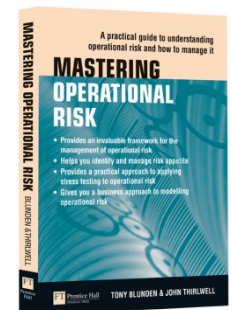


# People, plagues and process: Mastering operational risk

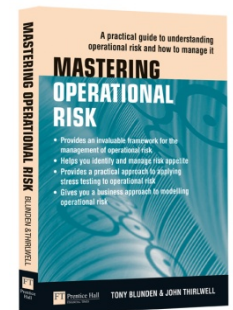
John Thirlwell

Chartered Banker Institute and  
Institute of Operational Risk,  
Edinburgh, 1 March 2011



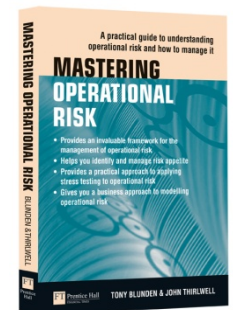
# Agenda

- Writing the book
- Operational risk: what it is and why it matters
- The benefits of good operational risk management
- Operational risk governance
- Measurement or assessment: uses and abuses of data
- Managing people risk

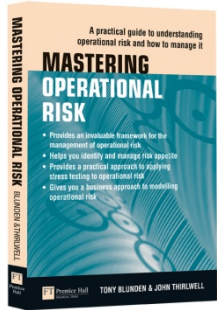
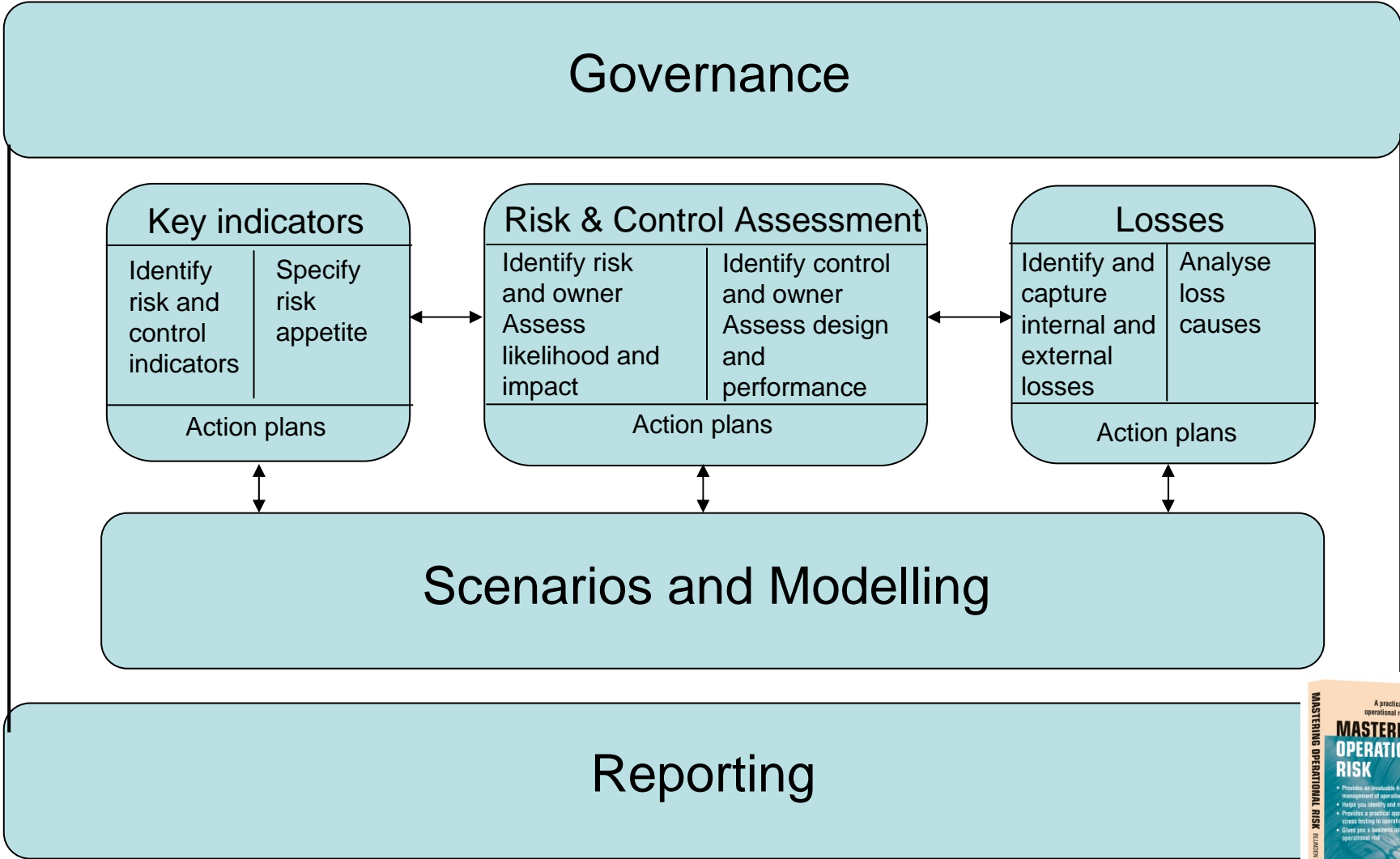


# Operational risk: How to break it down?

- The Framework; putting the Framework to work

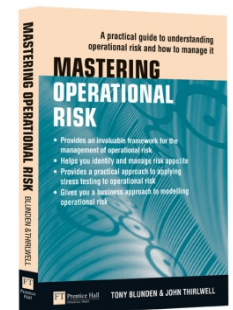


# ORM Framework



# Operational risk: How to break it down?

- The Framework; putting the Framework to work
- History; the Framework, putting the Framework to work
- History; the Framework, putting the Framework to work; business case; mitigation



# Breaking it down

## Part 1: Setting the scene

What is operational risk? The business case

## Part 2: The Framework

Governance, RCA, events and losses, indicators

## Part 3: Advancing the Framework

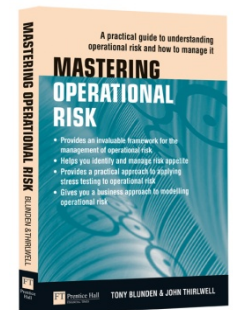
Reporting, modelling, scenarios and stress testing

## Part 4: Mitigation and assurance

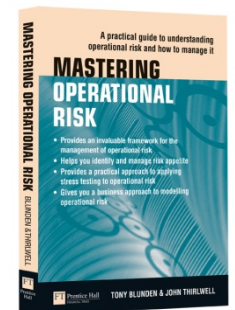
Business continuity, insurance, internal audit

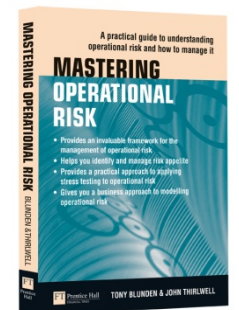
## Part 5: Practical operational risk management

Outsourcing, people risk, reputation risk



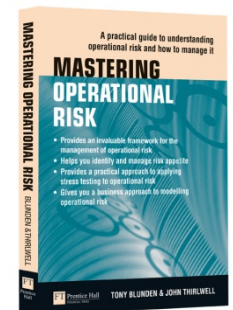
# Operational risk: what it is and why it matters





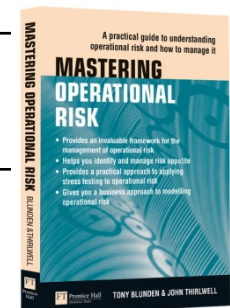
# 'The world has never been so full of risk'

(Thomas Aquinas, 1245)

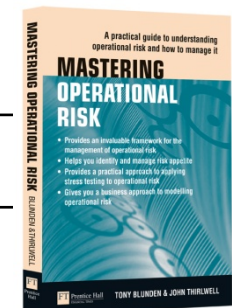


# National security strategy (Oct 2010)

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



<b>Year</b>	<b>Event</b>
1988	Piper Alpha oil rig (North Sea)
1993	Metallgesellschaft
1995	Barings Bank (+ Daiwa (1995), Sumitomo (1995), Allfirst/Allied Irish (2002), National Australia Bank (2004), Société Générale (2008))
1998	Long Term Capital Management
2000	Millennium Bug
2001	World Trade Center (9/11)
2001	Enron/Arthur Andersen
2003	SARS near-pandemic
2005	Hurricane Katrina (+ Dennis, Emily, Rita, Wilma)
2010	BP/Deepwater Horizon oil spill (+ Texas City (2005), Alaska pipeline (2006))
2010	Eyjafjallajökull (Iceland) volcano



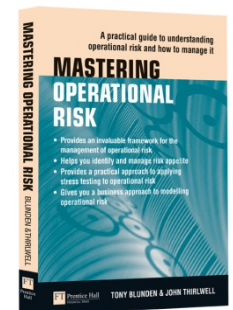
# Defining operational risk

‘Operational risk is the risk of direct or indirect losses resulting from inadequate or failed processes, people or systems, or from external events.’ [*Operational risk: the next frontier*. RMA/PriceWaterhouseCoopers, 1999]

‘The risk of **loss** resulting from inadequate or failed **internal** processes, people or systems or from external events’ [Basel II]

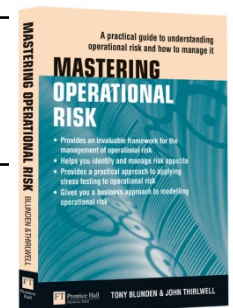
- includes legal risk; excludes strategic and reputational risk
- regulatory risk?

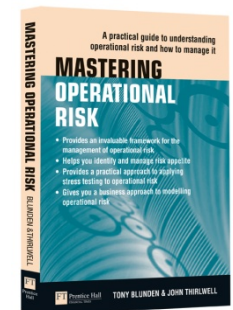
‘The risk of loss **arising** from inadequate or failed internal processes, **or from** personnel and systems, or from external events.’ [Solvency II]



# Is operational risk different from other risks?

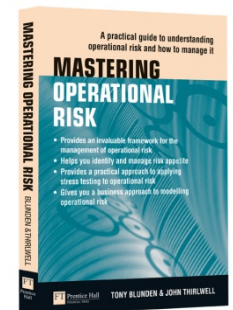
	Credit, market, commodity, liquidity	Operational
Is the risk transaction-based?		
Is the risk assumed proactively ?		
Can it be identified from accounting information e.g. the P&L?		
Can audit confirm that every occurrence of the risk has been captured?		
Can its financial impact be capped or limited?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



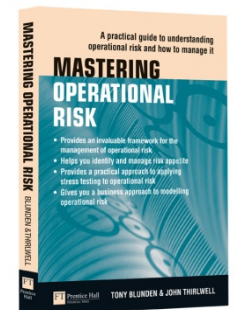


An attempt to frame the unframeable, to assuage fears about the uncontrollable 'rogue others' and to tame the man-made monsters [of the financial system].

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



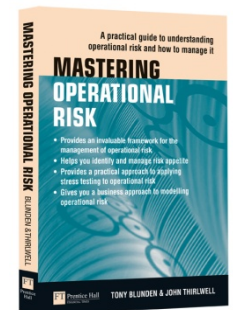
# The benefits of good operational risk management



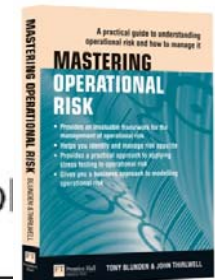
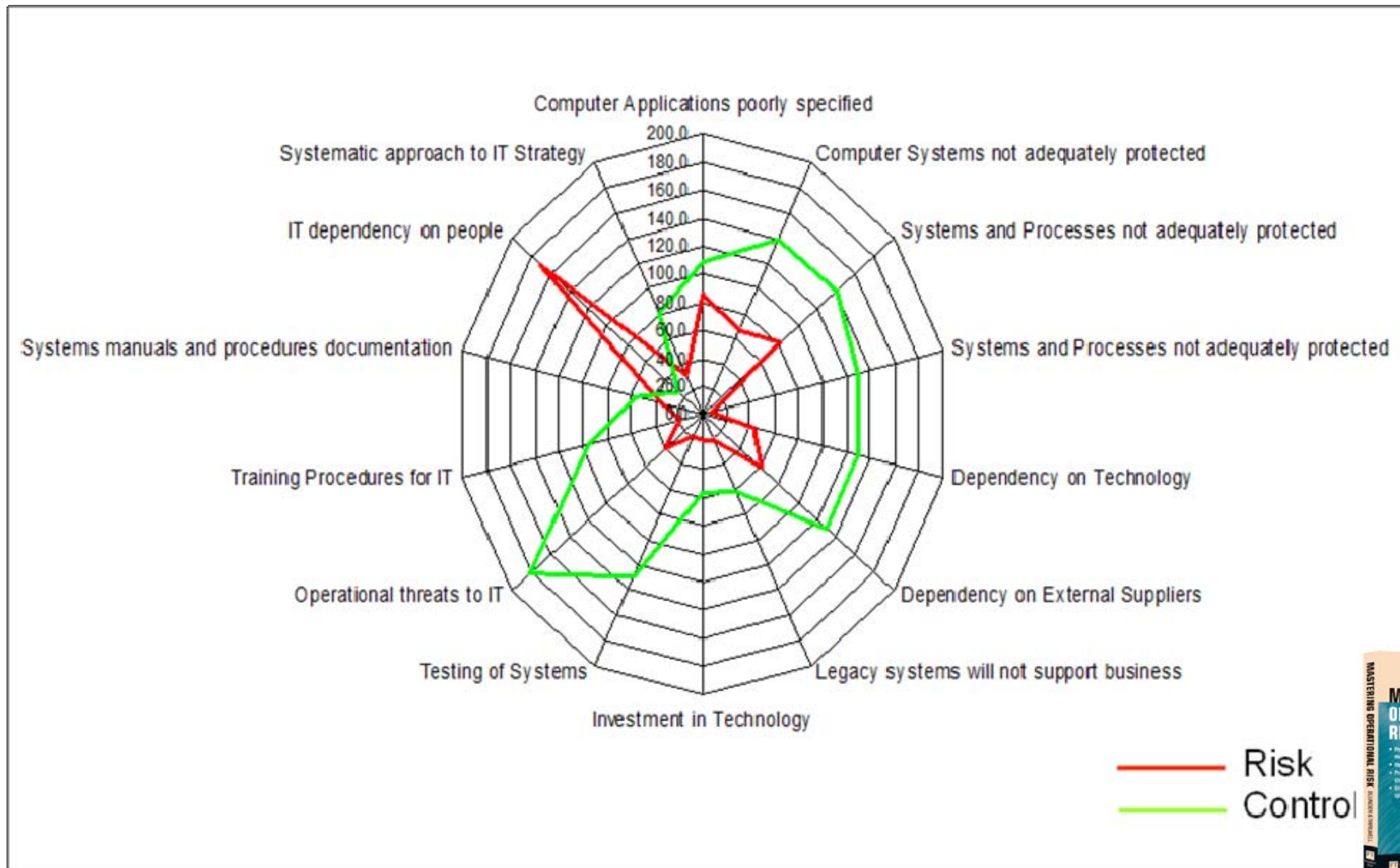
# Benefits of an effective operational risk management framework

## Informed decision making

- Understanding the OR context of decisions (governance)
- Distinguishing *your* operational risks and optimising control resource (RCA)



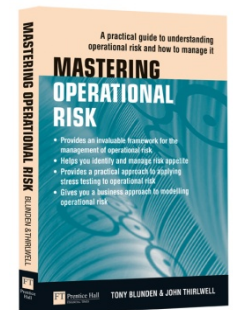
# Optimising resource through risk and control assessments



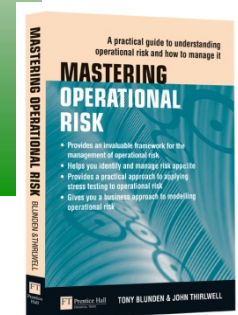
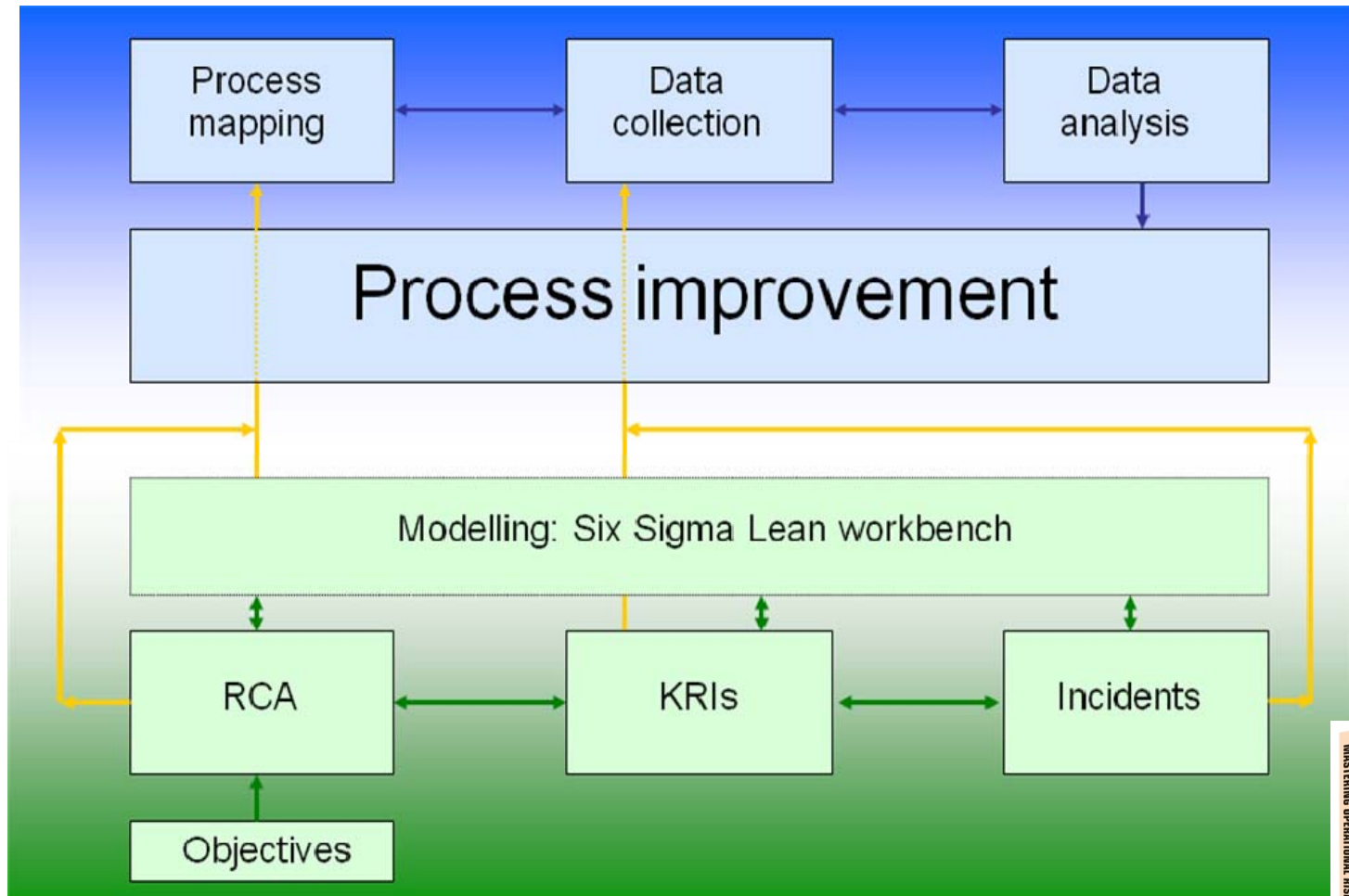
# Benefits of an effective operational risk management framework

## Informed decision making

- Understanding the OR context of decisions (governance)
- Distinguishing *your* operational risks and optimising control resource (RCA)
- Assessing past problems (losses)
- Knowing where you are now (indicators) . . .
- . . . and where you may be heading (scenarios)
- Allocating capital (modelling)
- Getting the *right* information (reporting)

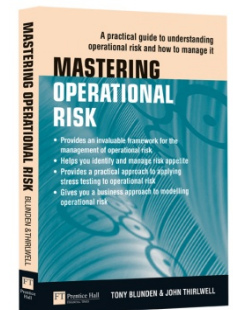


# Interaction of operational risk management and Six Sigma and Lean

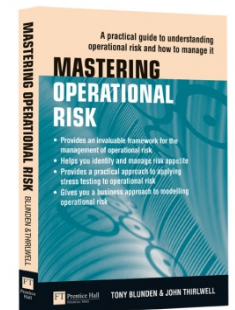


# Other benefits of operational risk management

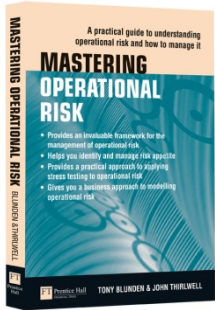
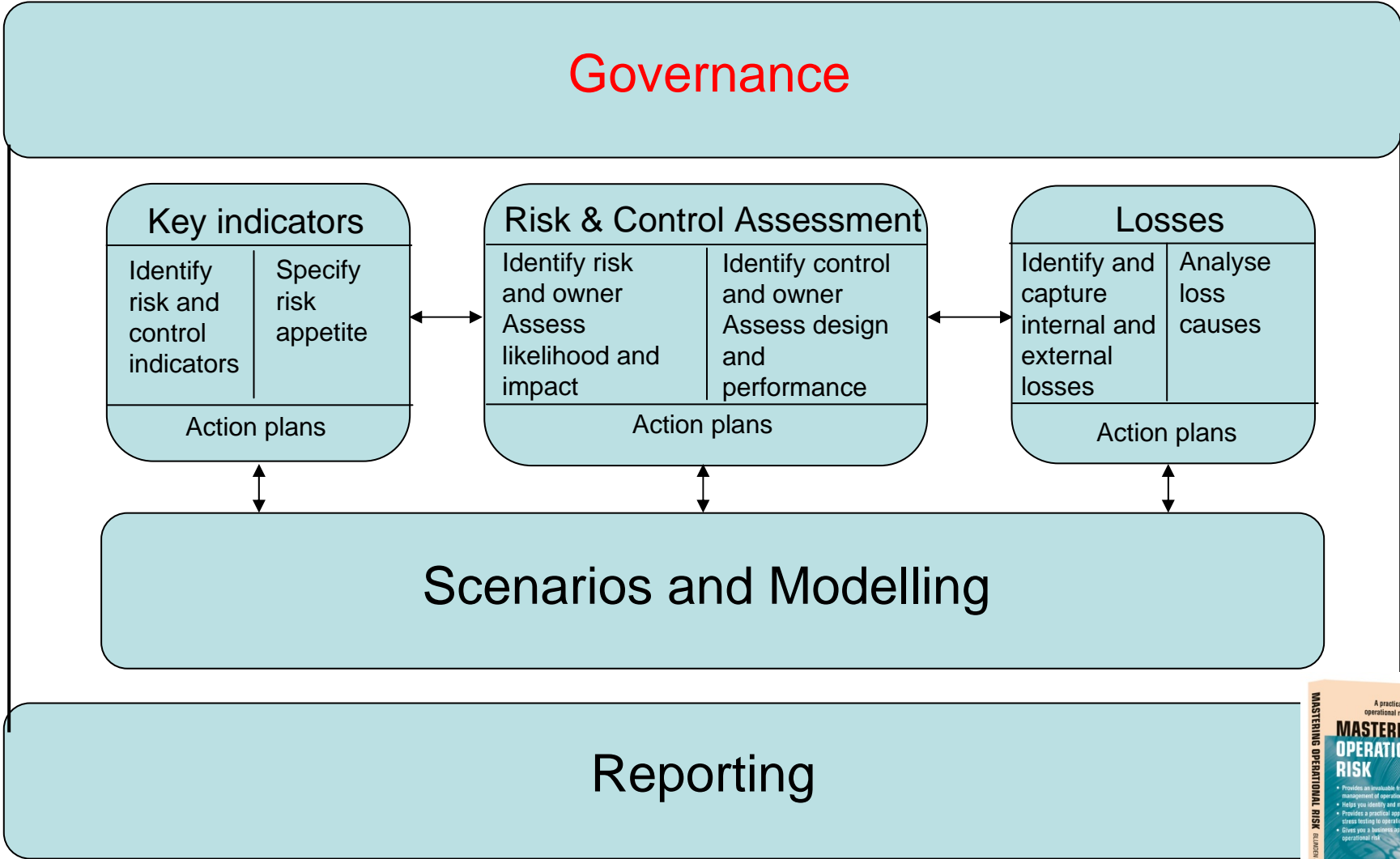
- Business continuity planning
  - Will you be a survivor?
  - Will you be back in business first?
- Insurance buying
- Outsourcing
  - Managing the core
  - Better customer service
  - Higher activity levels
- Project management
- Reputational damage
  - Preventing it
  - What to do if it happens
- People risk management



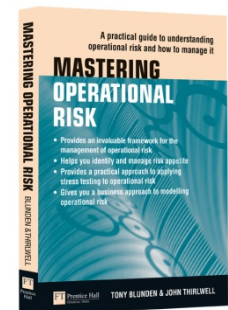
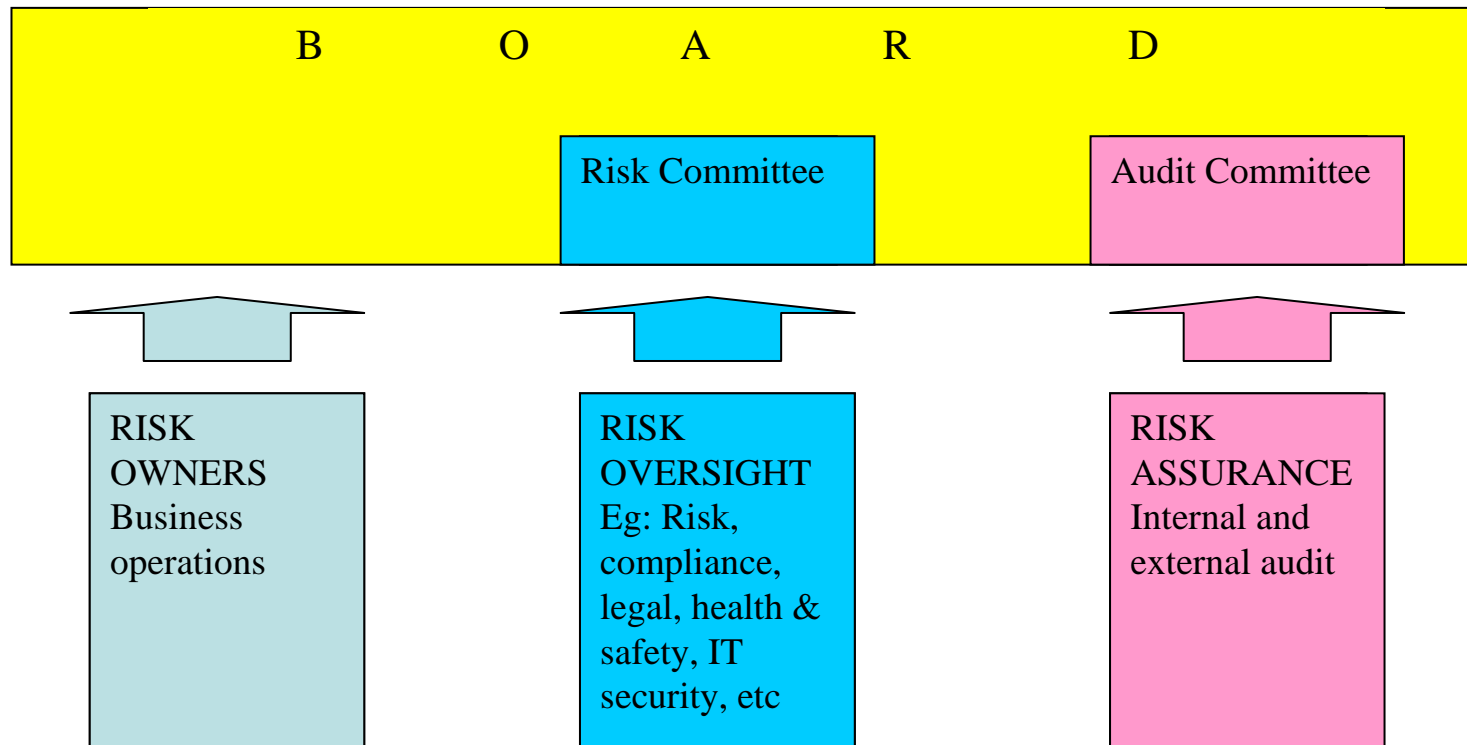
# Operational risk governance



# ORM Framework

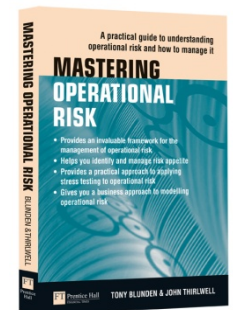


# The 3 lines of defence

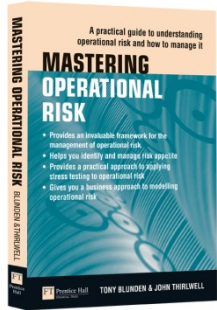
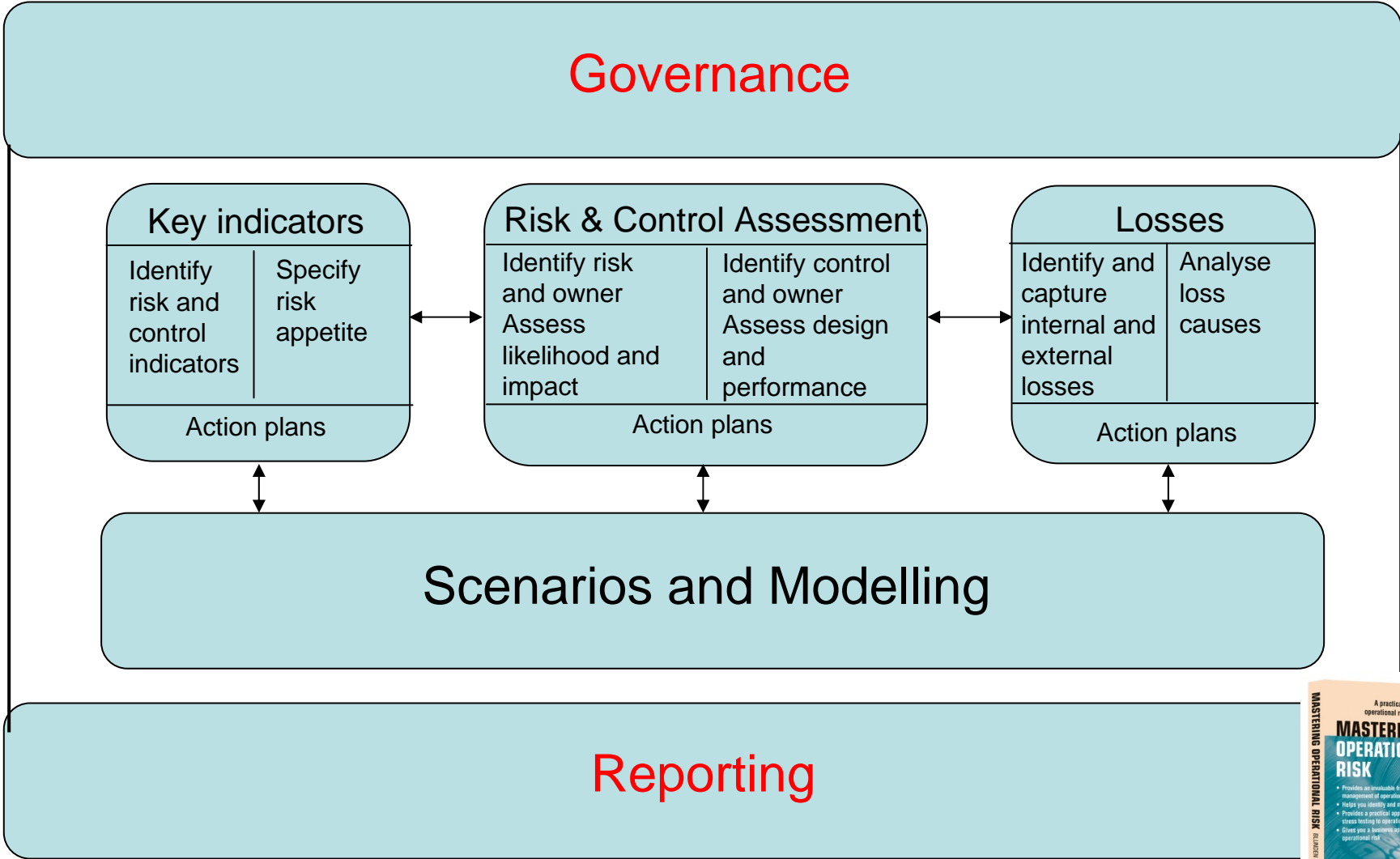


# Board

- Leadership
  - Culture
  - The tune in the middle
- Strategy and objectives
  - Risk appetite
- Reporting and communication

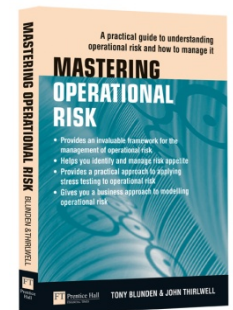


# ORM Framework

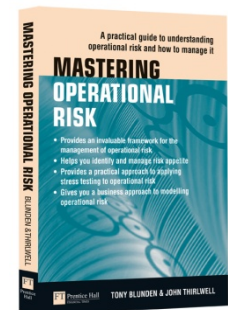
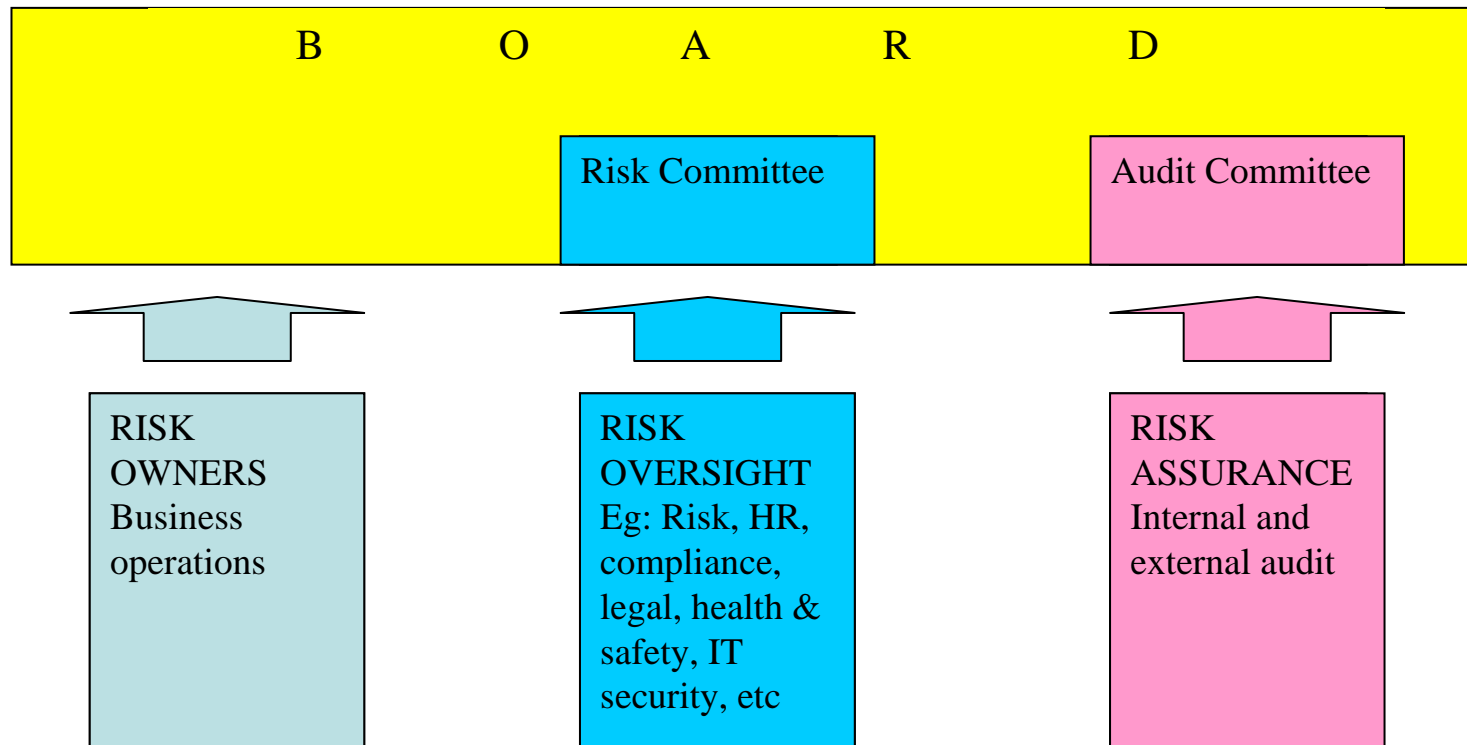


# Board

- Leadership
  - Culture
  - The tune in the middle
- Strategy and objectives
  - Risk appetite
- Reporting and communication
- Risk, the Risk function and the Risk Committee
- Is the CEO also the CORO?

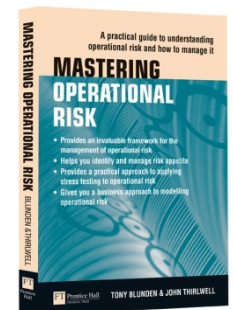


# Where does the operational risk function sit?

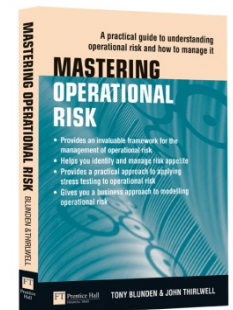
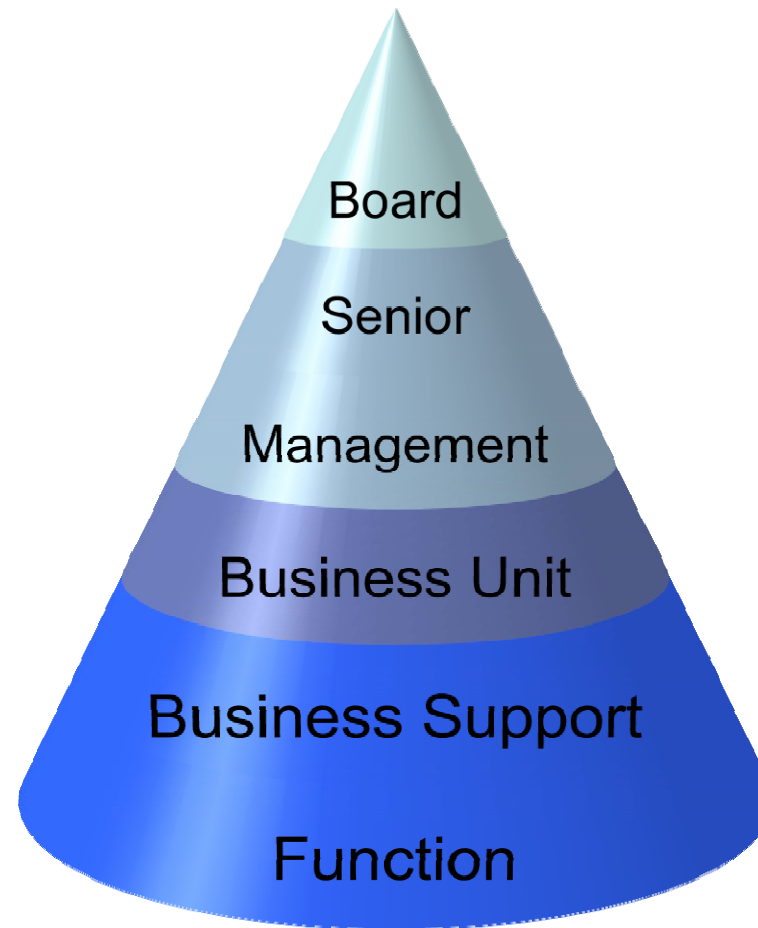


# Risk assurance

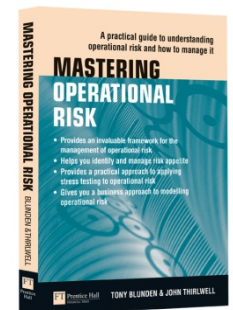
- Independent
- Internal audit
  - Clear objectives
  - Status and position in the firm
    - Audit Committee
  - Priorities
- External audit – financial reporting
- Internal audit as executive management
- Internal audit as consultant
- Internal audit as investigator



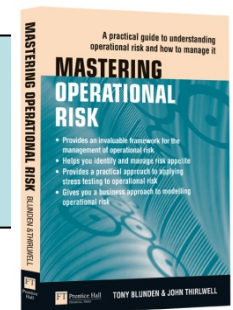
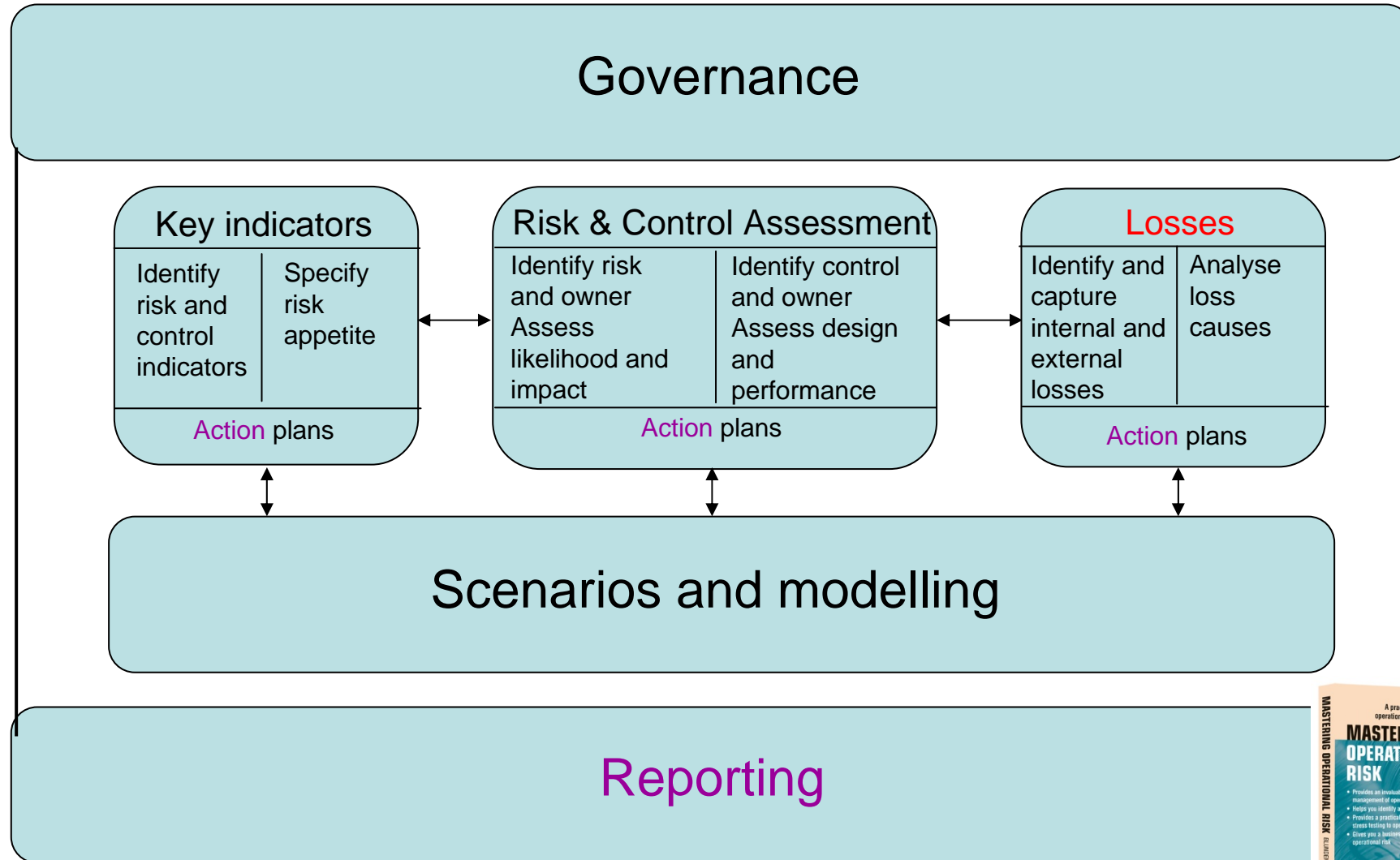
# Whose risk (appetite) is it anyway?



# Measurement or assessment: uses and abuses of data



# ORM Framework

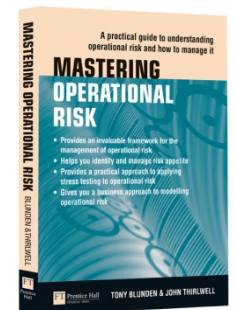


# The risk register

‘The conveyor belt of sins’

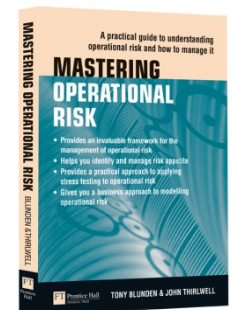
or

‘What needs to go right?’



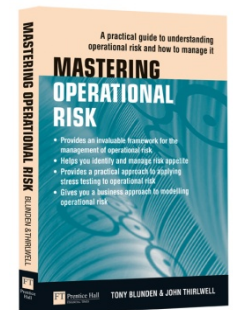
# Issues and decisions concerning event data

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

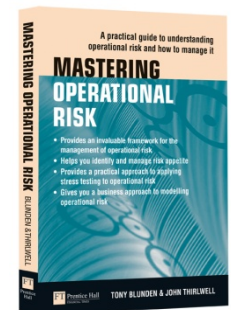
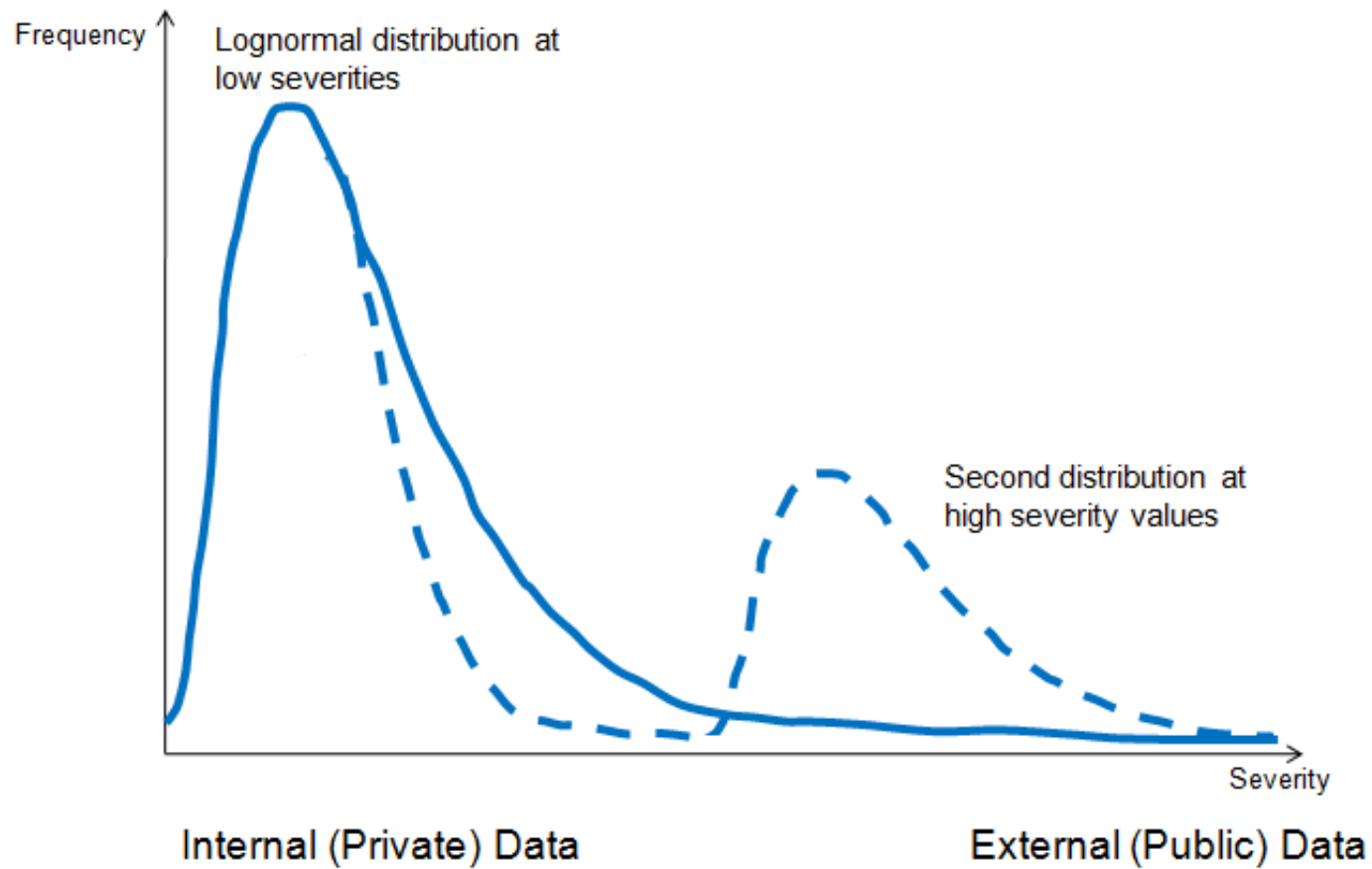


# Realities of risk event data

- It will be incomplete, scarce and patchy, even allowing for external data – the ‘tail’ problem.



# Lognormal and bimodal distributions



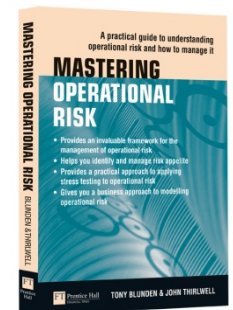
# Realities of risk event data

- 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.

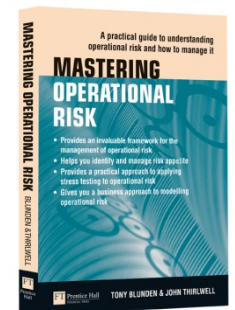
*However*

- 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*)

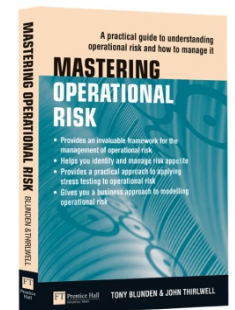


Felix qui potuit rerum cognoscere causas

(Vergil, *Georgics*)

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

(Shakespeare, *Othello*)

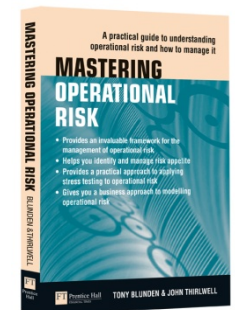
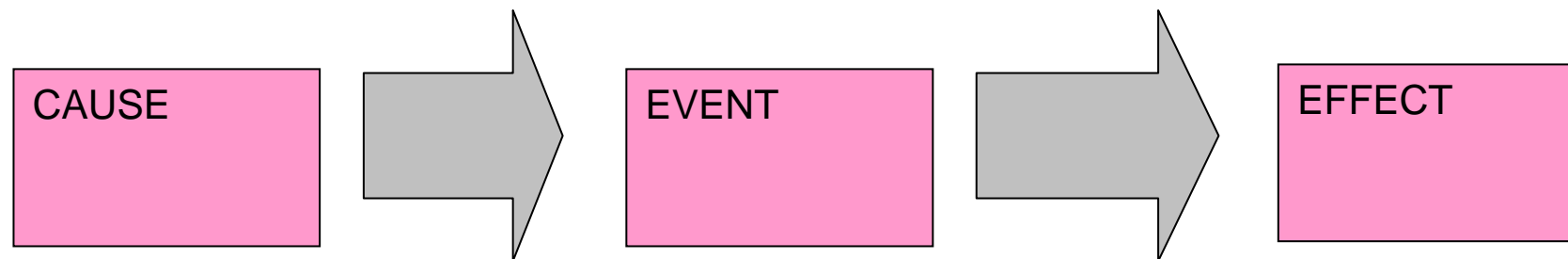


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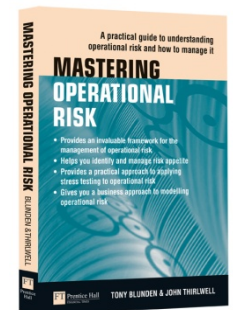
# Some Nobel thoughts on quantification

Unlike the position that exists in the physical sciences, in economics and other disciplines that deal with essentially complex phenomena *[operational risk?]*, **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.**

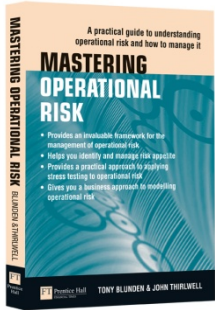
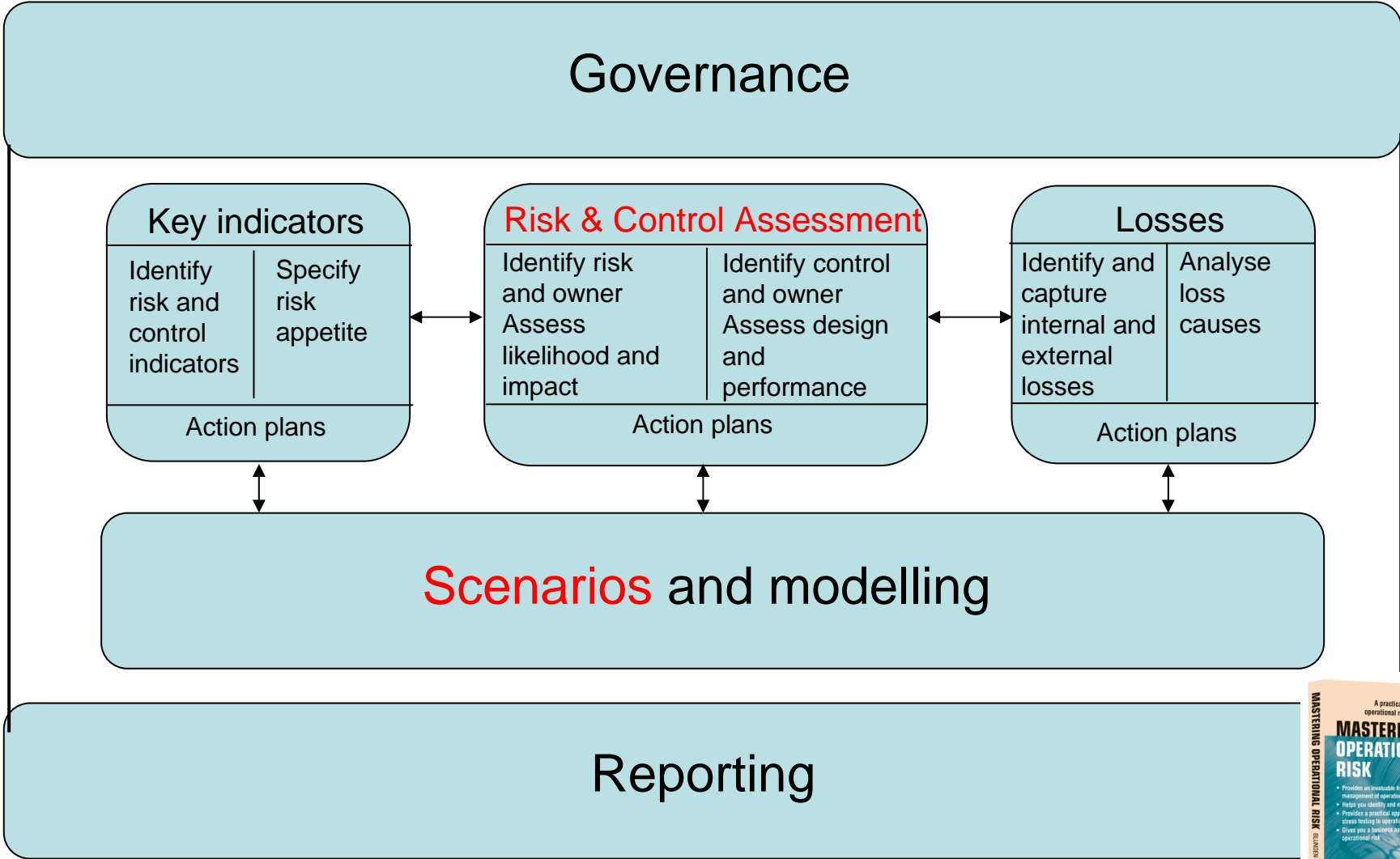
[Friedrich von Hayek, *Pretence of Knowledge*, Nobel acceptance speech 1974]

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]

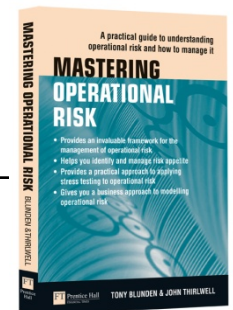


# ORM Framework



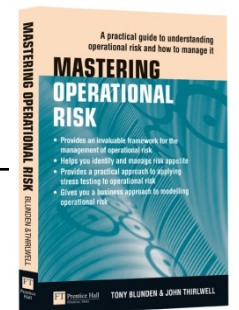
# Traditional risk management

<b>Likelihood</b> High (4)	4	8	12	16
Med High(3)	3	6	9	12
Med Low (2)	2	4	6	8
Low (1)	1	2	3	4
<b>Impact</b>	Low (1)	Med Low (2)	Med High (3)	High (4)



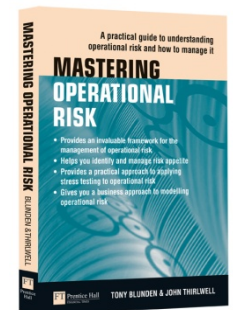
# Intelligent ORM

<b>Likelihood</b> High (4)	4	8	n/a	n/a
Med High(3)	3	6	9	n/a
Med Low (2)	2	4	6	8
Low (1)	1	2	3	4
<b>Impact</b>	Low (1)	Med Low (2)	Med High (3)	High (4)



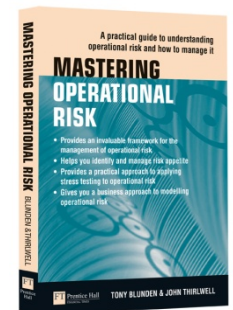
# Issues with risk and control assessments and scenarios

- Subjective biases
  - Availability bias - and the elephant
  - Motivational bias
- Lack of challenge / peer review
- Combination of events *over a period of time* (scenarios)
- Paper overload
- Lack of management buy-in
- Lack of feedback
- Lack of follow-up
- Failure to use in-house data as validation (e.g. risk indicators, loss data)

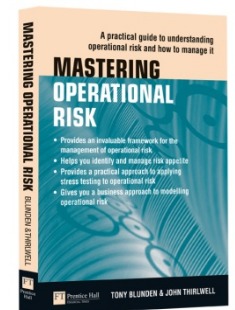


# Modelling operational risk - a qualitative approach

- Use existing risk and control assessments
- No need to wait for adequate loss history
- How it might work:
  - Set up ranges
  - Assess impact and likelihood of risks
  - Assess failure probabilities of controls
  - Correlate risks (if possible)
  - Challenge input
  - Run Monte Carlo simulations
  - Assimilate results and reports

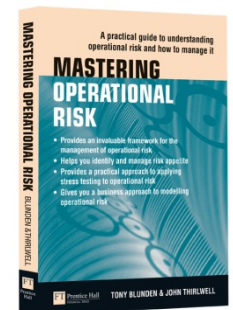


# Managing people risk



# People risk

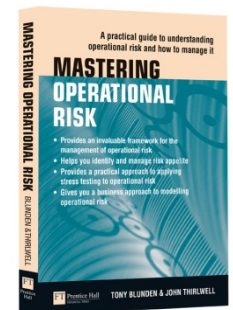
- Operational risk is the **risk of loss from inadequate or failed** internal processes, **people** and systems or from external events.
- ‘80% of operational risk is down to human error or management failure.’  
(Jonathan Howitt, ex Head of operational risk, Dresdner Kleinwort Benson, PRMIA, 2004)



# People risk and the financial crisis

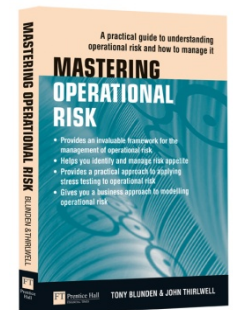
## Financial crisis

- Asset bubble
- Politicians, regulators, central banks
- The banking ecosystem
- Failure to apply good risk management
- Failure to apply good risk governance
- Human behaviour (bias, greed, herd instinct)



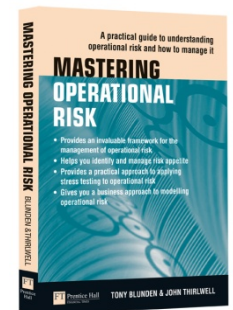
# Conclusions of the Financial Crisis Inquiry Commission

- Avoidable; self-harm
- ‘dramatic failures of corporate governance and risk management . . . were a key cause of this crisis’
- ‘there was a systemic breakdown in accountability and ethics’
- Collapsing mortgage lending standards; over-the-counter derivatives (W. Buffett: ‘financial WMD’); credit rating agencies



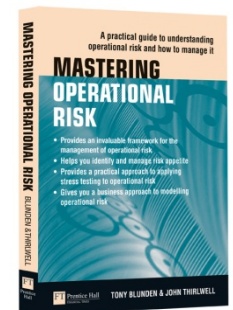
# People risk essentials

- Leadership: Board and senior management
  - Chairman
  - As team
  - Red flag issues
- Culture
  - Strategy and objectives
  - What we mean by excellent behaviour
  - Openness and transparency
  - Communication
  - Walking the talk
- Change and flexibility
  - Continuous improvement
  - Changing competitive, economic and social environments



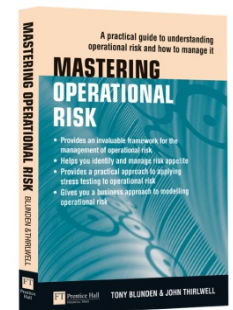
# Senior people risk

- The people risk of the CEO
  - Chairman and Board
  - Emperor or celeb?
  - Strategy and implementation
  - Decisions: how many? how good?
  - Reputation risk
- The people risk of risk management
  - Something can be done
  - Abdication of responsibility
  - Blame



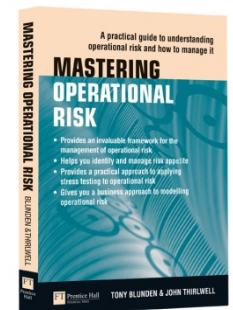
# People risk: causes, controls and indicators

- 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
- People risk indicators



# People risk and HR

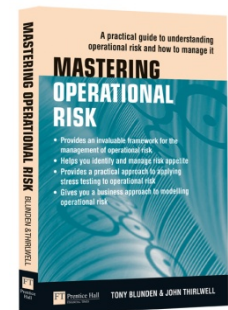
- Is HR a transactional or a risk function?
- Much risk is managed by good HR. How much is managed by a good HR department?
- Understanding and predicting risk is highly dependent on understanding human and organisational behaviour. HR has a role as senior management's guide.
- Would the HR Director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



- All risks should be viewed through a people lens and all people issues viewed through a risk lens



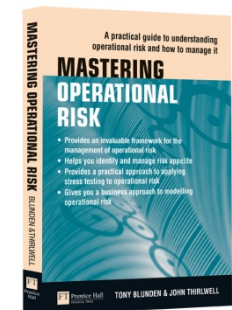
Good people management  
is good risk management  
is good operational risk management



‘The world has never been so full of risk.’



‘her infinite variety’



# Contact details

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