

My background

- Aviva plc
- Diageo plc
- Royal Bank of Scotland
- President, Institute and Faculty of Actuaries



Risk Management

- Good business and risk management are one and the same and, at its heart, great risk management is about great conversations in order to drive better informed decisions.
- Risk management is a behaviour supported by a process rather than the converse and as such, all management have a responsibility to manage risk in accordance with values and purpose.



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Risk Management

Good Risk Management is:

- Led by the CEO
- Watched over by the Board
- Owned by everyone in the business
- Supported by a second line of defence
- Quality assured by Audit



Risk Types

Strategic

- Economic
- Political
- Country Risk
- Competition/Products
- Anti Trust
- Earnings Volatility
- Capital Adequacy
- Business Expansion and M&A
- Market Confidence



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Risk Types

Operational

- People (hiring, firing, remunerating
- Environment and sustainability
- Health & Safety
- Bribery & Corruption
- Fraud
- Anti Money Laundering
- Regulatory (including censure)

- Reputational
- Terrorism
- Raw Materials, Manufacturing
- IT , Systems and Business Continuity
- Information Security
- Taxation



Risk Types

Financial

- Capital Adequacy
- Credit Risk
- Concentration Risk
- Interest Rate Risk
- Funding and Liquidity Risk
- Currency Risk
- Asset Risk and Liquidity
- Basis Risk



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Who Has What Risk?

- · All corporations have nearly all these risks in some form
- The most important risks differ by sector and concentration
- Financial institutions multiply the financial risk because that is what they trade with their customers
- Banks have large and fast moving risks
- · What is the key risk for a Tug company?



Risk Management - Corporates

- Strategic Risk
- Strategic risk is important for all Corporates
- Consumer understanding helps with emerging risks
- Operational Risk
- Customer satisfaction and safety is a priority
- Sales practices
- The factory is often physical
- Commodities
- Taxation
- Financial Risk
- Transactional risk is mainly with customers
- Limited financial risk on balance sheet for consumer goods
- Resource and project risk on balance sheet for capital goods



Risk Management - Insurance

- Strategic Risk - As per Corporates
- Operational Risk

- Sales practices
- Information technology is the factory
- Regulators and customers distrust insurance
- Embedded underwriting disciplines
- Large established pricing and valuation models
- Financial Risk
- Balance sheet is 10 x bigger than Corporates
- Risk remains in the products sold
- ALM is legally required
- Under UK regulation, all contracts are valued and market to market (gross not net)
- Relatively few risk decision people e.g. Product designers, valuation experts and investment managers

Risk Management - Banking

- Strategic Risk
- As per Corporates
- Speed of Crisis Run on the Bank
- Operational Risk
- Sales practices
- Information technology is the factory
- Banking in the 'sin bin' since 2008
- Multiple risk decision points each banker and each trader
- Multiple complex pricing and valuation models
- Financial Risk
- Balance sheet is 100 x bigger than Corporates
- Liquidity is critical for stability
- Annual refinancing is 20 x bigger than insurance
- Financial risks in each product sold
- Very different risks in Retail, Corporate and Investment Banking

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Banking - The Big Risks

- Credit risk in a downturn
- Concentration Risks
- Liquidity running out of cash
- Inadequate capital
- Complex and volatile derivative exposures



Risk Governance - Fit the Need



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Royal Bank of Scotland Risk Governance

- New strategic plan
- · Significant strengthening of global risk management
- · Changed link between risk and incentives
- New Board Risk Committee
 - Walker compliant
 - Oversight of all risks
 - Taking deep dives



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Risk Information

- Corporate Strategy
- Risk Appetite (but not the only document)
- Risk Attitude (just as important)
- Risk MI (always important, but never perfect)
- Risk Policies (vital, but keep them simple)



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The Financial Crisis - Risk Control Failures

- Miss-priced credit to borrowers
- Miss-priced credit default swaps
- Uncontrolled OTC derivatives
- ABS structures disconnected origination from banks underwriting
- Over reliance on wholesale funding in banks
- Inadequate capital requirements during boom times
- Inadequate stress testing
- Unregulated financial service companies
- Excessive M&A on borrowed money
- · Bonuses drove selfish behaviour



The Financial Crisis – Lessons for Risk Management

- Tail risks do happen in very unpredictable ways
- Emerging risks are more important than those you see today
- Scenario testing is vital
- Risk management needs both scale and the authority in financial institutions
- The risk management framework should be clear to everyone
- Quality risk information is needed
- Product design and pricing should be consistent with the risk appetite



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Actuaries in Risk Management

Strengths

- Disciplined risk assessment
- Statistical foundation
- Financial engineers

Opportunities

- Making financial sense of the future
- Being the model builders and 'scenario testers'

Weaknesses

- Left brain bias
- Narrow experiences

Threats

 Inability to show relevance of our skills



Making Money Safely

- Good risk management is just about 'making money safely'
- Fit risk management resources and processes to the scale, type and frequency of the risks
- Make great risk management your competitive advantage
- · Great risk management will help create wealth, not destroy it



