Misys Risk Forum

London, 2nd September 2009

It is possible to manage risk in an integrated manner?

. . . with a little help from some friends

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2 September 2009

Risk Forum
Misys European Customer Conference 2009
2 September 2009, London


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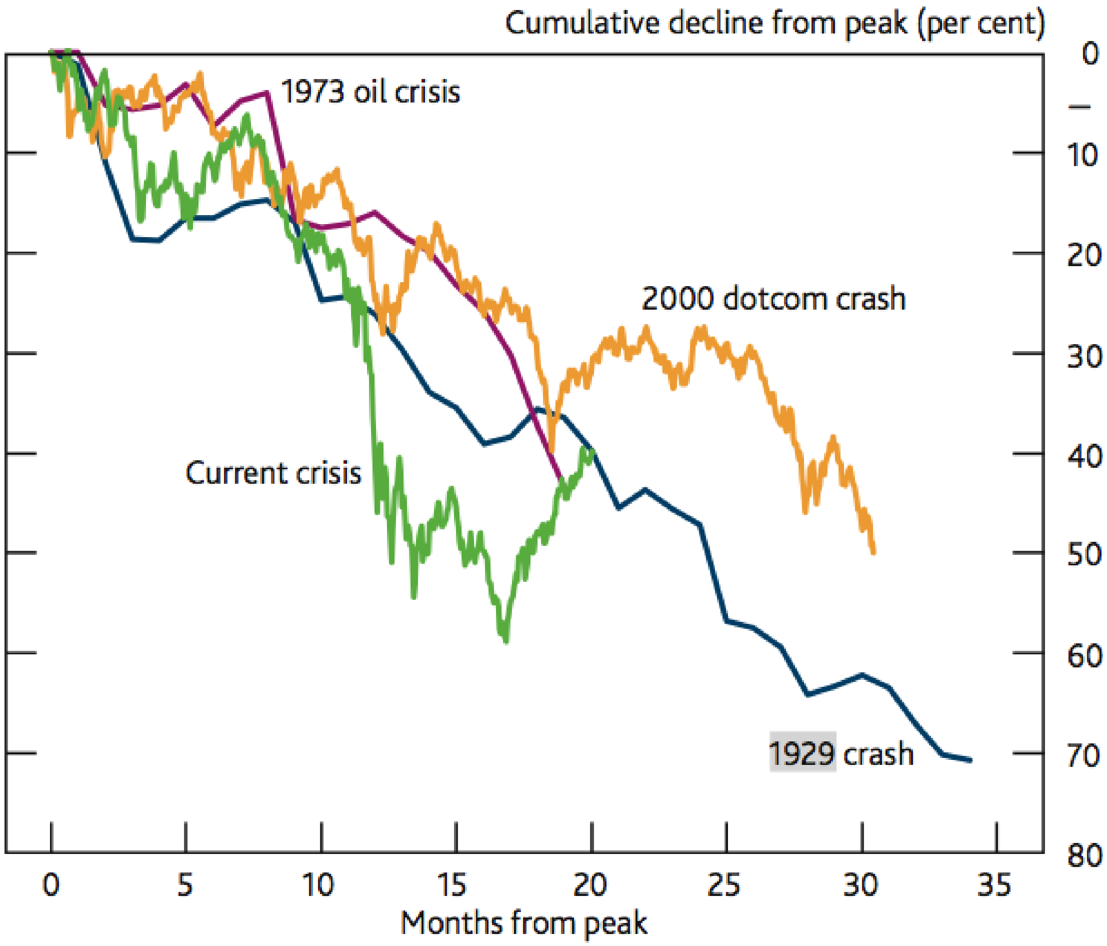
CANELA - RS - BRASIL

Those who cannot remember the past are condemned to repeat it.

Chart 1.7 FTSE world equity index during crises[a]



Sources: Global Financial Data Inc. and Bank calculations.

The response . . .

An International Rescue?

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What is ‘risk’? Aswath Damadoran

a. risk versus **Probability** (the classical ‘Knightian’ distinction – *uncertainty* versus *risk*)

b. risk versus **Threat**

c. all outcomes versus **Negative outcomes**

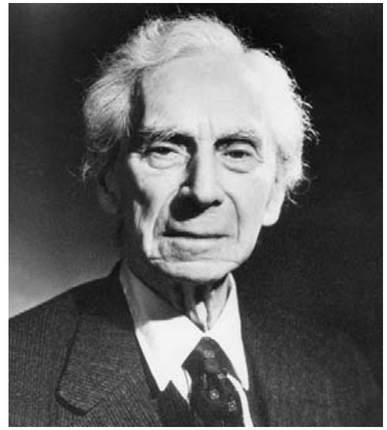
   Risk = Probability of an accident * Consequence in lost money/deaths

d. in finance:
   is defined in terms of **variability of actual returns on an investment around an expected return**, even when those returns represent positive outcomes.

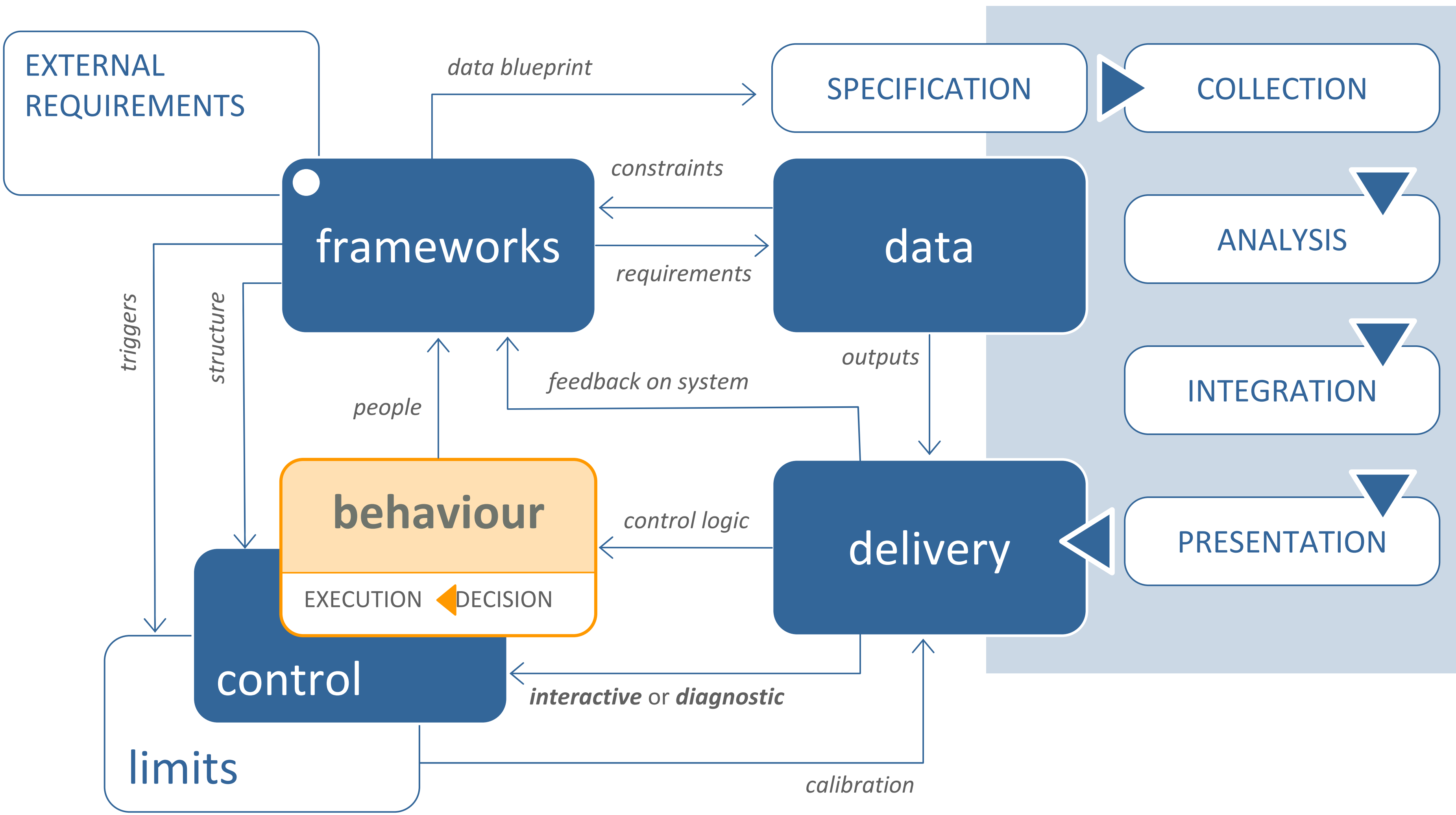
Risk as . . .

- complexity; ambiguity
- process non-performance / human error
- wrong decision based on misjudgement
- wrong decision based on incomplete information
- wrong decision based on incorrect information
- correct decision based on incorrect criteria
- observed/distribution variance of events
- loss exceeding some trigger point (exceedence)

Do not fear to be eccentric in opinion, for every opinion now accepted was once eccentric.

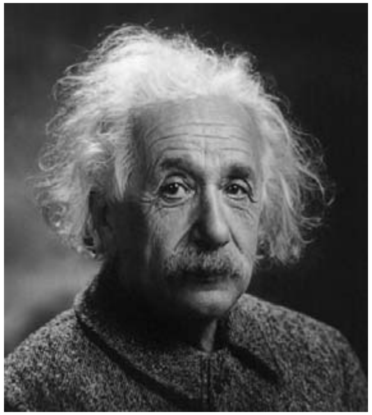


The risk 'system' of the firm (a bit oversimplified)



Parsimony

Make everything as simple as possible, but not simpler.



Integrating what?

Element 1
Adequacy of Pillar 1 risks

- Credit risk
- Market risk
- Operational risk

Element 2
Risks not fully covered under Pillar 1

- Residual risk
- Securitisation risk
- Underestimation of credit risk (model risk)

Element 3
Risks not covered by Pillar 1

- Interest rate risk in the banking book
- Concentration risk
- Liquidity risk
- Settlement risk
- Reputation risk
- Strategic risk
- Underwriting risk
- Pension risk
- Transfer risk
- Underestimation of credit risk using standardised approach
- Weaknesses in credit risk mitigation

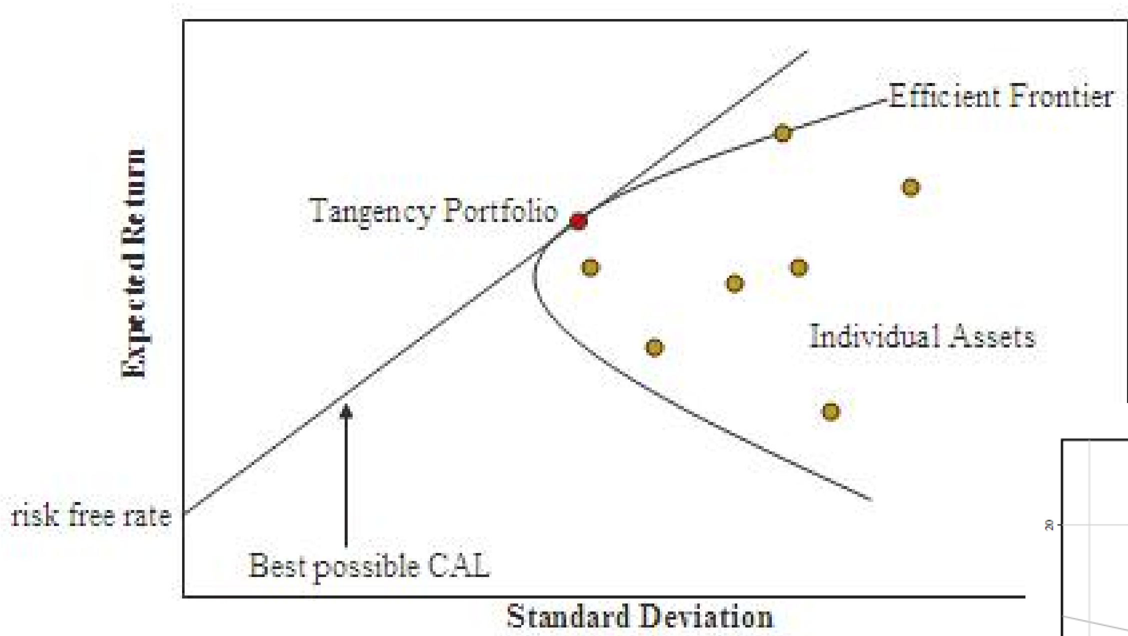
Element 4
External factors

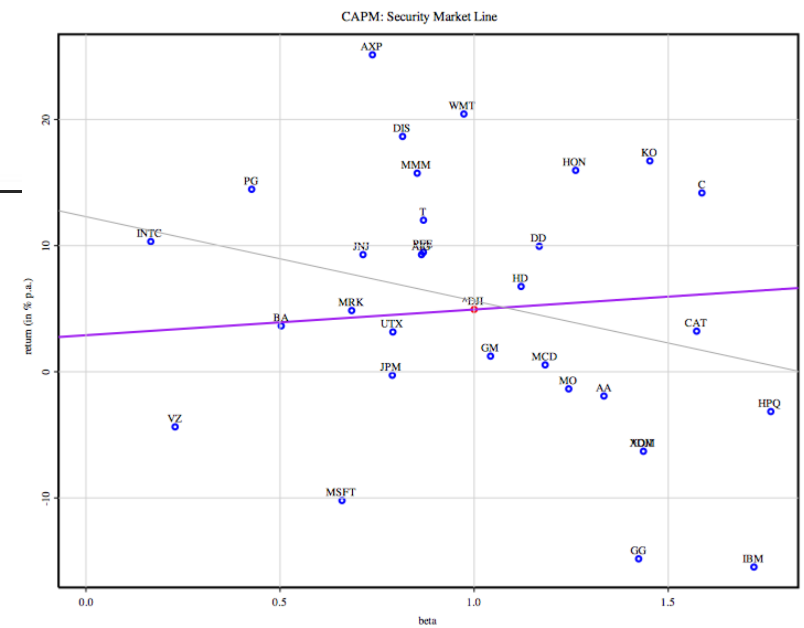
- Business risk (earnings and costs)
- Strategy
- Economic and regulatory environment

FSA, Strengthening capital standards 2006 (after CEBS), CP 06/03

Practical men, who believe themselves to be exempt from any intellectual influences, are usually the slaves of some defunct economist.

Shareholder value? The risk/return tradeoff / CAPM





Whenever a theory appears to you as the only possible one, take this as a sign that you have neither understood the theory nor the problem which it was intended to solve.

A broader question

Is it possible **NOT** to manage risk in an *integrated* manner?

or

If you are going to manage risk *effectively*, you have to do so in an *integrated* manner . . . .

Integration . . .

- Bringing together risk information from different sources (complete picture / data integration)
- Judgements on data, eg. in banking book: PD versus LGD
- Bringing together information on different classes of risk
- Mathematical approaches to combining probabilistic loss distributions ie. copulae
- Correlations – and behaviour under stressed conditions
- Long tail / fat tail problems
- Controlling peoples' behaviour

Dr Claire Lewicki:

Control is an illusion, you infantile egomaniac. Nobody knows what's gonna happen next.

Man must strive and in striving he must err.

Allocation systems / funding . . .

Given the internal funding rates in the UBS Funds Pricing Policy as it existed at the relevant times, UBS's businesses generally were able to fund themselves internally at prices that were better than those available in the market.

UBS

Questions

The role of technology:

- areas in which the primary solution is **technological**?
- areas in which technology is an **enabler**?
- areas in which technology **does not really help** very much?

Questions

Behaviour

- Dr Claire Lewicki (. . . control . . . illusion)
- Decision heuristics / biases
- Retrospective sense-making
- Control will become more **effective** only as it becomes more **sophisticated** only as it becomes **multi-disciplinary**
- The need for **innovation** in risk management and control

The answer?

The Holy Grail:

Enterprise Risk Management

Rephrasing the rephrasing . . .

The initial question becomes four questions:

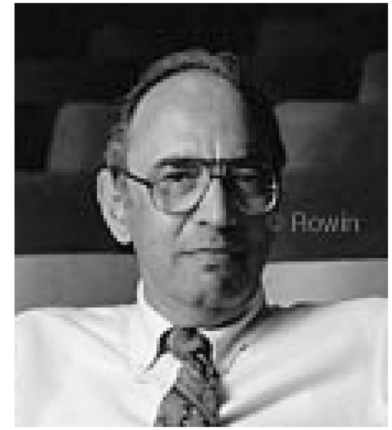
1. Which risks can be managed in an integrated manner?
2. Which risks cannot be managed in an integrated manner?
3. Which risks cannot be managed at all?
4. What should we do about this?

The future

- Predictions on changes to the way supervisors view risk
  - more heat – ‘enhanced supervision’
  - more light or less light?

- Increased role of behaviour
  - alignment of incentive structures (a la Walker)
  - microeconomic allocation systems: internalising costs of risk – including liquidity, reputation, etc
  - the need for more ‘failure’ and more learning from ‘failure’ – especially with trading limits / limit breaches
  - perceptual control insights

. . . and the last word goes to . . .



Since no paradigm ever solves all the problems it defines and since no two paradigms leave all the same problems unsolved, paradigm debates always involve the question: Which problems is it more significant to have solved?

Is it time to shift paradigms?

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