Consultancies offers you a platform to work on multiple actuarial opportunities and geographies.

They are the initiators of the new trends, developments, tools/models and regulations in the market.

One gets to work in non-conventional markets like banking, investments, regulators, government initiatives, central bank/world bank initiatives etc.

Modelling

- Development
- Validation
- Governance

Audit

- Review of statutory liability, regulatory reports, embedded value etc.
- Peer review of actuarial work

Business Analysis

- Due Diligence for transactions including EV calculations and review

New Regulations

- Development & Implementation (Regulator)
- Training & Compliance (Insurer)

Core Areas

- Reporting
- Product Development and Pricing
- Investment strategy
- Monitoring

Others

- Data Transformation
- ERM
- Assist new insurer/reinsurer
- Formulating policy

Pension – Risk & Areas of Work

Pension benefits are the backbone of an ageing population and a major area of concern for most of the developed nations with an ageing population. Pension benefits may be provided by the State, the company or self-sponsored by an individual. The financial significance and the risk involved with these benefits make it a key areas for actuaries

Risk

The Key Risk Includes:

- Poor investment returns
- Increased longevity or death in service pay-outs
- Expenses higher than anticipated

Areas of Work

The major areas of work for actuaries include :

- Designing of pension plan/schemes
- Calculation of pension liabilities
- Regulatory Reporting e.g. IAS 19
- Asset-Liability Management

What Actuaries Do?

Business professional who identifies the risks inherent in a business

Use mathematics, statistics, and financial theory to determine the probability of risks and their financial consequences.

Ensure compliance to various regulatory and shareholder reporting requirement

Analyze data to estimate likely cost to the company of an event such as death, sickness, injury, or loss of property.

Address financial matters, such as how a company should invest to maximize return on investments

Design insurance policies, pension plans, and other financial strategies.

Focus points for students to enter in the industry



The focus of every recruiter is to hire the resources which showcase good analytical, technical, software and communication skills.

Students can focus on:

- ❖ **Actuarial Exams**
- ❖ **Programming software used in the industry like R, SAS, VBA, Python, MS Excel**
- ❖ **Basic knowledge about insurance industry and the challenges of the industry**



Insurance Companies



jeevan suraksha ka /
naya nazariya

Consultancies



Questions?

