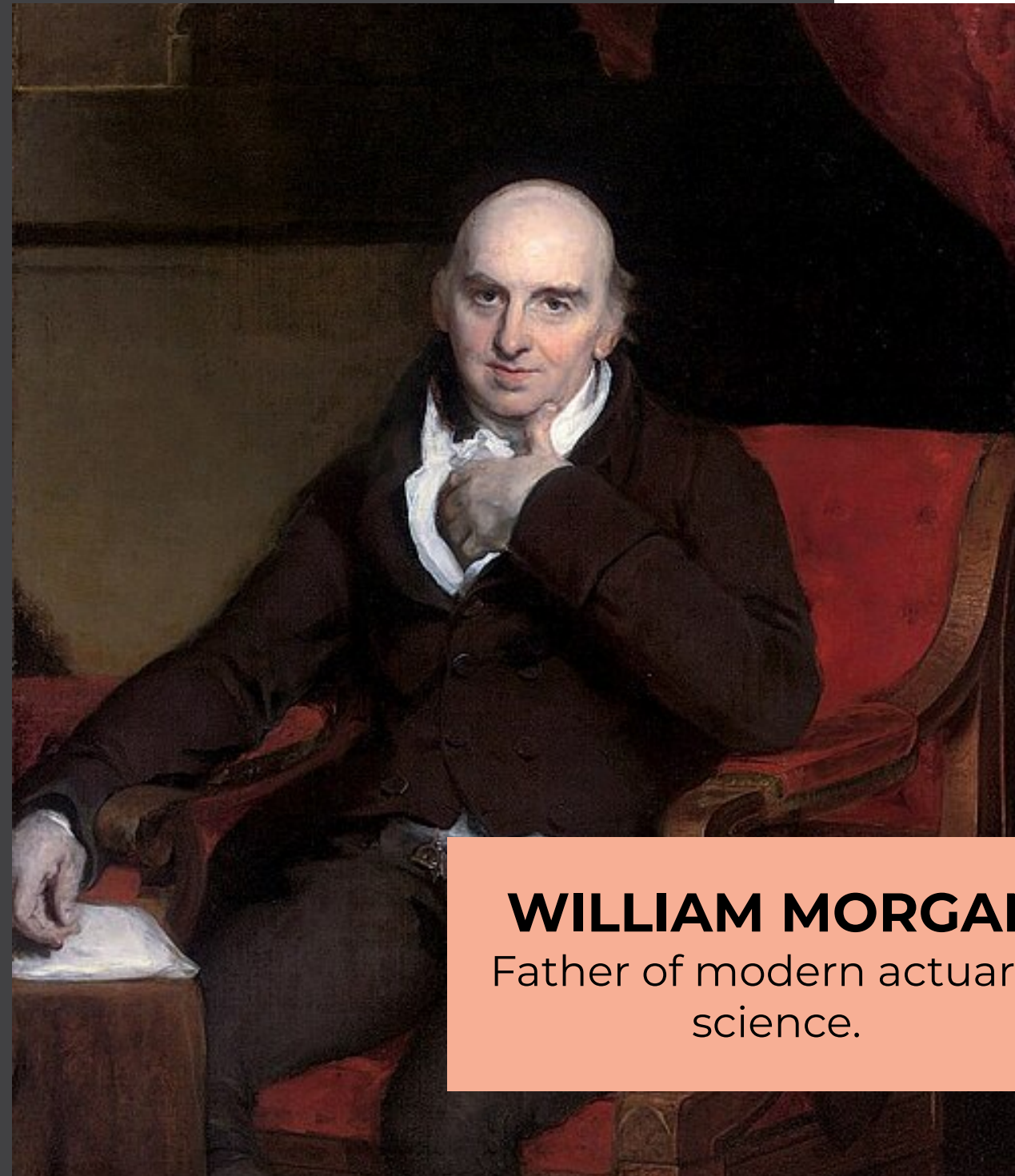




INSTITUTE OF ACTUARIAL
& QUANTITATIVE STUDIES





WILLIAM MORGAN
Father of modern actuarial
science.

Actuaries Are Everywhere

Actuaries may seem like they're only found in boardrooms or behind spreadsheets, but they're actually everywhere. From the friend who triple-checks the weather forecast before going for a jog, to the parent who packs a full emergency kit for a weekend getaway, to the co-worker who refuses to eat the last piece of cake because "the risk of it being too sweet is too high," we all make decisions based on risk, just like actuaries!

Whether we're choosing an umbrella, planning the safest route for a road trip, or weighing the risks of eating that questionable leftover, we're all applying actuarial thinking to our daily choices without even realizing it.

Actuary in Sports Management

Scenario: A football club wants to insure its star player against injuries.

Objective: Understand how actuaries calculate the cost of insuring a player.

Some of the Key Factors to Consider:

- A Player Injury Risk Assessment
- Player Valuation and Contract Negotiation
- Sports Insurance
- Fantasy Sports and Gambling Analysis
- Club and Team Financial Stability
- League-Wide Risk Management



Think about the ones that will be a crucial consideration to insure a star player

Wimbledon's organisers got \$142 million when the tennis grand slam was cancelled because of Covid-19. The IPL's organisers didn't get even a penny in the event of such a cancellation. **WHY?**



The Birth of Insurance

Insurance originated at Edward Lloyd's Coffee House in late 17th-century London.

Merchants and shipowners met there to share news and pool risks of sea voyages.

This gave rise to marine insurance contracts and the idea of underwriting.

Lloyd's evolved into a formal insurance marketplace, setting global standards.

Expansion later included aviation, energy, cyber, and climate-related risks.

Today, Lloyd's blends historic practices with technology, data analytics, and sustainability.



Mission: The Rs. 86,400 Challenge

You just received Rs.86,400. How will you use it in one day?
You can divide the amount across any or all of the five categories below.
Think about what matters most to you and how you'd like to make the most of this opportunity in a single day.
But here's the twist — surprise schemes may pop up throughout the day that offer special rewards or challenges tied to how you choose to spend or save!

Instructions:

- You have Rs.86,400 to allocate.
- Decide how much you'd like to assign to each of the five categories.
- Make sure your total adds up to Rs.86,400.
- Use the notes area to explain your reasoning or plans.

The categories are:

-  Spend It
-  Save It
-  Invest It
-  Give It
-  Learn with It (Rs.13,000 short course, Rs.21,500 certification, Rs.35,000 diploma)



Pensions

What is a Pension?

A pension is a regular income you receive after retiring from work, usually funded through contributions you (and sometimes your employer) make during your working years.

There are two common types:

- Government/State Pensions: Provided by the government.
- Private/Occupational Pensions: Set up through your employer or personally.

Savings

Savings refer to the money you set aside regularly from your income, typically in a bank account, to use in the future for emergencies, goals, or retirement.



Features	Pensions	Savings
 Purpose	Income support after retirement	Any financial goal or emergency
 Access	Restricted before retirement; may have penalties	Freely accessible anytime
 Returns	Can offer higher/market-linked returns; locked-in	Lower unless invested in higher-return options
 Employer Involvement	Often includes employer contributions (e.g., EPF, NPS)	Typically self-funded and managed
 Tax Benefits	Specific tax deductions available	Some savings types offer tax benefits (e.g., PPF)

INDEPENDENT EVENTS

Two events are independent if the outcome of one does not affect the outcome of the other.

✓ Formula for Independent Events (A and B):

$$P(A \text{ and } B) = P(A) \times P(B)$$

Example:

Tossing a coin: $P(\text{Heads}) = 1/2$

Rolling a 6 on a die: $P(6) = 1/6$

Since these are independent:

$$P(\text{Heads and } 6) = 1/2 \times 1/6 = 1/12$$

