

Bank risk management workshop

Operational risk

John Thirlwell, FCIB, FIOR

ifs, 11 July 2014

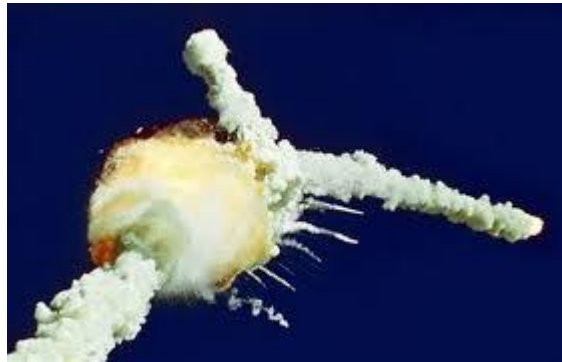
Agenda

- Operational risk – what it is and why it matters
- The operational risk management framework
- The benefits of good operational risk management
- Operational risk governance
- Measurement and assessment: uses and abuses of data
- People risk and operational risk culture

Defining operational risk

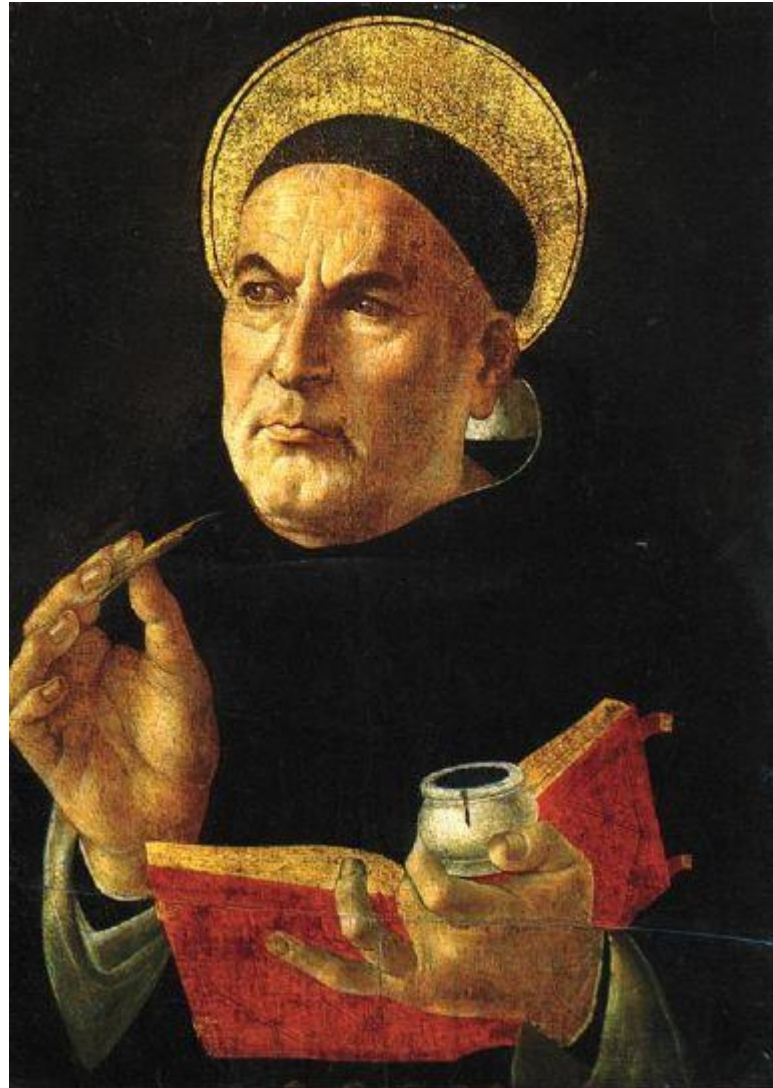
‘the risk of loss resulting from inadequate or failed internal processes, people or systems or from external events’ [Basel II]

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





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



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

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)



Is operational risk different from other risks?

	Credit, market, commodity, liquidity (financial)	Operational (non- financial)
Is the risk wholly 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 operational risk different from other risks?

	Credit, market, commodity, liquidity (financial)	Operational (non-financial)
Is the risk wholly transaction-based?	Y	N
Is the risk assumed proactively ?	Y	N
Can it be identified from accounting information e.g. the P&L?	Y	N
Can audit confirm that every occurrence of the risk has been captured?	Y	N
Can its financial impact be capped or limited?	Y	N
Can you trade the risk?	Y	N

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Can its financial impact be capped or limited?	Y	N
Can you trade the risk?	Y	N
Is everybody in the firm responsible for the risk?		
Does the risk affect every activity?		

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Can you trade the risk?	Y	N
Is everybody in the firm responsible for the risk?	N	Y
Does the risk affect every activity?	N	Y



Liquidity Risk

Underwriting Risk

Operational Risk

(including Strategic Risk)

Market/Product Risk

Group Risk

Credit Risk

Operational risk is inherent in **all** banking products, activities, processes and systems, and the effective management of operational risk has always been a fundamental element of a bank's risk management programme. [Sound practices for the management and supervision of operational risk, BIS, 2011]

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

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

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

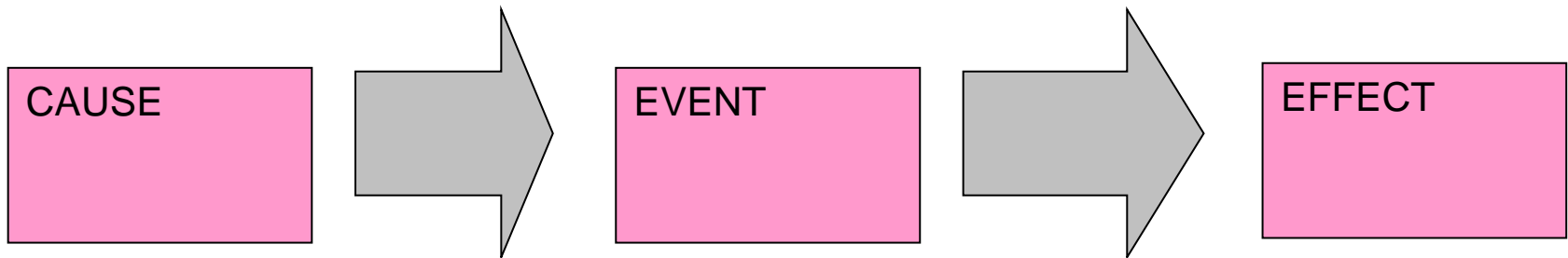
(Shakespeare, *Othello*)

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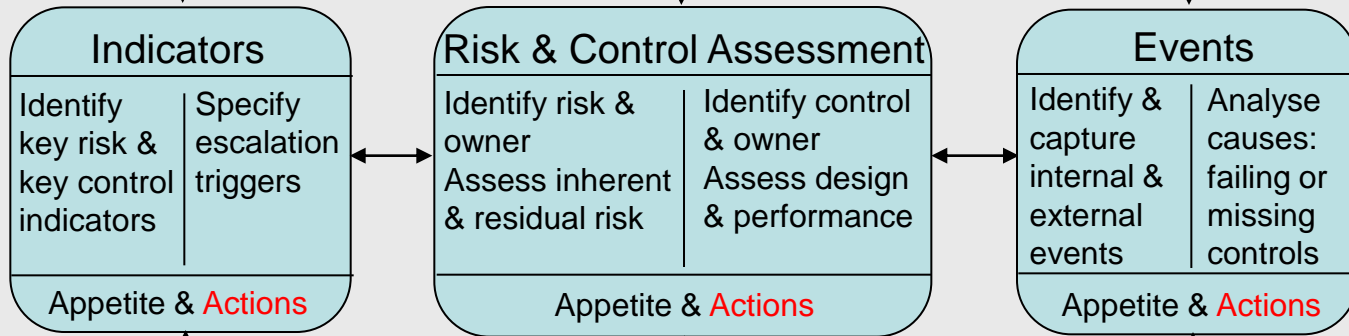
Traditional risk 'cycle' in the context of operational risk

- Identify
- Measure / Assess / Evaluate
 - Losses
 - Risk and control assessments (probability/likelihood and severity/impact)
 - Scenarios
 - Modelling
- Manage / Mitigate / Respond
 - Controls
 - BCP and reputation risk management
 - Insurance
 - Outsourcing
- Monitor / Report
 - Risk indicators

Operational Risk Environment

Governance

New activities, processes, products, systems



Scenarios & Modelling

Reporting

Three lines of defence

Agenda

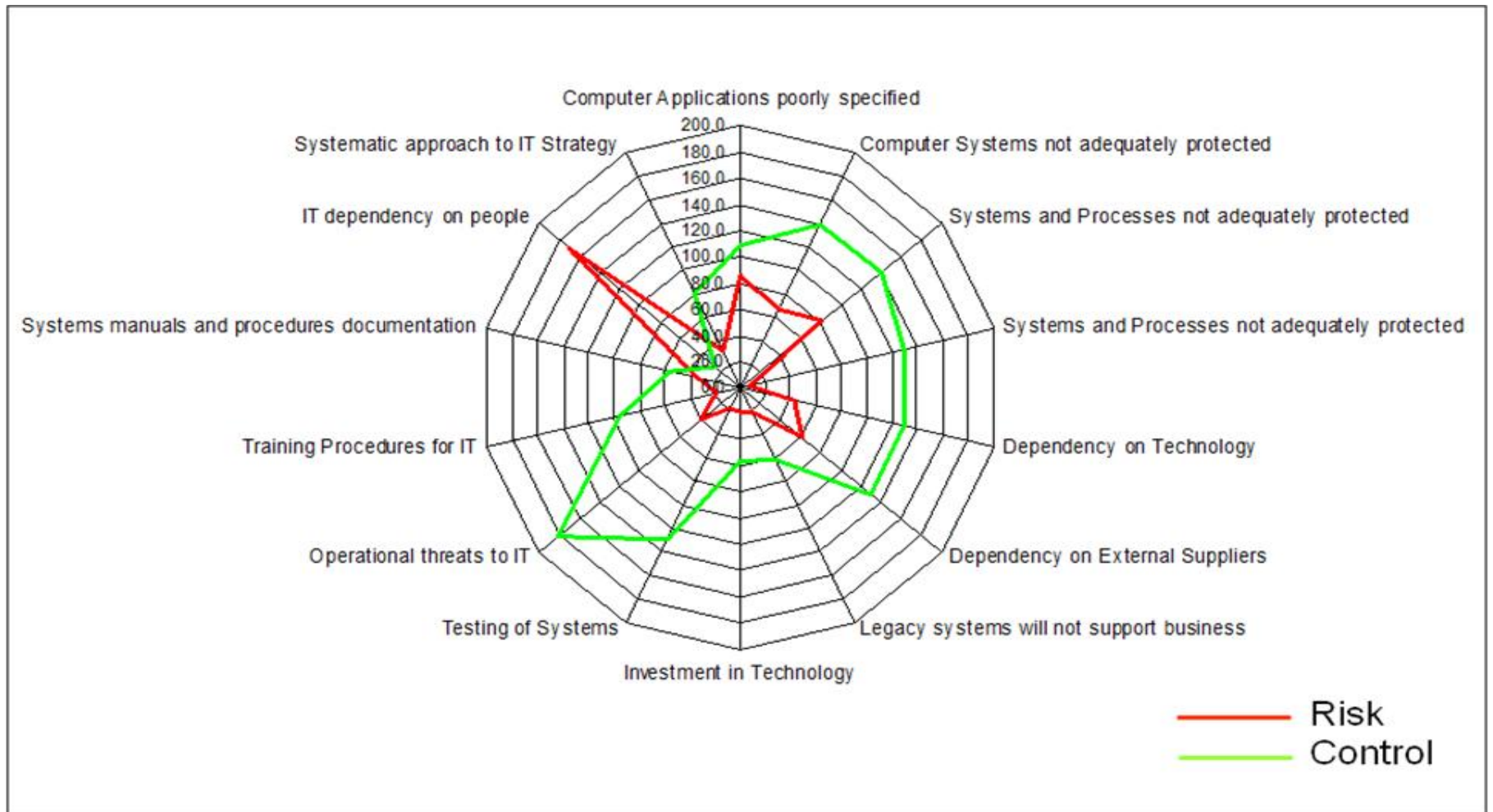
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Business benefits of an effective operational risk management framework

Informed and better 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

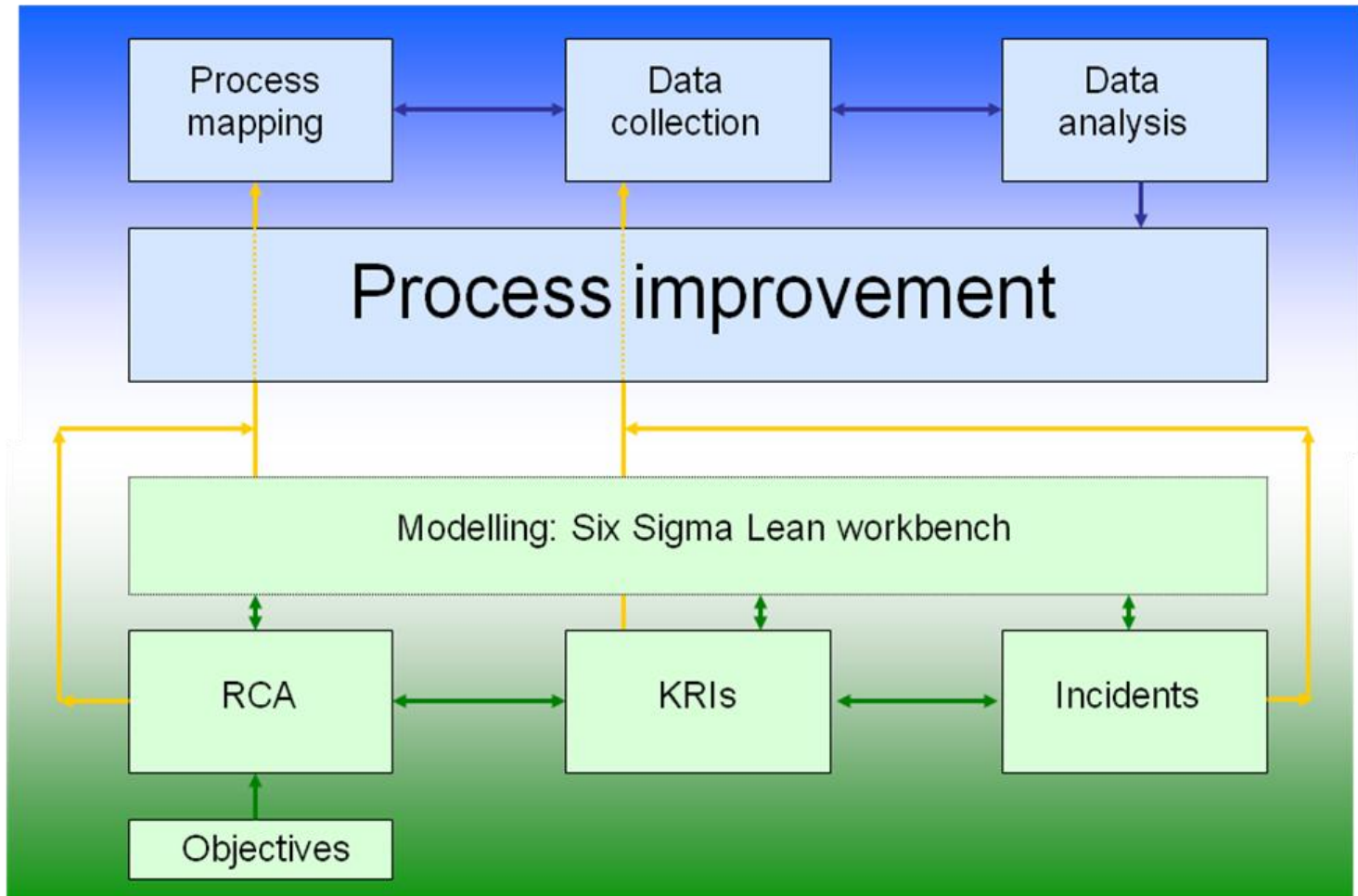


Benefits of an effective operational risk management framework

Informed and better decision making

- Understanding the OR context of decisions (governance)
- Distinguishing *your* operational risks and optimising control resource (RCA)
- Assessing and analysing past problems (losses)
- Knowing where you are now [against appetite] (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: achieving what you want, to time, to budget
- People risk management
- Reputational damage
 - Preventing it
 - What to do if it happens
- Culture of continuous improvement

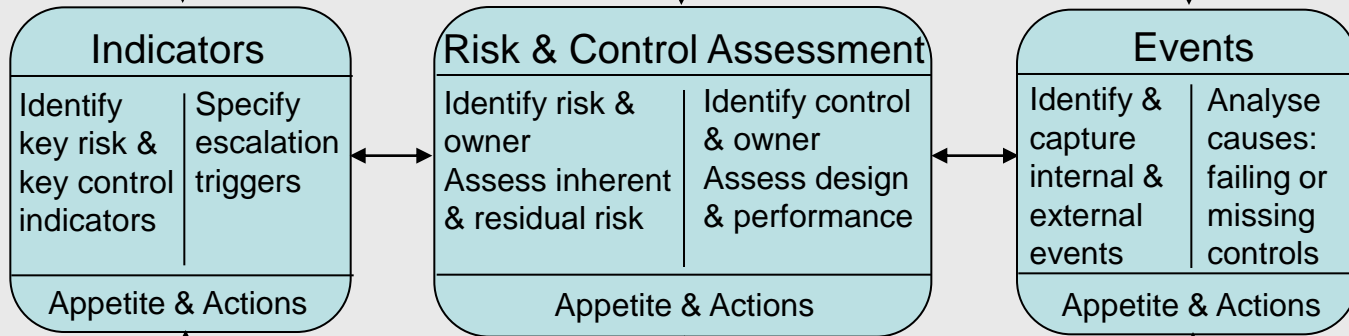
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Operational Risk Environment

Governance

New activities, processes, products, systems

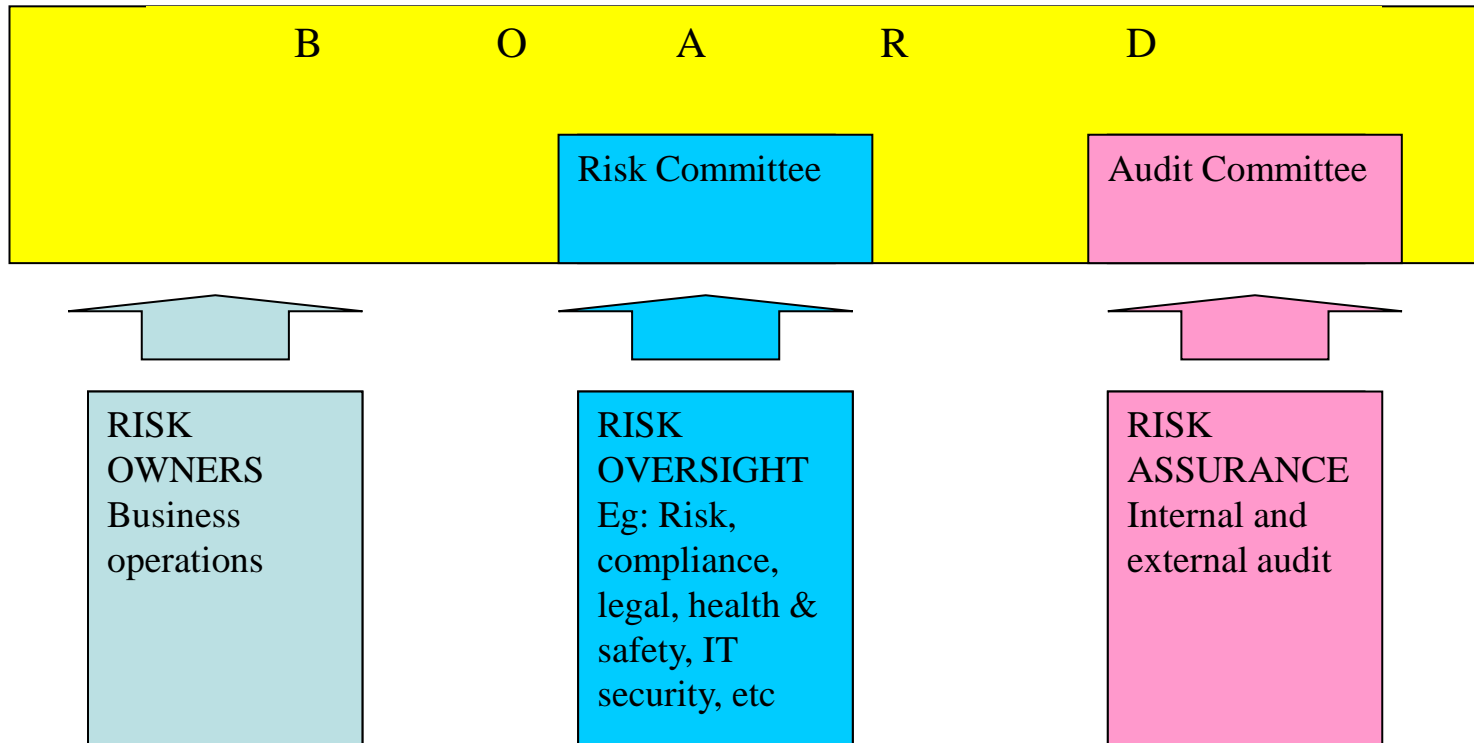


Scenarios & Modelling

Reporting

Three lines of defence

The 3 lines of defence



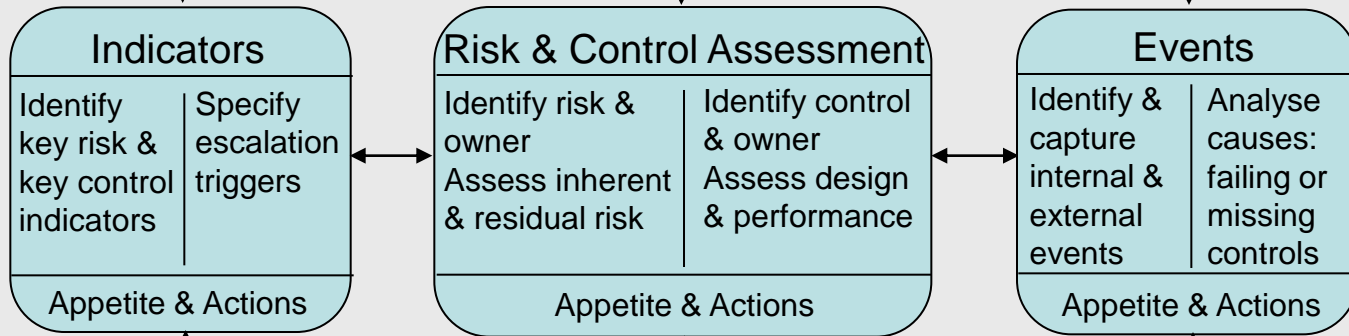
Risk and the Board

- Committed leadership
- Strategy and objectives
 - Values and excellent behaviours
 - The context for risk management and risk appetite
- Clear roles and responsibilities
- Open lines of communication
 - Openness and transparency
 - Reporting – up and down

Operational Risk Environment

Governance

New activities, processes, products, systems



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Three lines of defence

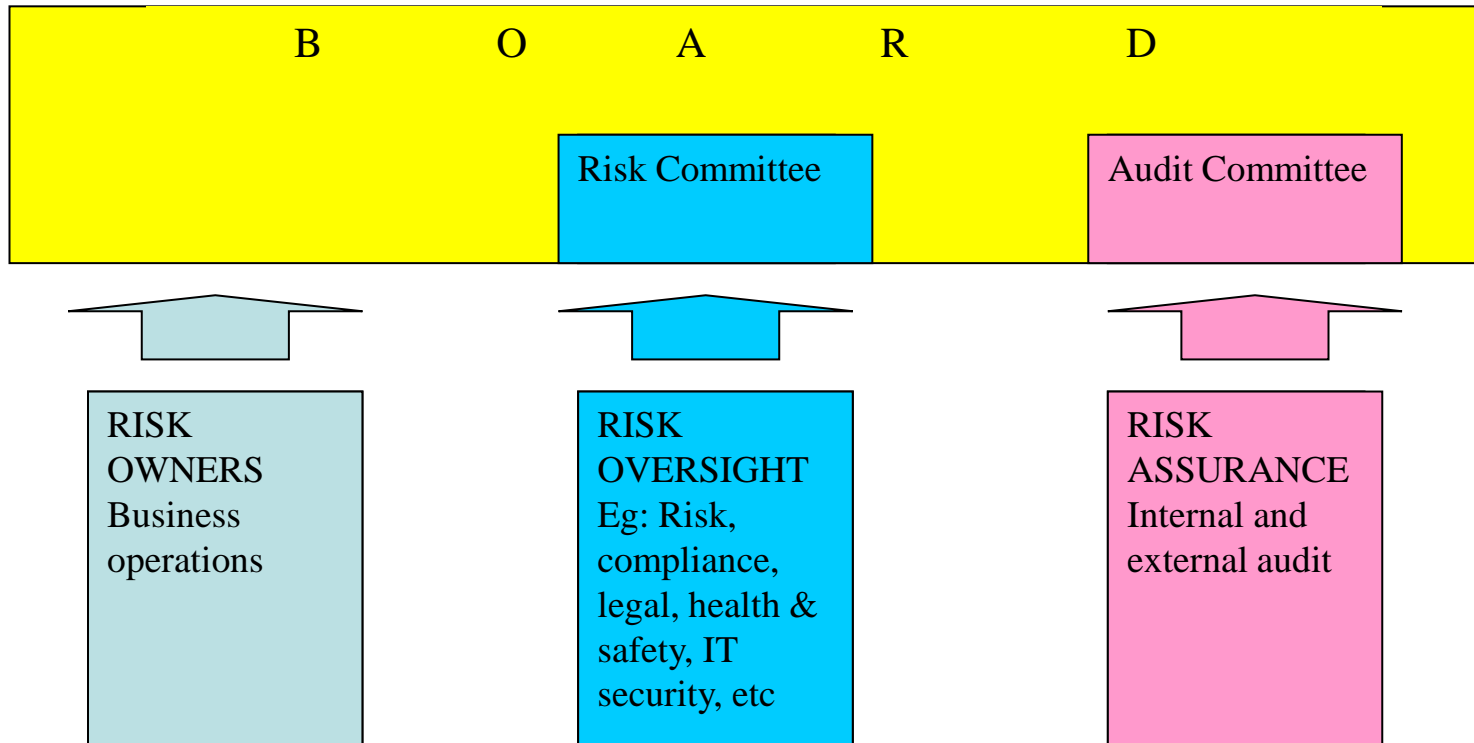
Risk and the Board: Group of Thirty

Board's key responsibilities are:

- Strategy
- Risk profile
- Appointing the CEO (and senior management)

[Toward effective governance of financial institutions (April 2012),
www.group30.org]

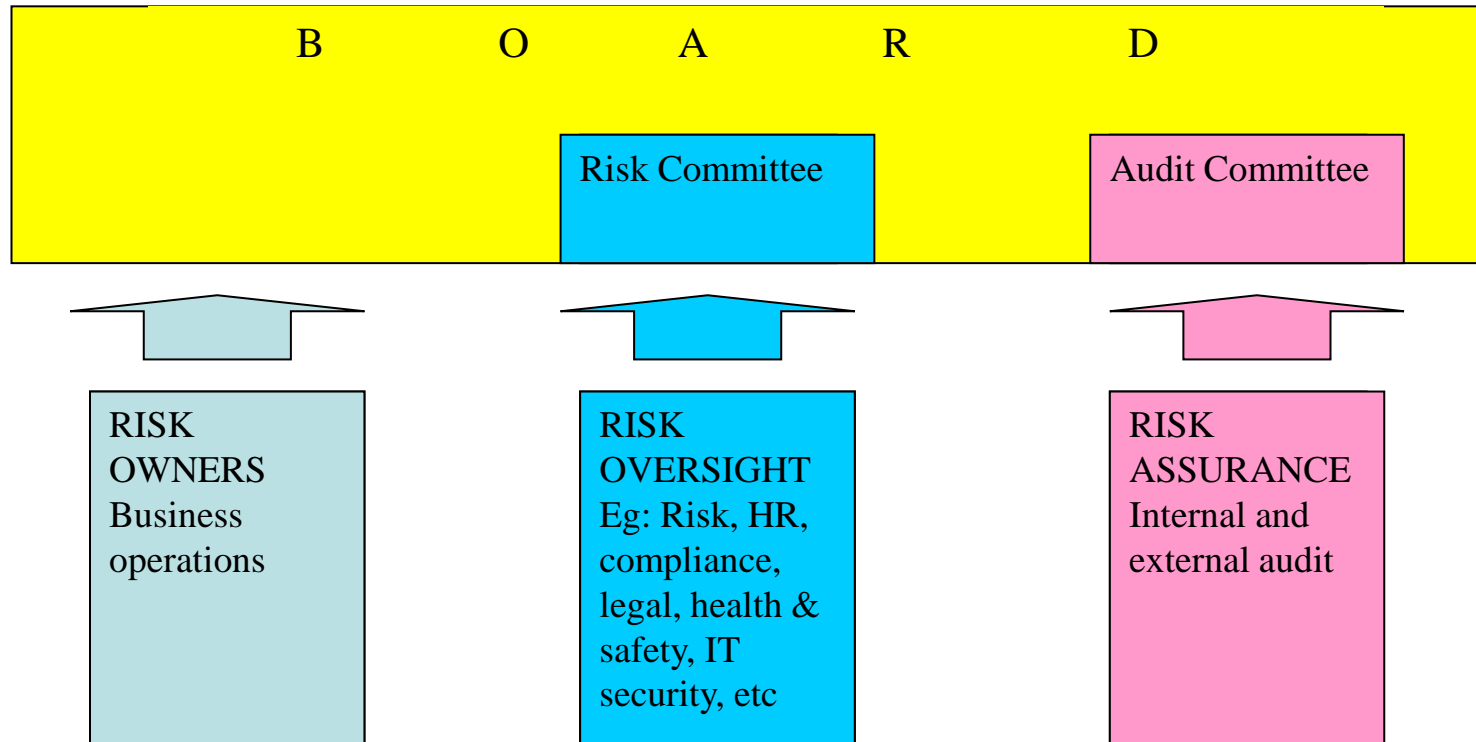
The 3 lines of defence



The risk function

- Does risk management manage risk?
- Control? or challenge and oversight?
- The (operational) risk function and
 - BCP
 - 3rd party dependencies (outsourcing, supply chain etc)
 - Insurance
 - IT security
 - New products
 - Compliance
 - Legal
 - Employees/HR: health & safety; discrimination
- Is the CEO the CORO or even the CRO?

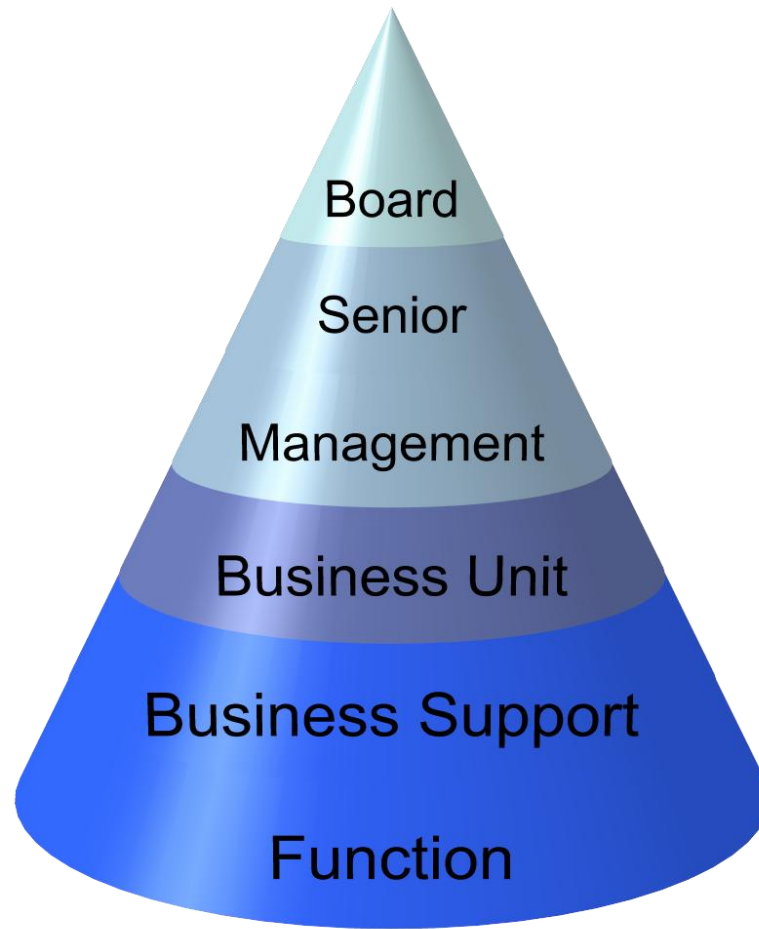
Where does the (independent?) operational risk function sit?



Risk assurance

- Independent
- Internal audit
 - Clear role
 - Status
 - As consultant and investigator?
 - As the canary in the mine regarding culture?
- External audit – financial reporting

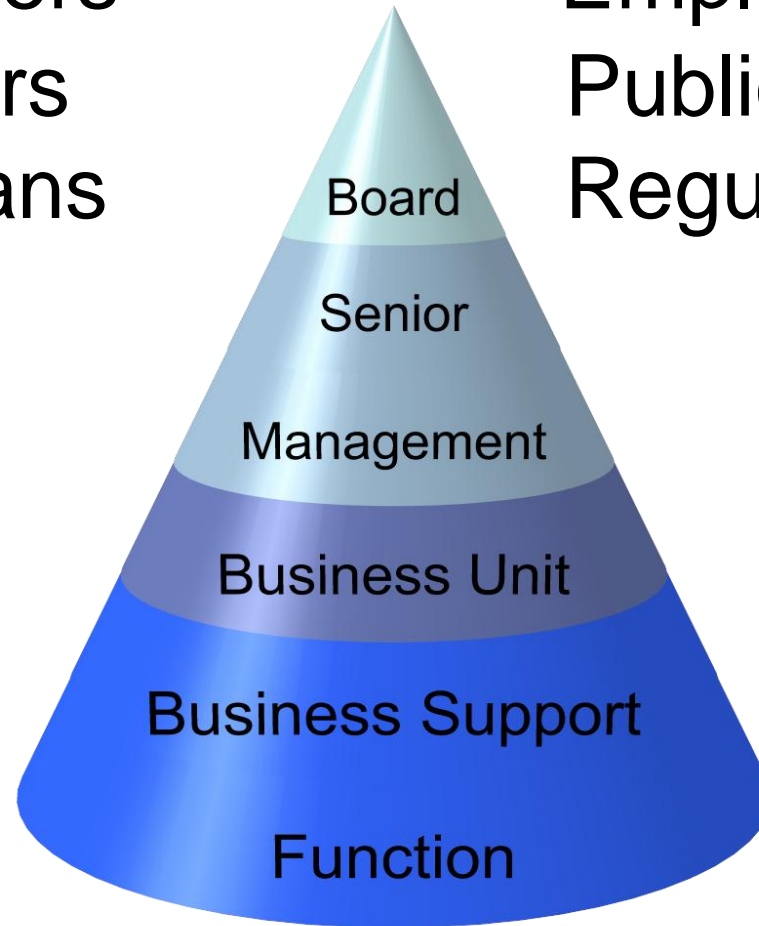
Whose risk is it anyway?



Whose risk appetite is it anyway?

Customers
Investors
Politicians

Employees
Public / community
Regulators



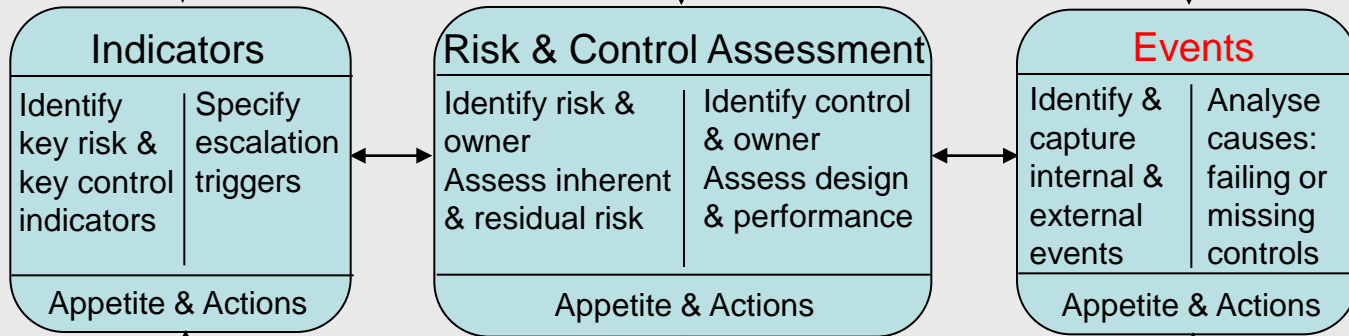
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The risk register

‘The conveyor belt of sins’

or

‘What needs to go right?’

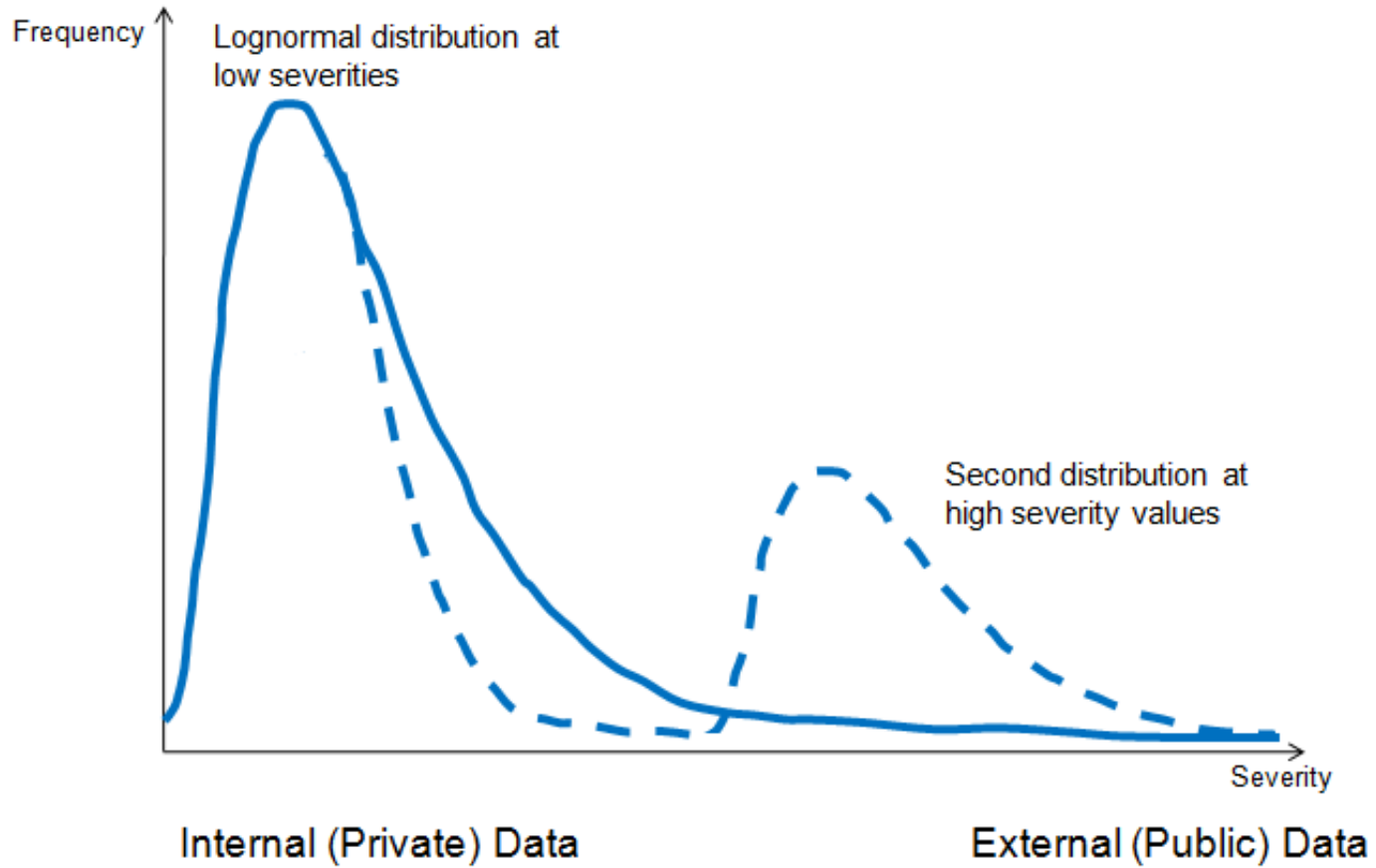
Issues concerning loss event data

- Which events or losses?
 - Direct or indirect?
 - Amount (the basis of impact/severity)
 - Date (the basis of likelihood/frequency)
 - Reporting threshold
 - Near misses
 - “Boundary” losses
 - Multiple events
 - Gains
 - Loss category
- Data capture

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

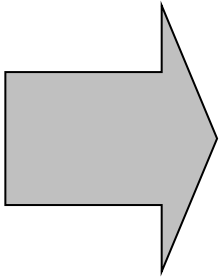
- It will be **incomplete**, scarce and patchy, even allowing for external data – the ‘tail’ problem.
- It will be **inconsistently** reported although, once reported, it is auditable.
- It is historic and **backward looking**. Major events will probably have led to tighter controls, change of policy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

However

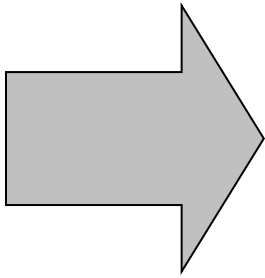
- It can **validate** indicators, risk and control assessments and scenarios
- It is **the beginning of** the essential chain of:
Data → information → understanding

AND THAT ONLY COMES WITH . . .

CAUSE



EVENT



EFFECT

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.

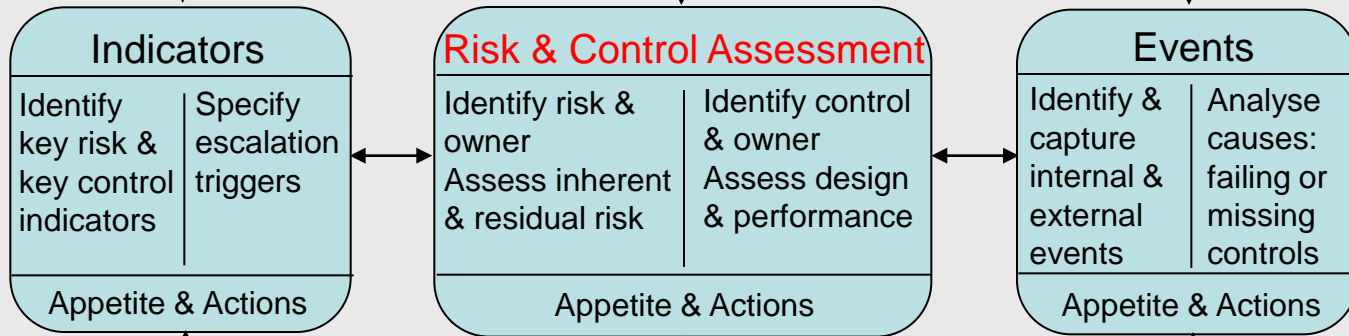
[Kenneth Arrow, *I know a hawk from a handsaw* CUP 1992]

So be humble and acknowledge your limitations!

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Traditional risk management

Likelihood 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
Impact	Low (1)	Med Low (2)	Med High (3)	High (4)

Intelligent ORM

Likelihood 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
Impact	Low (1)	Med Low (2)	Med High (3)	High (4)

Scenarios

- Stories help achieve buy-in
 - Use news stories or random (risk) words
- *Combination* of events
 - *over a period of time*
- Forward-looking

Issues with risk and control assessments and scenarios

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

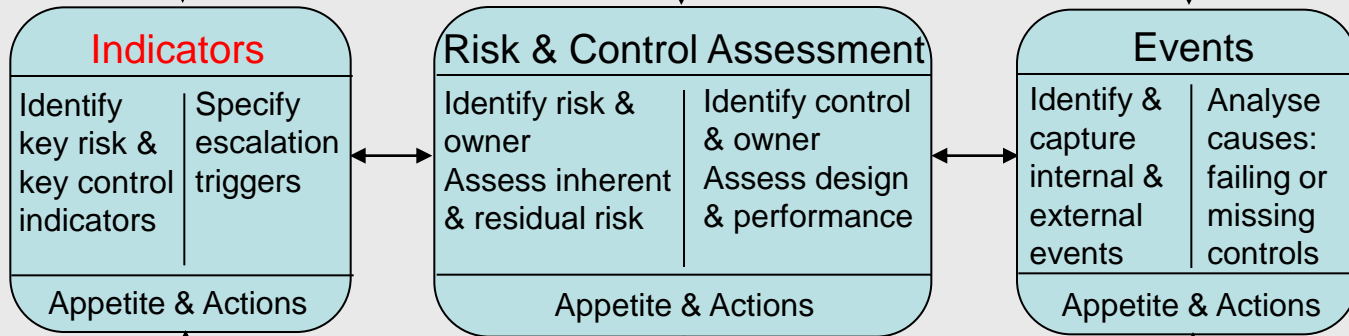
Modelling operational risk - an alternative approach

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

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New activities, processes, products, systems

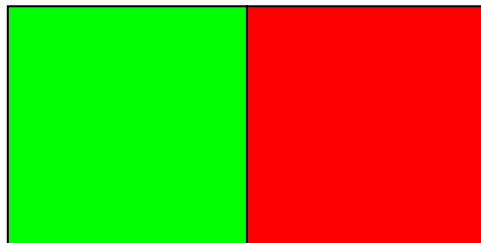
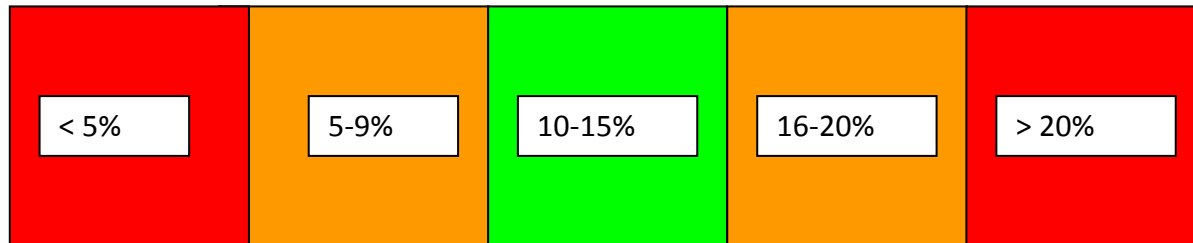
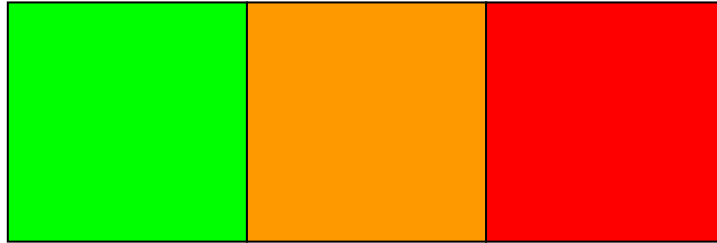


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A brief word on indicators



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People risk

Operational risk is the **risk of loss from inadequate or failed** internal processes, **people** and systems or from external events.

People risk – the financial crisis

Financial crisis

- Asset bubble
- Failure to apply good risk management
- Failure to apply good risk governance
- Human behaviour (greed, bullying, herd instinct, complacency)
- Politicians, regulators, central banks

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**’

People risk and culture essentials

- Committed leadership
 - Tone from the top / tune in the middle

‘If you get buy-in you can do extraordinary things. But if you don’t get buy-in you won’t even achieve the ordinary. It’s alright to talk about the tone at the top, but I prefer to talk about the tune in the middle.’

[Prof Mervyn King, chair of South Africa’s King Commission on corporate governance, IIA, 2008]

People risk and culture essentials

- Committed leadership
 - Tone from the top / tune in the middle
 - Do they walk the talk?
 - Do they exemplify the firm's values and behaviours?
- Strategy and objectives
 - Values and excellent behaviours
 - The context for risk management and risk appetite
- Clear roles and responsibilities
- Open channels of communication
- Selection, induction and training
- Reward

Mitigating people risk

- Objectives and, through them, values and behaviours, are the drivers for key people risk controls:
 - Selection
 - Appraisal and performance management
 - Training
 - Reward – what and who are rewarded?
 - Financial – bonus and malus; values
 - Promotion - values
- Succession planning
- People risk and reputation risk
- The role of HR

- 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

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