

Risk management, the banking crisis and internal audit

John Thirlwell

IIA (Scotland), November 2011



- Risk and operational risk
- Managing and measuring operational risk
- The banking crisis
- The role of internal audit



‘The world has never been so full of risk’

(Thomas Aquinas, 1245)



National security strategy (Oct 2010)

TIER 1	TIER 2
International terrorism	Chemical, biological, nuclear, radioactive (CBNR) weapons
Cyber attacks and large scale cyber crime	Overseas insurgency creating environment for terrorism
Major accident or natural hazard, e.g. extensive coastal flooding, pandemic	Organised crime
International military crisis	Satellite communications disrupted

Defining operational risk

‘The risk of loss resulting from inadequate or failed internal processes, people or systems or from external events’

Basel II via Operational risk: the next frontier. RMA/PriceWaterhouseCoopers, 1999

- includes legal risk; excludes strategic and reputational risk

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An attempt to frame the unframeable, to assuage fears about the uncontrollable ‘rogue others’ and to tame the man-made monsters [of the financial system].

Prof Michael Power, *Organized uncertainty : designing a world of risk management* (OUP, 2007)

Year	Event
1988	Piper Alpha oil rig; Lockerbie terrorist air strike
1993	Metallgesellschaft
1995	Barings Bank [+ Daiwa, Sumitomo, Allied Irish, National Australia Bank, Société Générale, UBS]
1998	Long Term Capital Management (Merton – Scholes)
2000	Millennium Bug
2001	World Trade Center (9/11); Enron/Arthur Andersen
2003	SARS near-pandemic [+ avian flus etc]
2005	Hurricane Katrina
2007 – 9	Banking crisis
2010	Eyjafjallajökull (Iceland) volcano
2011	Japanese tsunami and Fukushima nuclear disaster
2011	Sony PlayStation; BlackBerry outage



Liquidity Risk

Underwriting Risk

Operational Risk

(including Strategic Risk)

Market/Product Risk

Group Risk

Credit Risk

Is operational risk different from other risks?

	Credit, market, commodity, liquidity risk	Operational risk
Is the risk transaction-based?		
Is the risk assumed proactively ?		
Can it be identified from accounting information e.g. the P&L?		
Can audit confirm that every occurrence of the risk has been captured?		
Can its financial impact be capped or limited?		
Can you trade the risk?		
Is everybody in the firm responsible for the risk?		
Does the risk affect every activity?		



Liquidity Risk

Underwriting Risk

Operational Risk

(including Strategic Risk)

Market/Product Risk

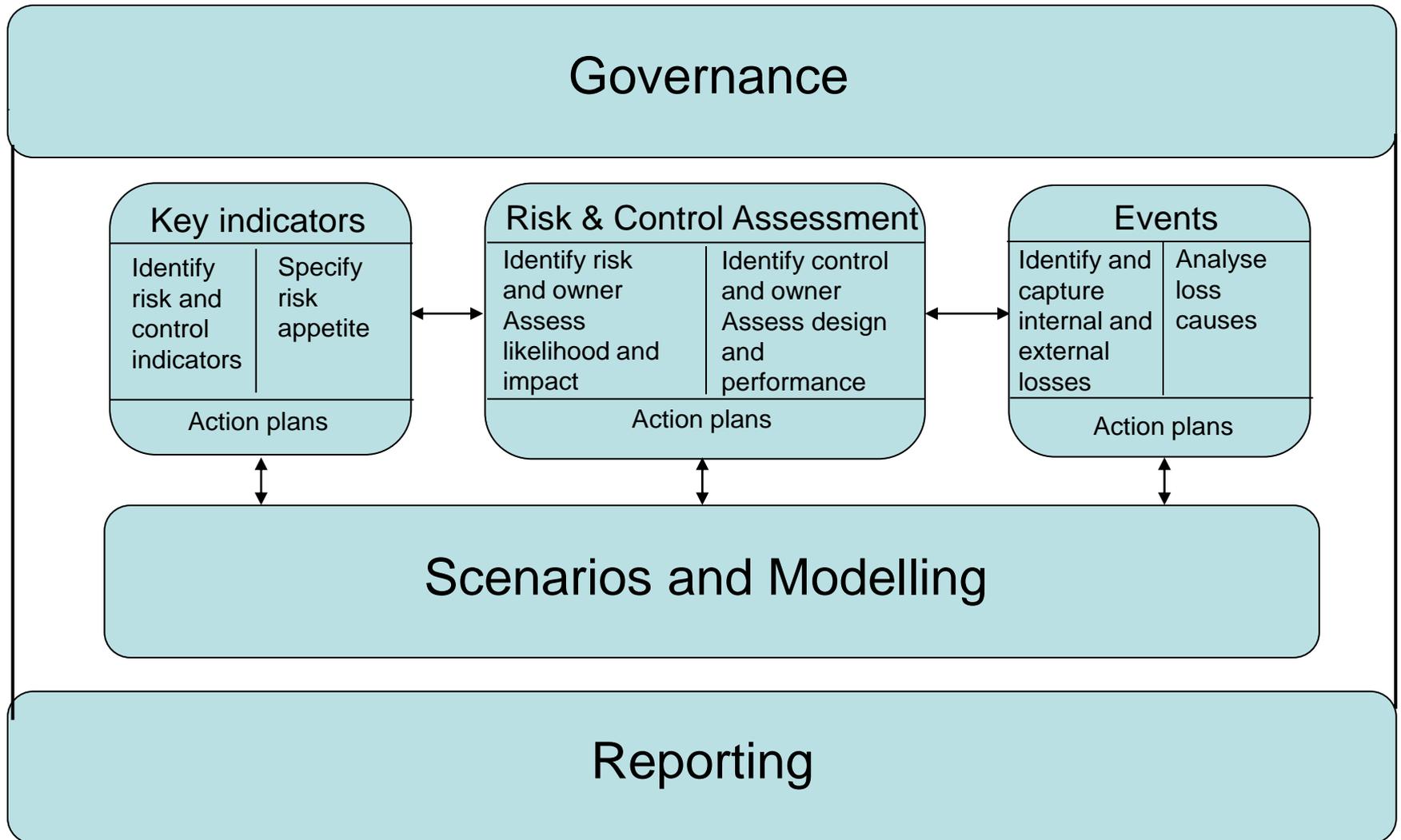
Credit Risk

Group Risk



- Risk and operational risk
- **Managing** and measuring **operational risk**
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ORM Framework



Board

- Leadership and culture

Risk culture

- Tone from the top and the tune in the middle
 - Embedding the culture
- Openness and transparency
- Clarity of roles and responsibilities
- Change and flexibility

Board

- Leadership and culture
- Strategy and objectives
- Risk appetite

Risk appetite

- Risk of loss a firm is willing to accept for a given risk-reward ratio
- Requires well-defined business objectives
- Requires clarity by the board of the identity, nature and extent of the significant risks it is willing to take
- Should inform business decisions
- Should tie in to business performance and reward

Risk appetite examples

- ‘No/minimal appetite for losses arising from financial crime or from reputation, legal or regulatory events’
- ‘Unmitigated losses no more than $x\%$ of PBT in any 3-year period’
- ‘No individual OR losses above $\pounds x$ or cumulative losses above $\pounds y$ over a 12 month period. Losses above $\pounds z$ to be reported to Risk or Audit Committees.’
- But what do these mean in practice in a world of operational risk?

Risk appetite

- Risk of loss a firm is willing to accept for a given risk-reward ratio
- Requires well-defined business objectives
- Requires clarity by the board of the identity, nature and extent of the significant risks it is willing to take
- Should inform business decisions
- Should tie in to business performance and reward
- Will be defined in quantitative and qualitative terms; requires multi-criteria components

Binary Board risks

Inappropriate tone at the top

Autocratic management

Inexperienced management

Poor management oversight

Frequent senior management over-rides

Overly complex organisational structures or transactions

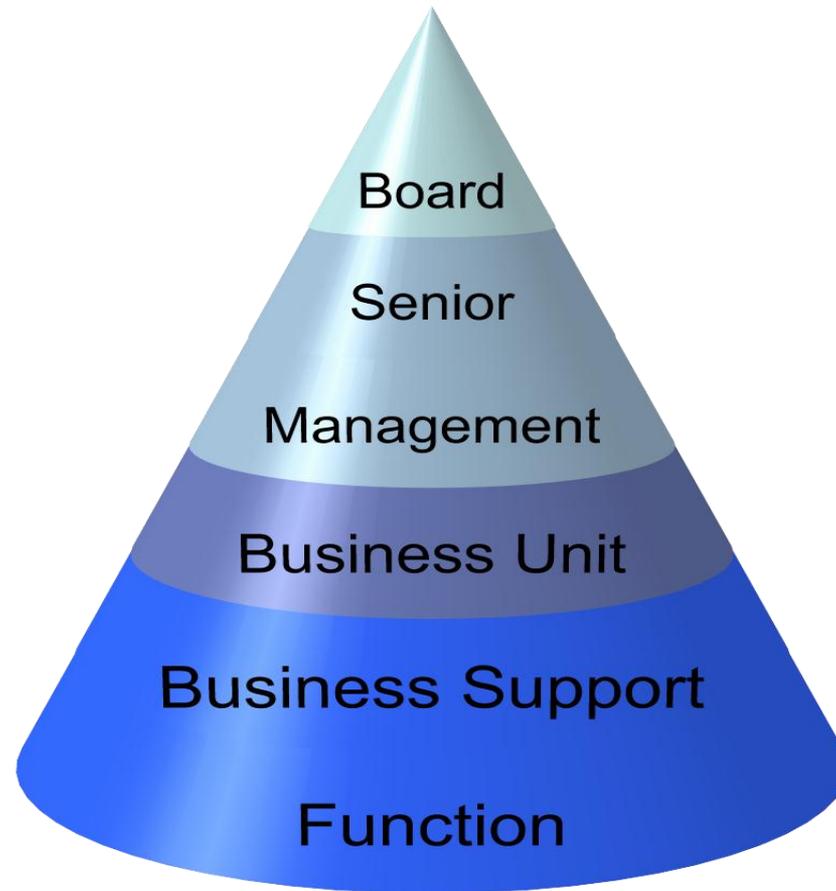
Lack of transparency in the business model and the purposes of transactions

(Late) surprises

Unrealistic earnings expectations

Exposure to rapid technological changes

Whose appetite is it anyway?

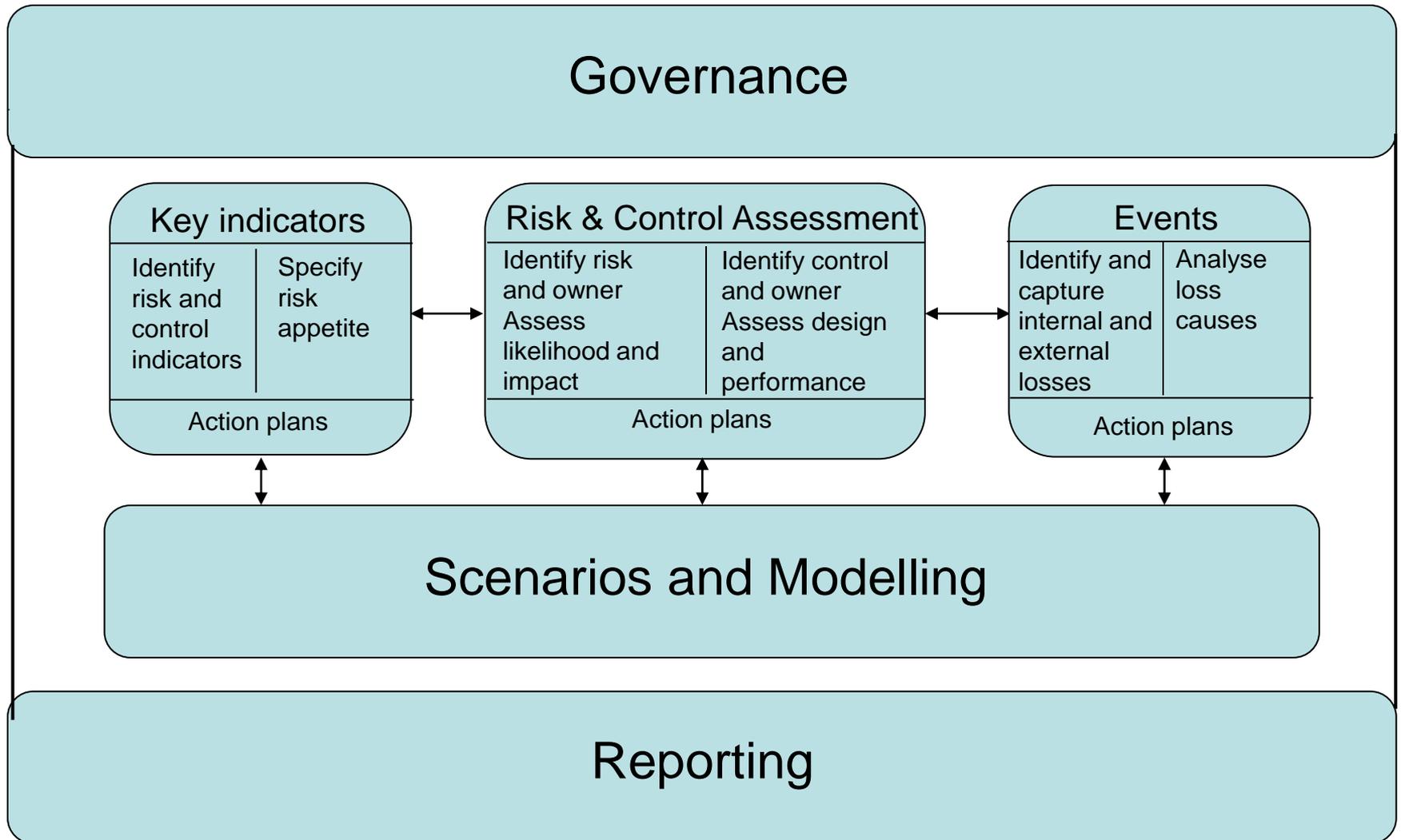


and external stakeholders:
customers, investors, regulators, public

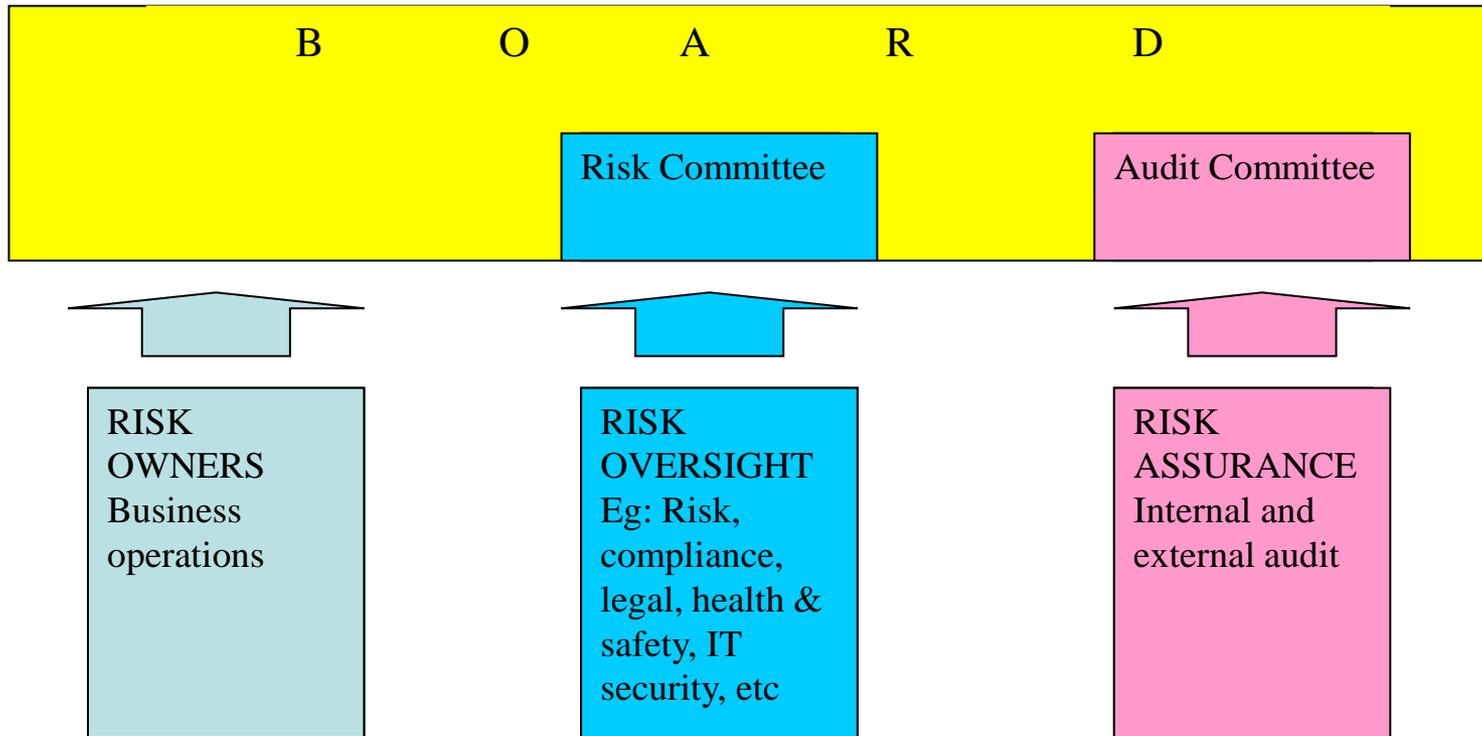
Board

- Leadership and culture
- Strategy and objectives
- Risk appetite
- Reporting and communication

ORM Framework



The 3 lines of defence



The risk function

- The risks of risk management
 - Role
 - Status and authority
 - Independence
- Control or challenge and oversight
- The (operational) risk function and
 - Business continuity and disaster recovery
 - 3rd party dependencies (outsourcing, supply chain etc)
 - Insurance
 - IT security
 - Compliance
 - New products
 - HR

Risk and HR

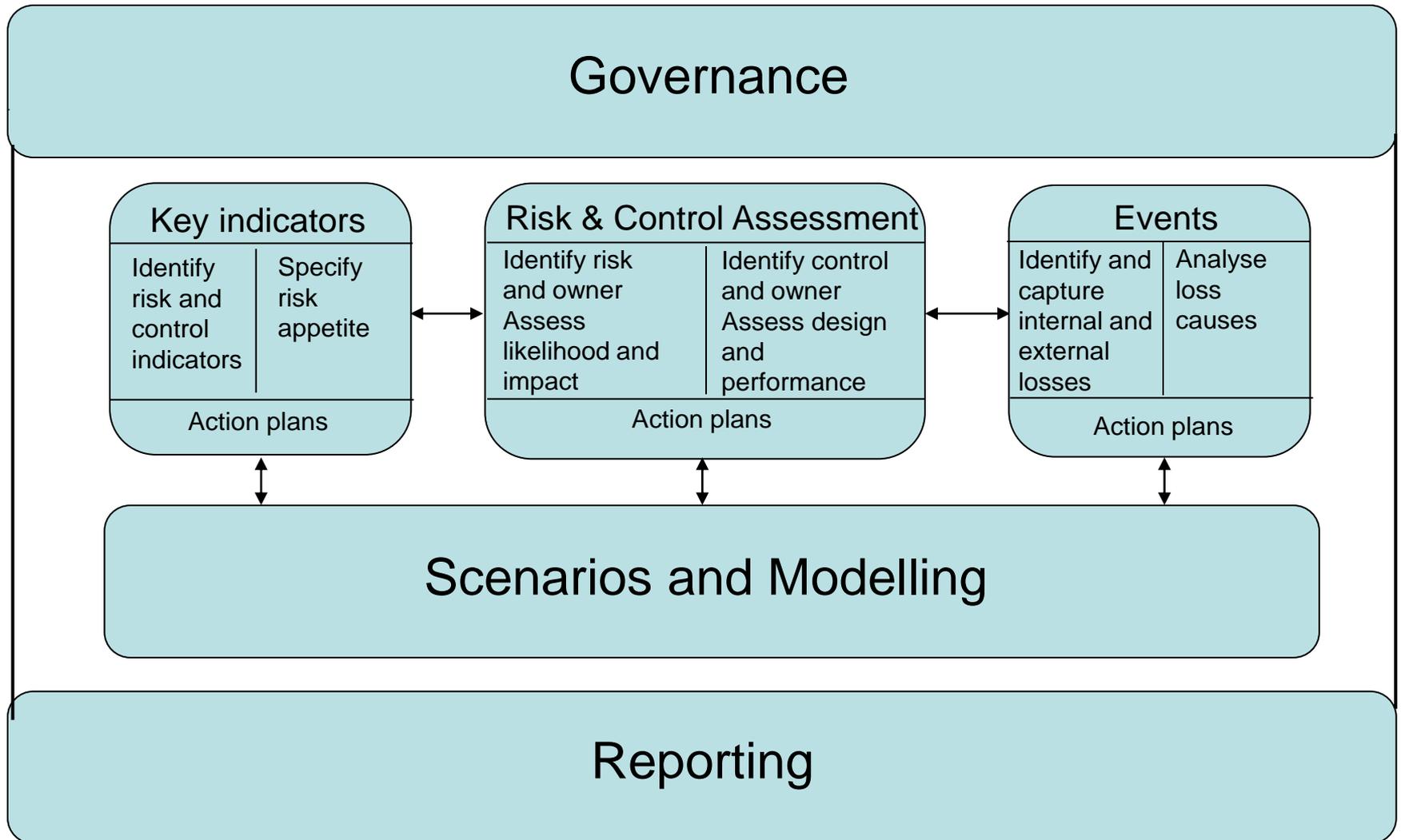
- Is HR a transactional or a risk function?
- Much risk is managed by good HR. How much is managed by a good HR department?
- Understanding and predicting risk is highly dependent on understanding human and organisational behaviour. HR has a role as senior management's guide.

Managing behaviours and people risk

- Objectives and, through them, behaviours are the drivers for key people risk controls:
 - Selection
 - Appraisal and performance management
 - Training
 - Reward
 - Succession planning
- People risk and reputation risk
- Is HR the key risk function?

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The risk register

or 'What needs to go right?'

Issues and decisions concerning event data

- Which events?
 - Reporting threshold
 - Near misses
 - “Boundary” losses
 - Gains
- The data
 - Amount (the basis of severity)
 - Currency
 - Direct / indirect loss
 - Date (the basis of frequency)
 - Multiple events
 - Loss category

Realities of risk event data

- It will be **incomplete**, scarce and patchy, even allowing for external data – the ‘tail’ problem.
- It will be **inconsistently** reported although, once reported, it is auditable.
- It is historic and **backward looking**. Major events will probably have led to tighter controls, change of policy etc. The external environment will change.

However

- It can **validate** indicators, risk and control assessments and scenarios
- It is **the beginning of** the essential chain of:
Data → information → knowledge → understanding

BUT THAT ONLY COMES WITH . . .

Felix qui potuit rerum cognoscere causas
(Vergil, *Georgics*)

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It is the cause, it is the cause, my soul.

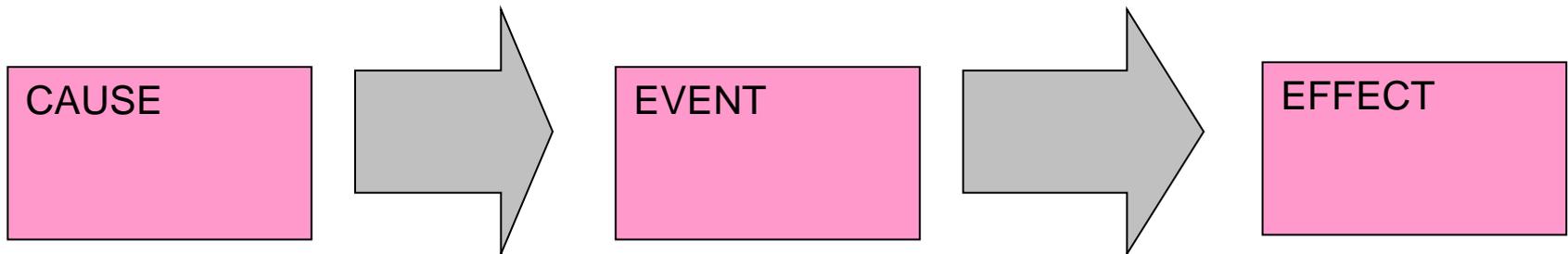
(Shakespeare, *Othello*)

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Some Nobel thoughts

Unlike the position that exists in the physical sciences, in economics and other disciplines that deal with essentially **complex phenomena, the aspects of the events** to be accounted for **about which we can get quantitative data are necessarily limited and may not include the important ones.**

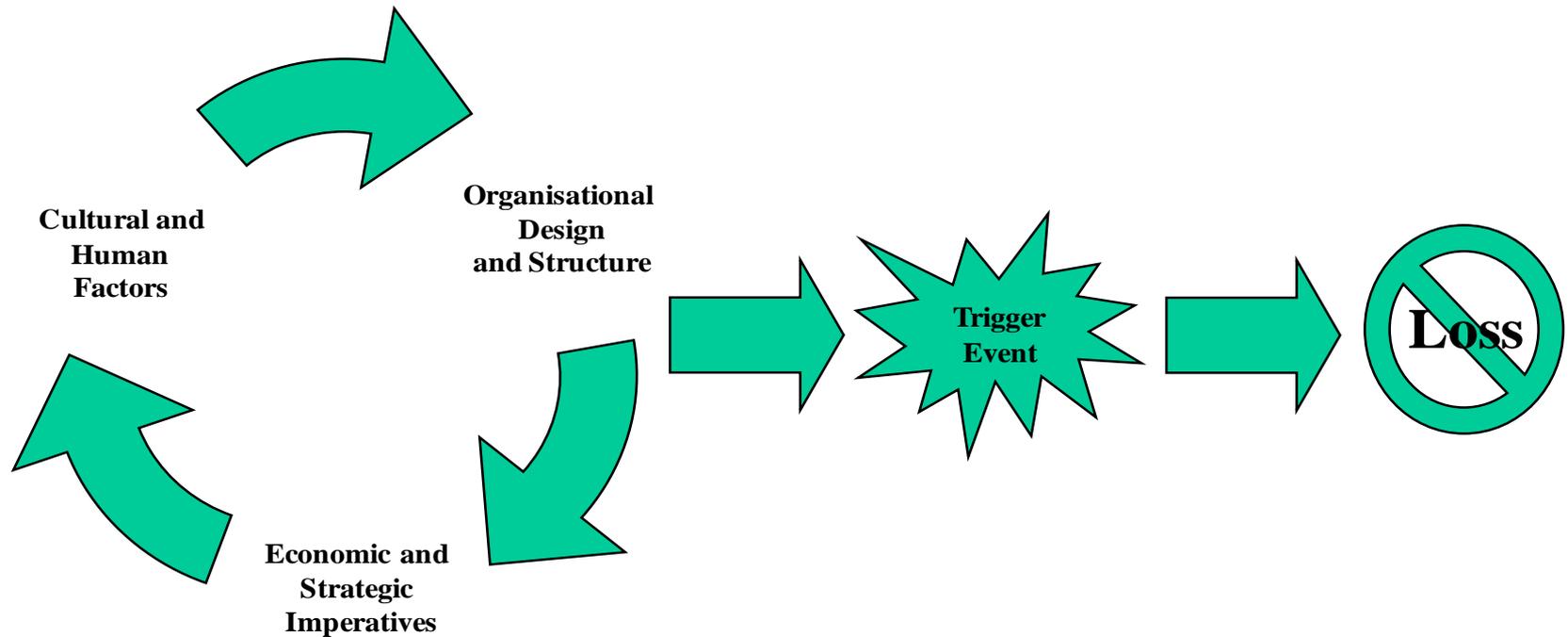
Friedrich von Hayek, *Pretence of Knowledge*, Nobel acceptance speech 1974.

Our knowledge of the way things work, in society or in nature, comes trailing clouds of vagueness. **Vast ills have followed belief in certainty.**

Kenneth Arrow, *I know a hawk from a handsaw* (CUP 1992)

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A Typical Crisis Model



Dr Simon Ashby, *The 6 C's of the financial crisis*, (Financial Services Research Forum, Nottingham University Business School: April 2010)

The banking crisis

- The trigger: Asset bubble
 - Sub-prime lending
 - Complex instruments (?)
- Organisational design and structure
 - Failure to apply good risk management and governance
 - Rating agencies
 - Regulators and the regulatory regime?
- Economic and strategic imperatives
 - The banking ecosystem: systemic risk
 - Politicians
- Cultural and human factors
 - Human behaviour (greed, herd instinct, hubris etc)

US Congressional Financial Crisis Inquiry Commission (2011)

‘The crisis was **avoidable**.’

The key conclusions were that there were:

‘**dramatic failures of corporate governance and risk management** at many systemically important financial institutions’

‘a **systemic breakdown of accountability and ethics**’

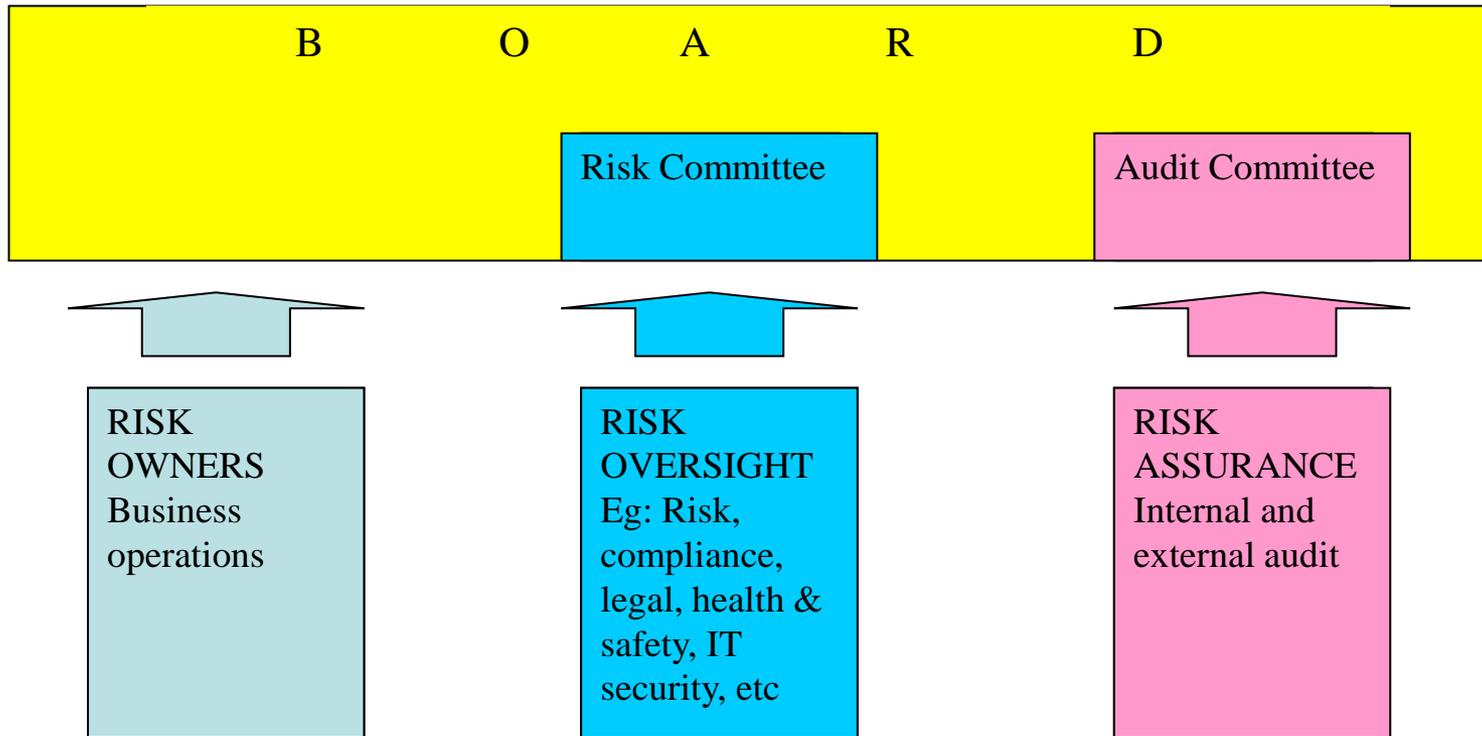
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The 3 lines of defence



The role of internal audit

- Independence
- Internal audit
 - Clear objectives
 - Status and position in the firm
 - Audit Committee
 - Priorities
- Internal audit as
 - executive management
 - consultant
 - investigator
 - cultural canary



Contact details

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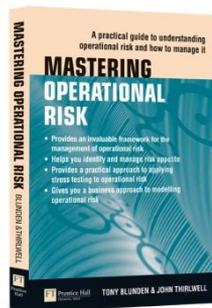
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A practical guide to understanding
operational risk and how to manage it

MASTERING OPERATIONAL RISK

- Provides an invaluable framework for the management of operational risk
- Helps you identify and manage risk appetite
- Provides a practical approach to applying stress testing to operational risk
- Gives you a business approach to modelling operational risk

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