Working Out a Safe and Sound Risk Management Framework

under a reinforcing regulatory pressure

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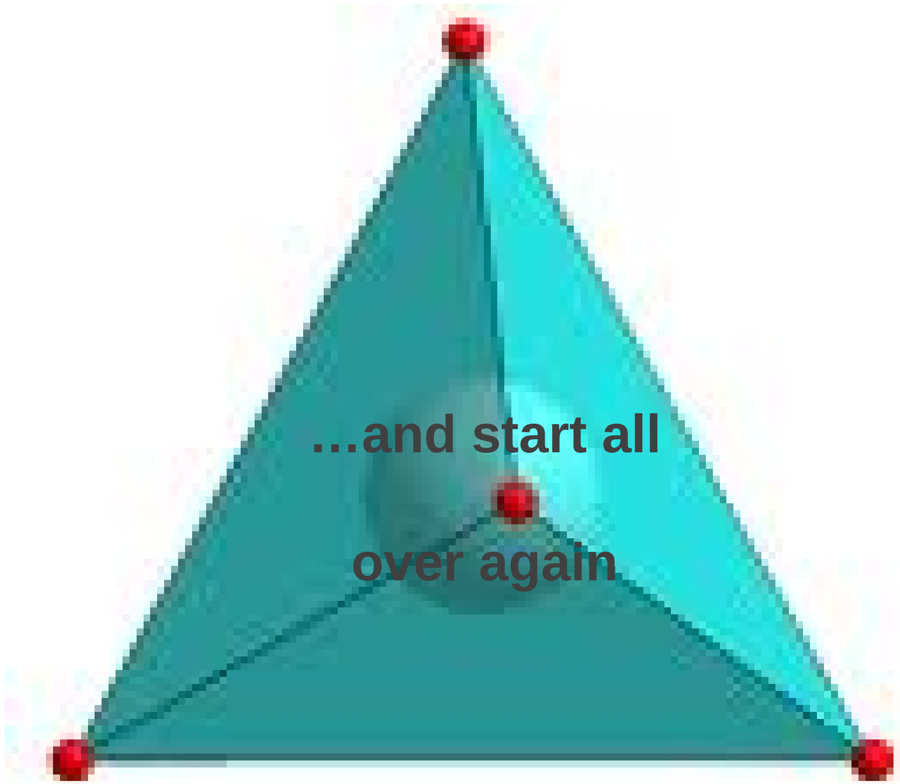
Disclaimer

This document presents the point of view of its author, which which may differ from DEXIA's. It supports an oral presentation and is incomplete without it.

A sound risk management relies on three articulated actions

1. Identify risks



2. Measure risks

3. Manage risks

1. Identify risks

It is not possible to identify all risks, all the more to measure them

The historical most complete usable risk framework was worked out previously to the decision to implement nuclear plant on the US territory.

- It uses a « Probabilistic Risk Assessment », which characterizes risks by:
  - The magnitude (**severity**) of the possible adverse consequence(s), and
  - The likelihood (**probability**) of occurrence of each consequence.

Direct lessons are:

- Risk Management usually focuses (too much?) on those areas where both the probability and severity of the potential losses can be quantified.
- Vague but risky areas can nonetheless be somewhat contained
- It is not possible to identify all risks (« unk-unks » for unknown severity and probability).

Severity / Frequency	Known	Unknown
Known	**Usual risks** that can be measured: credit, interest rate, price, etc. 	Ex: **Model risk**, reputation risk 
Unknown	Unexplained return volatility, **business risk** 	Unk-unk -> reasonable capital cushion 

1. Identify risks

Contain non measurable risks

Non measurable risks can nonetheless be contained

Define and classify risks in a explicit glossary

- Risk taxonomy is the property of the institution (Basel2 pillar2)
- Avoid double counting and loopholes

Work out a yearly Risk Identification process / review

- Jointly with strategy and the businesses
- And the cooperation of Finance to back-test losses and locate excessive returns

Make sure that existing but hardly measurable risks are covered

- Internal risks: People, process and systems
- External risks: Competitive pressure, state of the economy, legal and regulatory changes

1. Identify risks

How to pick the risks that can be identified?

To start with, what is a « risk »?

- Risk definition conditions what a loss is
  - Which in turn conditions the perimeter of the exercise
  - A little poll:
    - Question 1: Can you formulate the definition of a Risk?
    - Question 2: Who could guarantee that the definition of what is a risk is shared across the Institution and documented?

Risk hunting should start by scrutinizing the business model

- The expertise to be valued makes explicits the nature of risks to be taken
  - « Tell me where do you expect your profit to come from, and I will tell you what your risks are »
  - Risk segmentation may differ largely from the normative taxonomy defined by regulators!
- How to chase risks?
  - Losses back tests?
  - Profits?

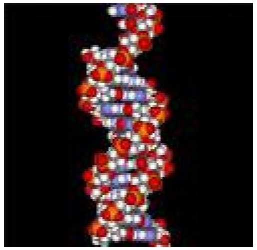
1. Identify risks

How to pick the risks that can be identified?

To find risks, chase profits;

Where do value creation comes from?

- **HARD WORK**
  - Human intensive jobs, like industries



- **SPECIFIC EXPERTISE**
  - Value of information no one else has
- **CAPITAL HOLDING**
  - Risk-taking ability

In Financial Institutions profit usually comes from expertise or capital

- Analyzing profit sources should then reveal either expertise or capital
  - This shines a new light on certain activities like trading, financial services (custody,…), franchises using the brand name (investment services,…), etc.
  - Without a specific expertise, on the long term, capital can hardly return more than the risk-free rate

1. Identify risks

Basel3 introduces limited changes in matter of risk identification

Basel2 enforced the natural requirement that the business of lending others money should rely on an industrial rating infrastructure, able to quantify customers solvency.

- Very much credit oriented
- The need for pillar2 recognizes pillar1 deficiencies

Basel3, as Basel2, remains very much focused on measurable risks

- Basel3 remains in the same logic as Basel2 pillar1
- No evolution of the historical credit – market – operational silo approach

Notably significant risks are still not covered:

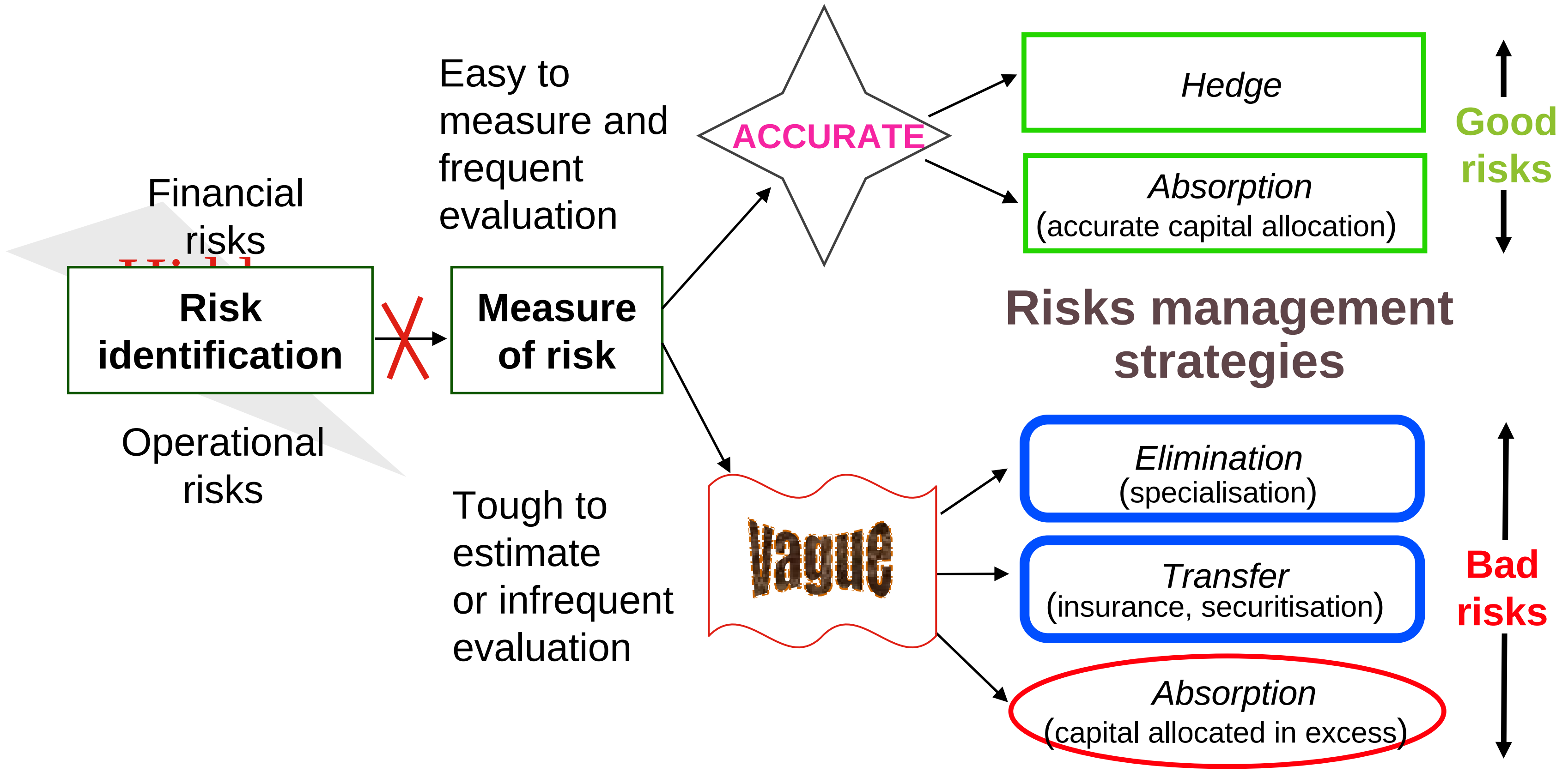
- Interest Rate risk of the Banking Book
- Behavioral risks (prepament, outflow, …)
- Business risk

New interest in concentration, spread and liquidity risk

- Concentration risk is mentionned several times, but not defined
- Banking spread risk has no RWA, but it may impact Tier1
- Liquidity risk remains - rightly - not capitalized but it constrains banks business

2. Measure risks

The ability to measure a risk conditions how it will be managed

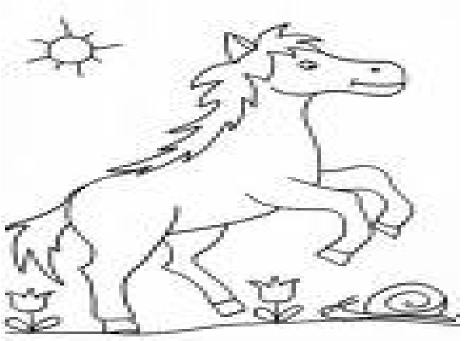


Of course, unidentified risks cannot be measured, can they?

2. Measure risks

There are currently two major risk metrics available

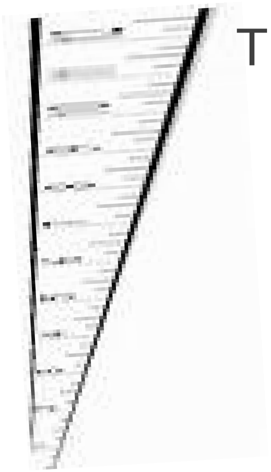
- Regulatory Capital is quite simple and applies to a restrictive perimeter
  - Banking perimeter only
  - Focused on well known risks; largely ignores others
  - Simplified models; for instance ignores concentrations
  - Pro-cyclical by construction



- Economic Capital has a wider scope and depth but it requires enhanced models and better data
  - Consolidated rather than banking perimeter
  - Aims at covering all risks
  - Methodology that can identify concentrations
    - more data needed
  - Through The Cycle

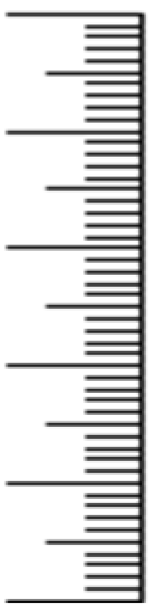
2. Measure risks

The regulatory metrics can be understood as a minimum to use with care



The regulatory metrics should be used with caution

- Dangerous belief that the Credit / Market / Operational risk segmentation covers all risks
- Erroneous sense of safety following regulators approval of « advanced »internal models
- Excessive focus on credit risk, which assessment is biaised
  - Sovereign, long term assets, securitization,…



Each institution should build up the best neutral and transverse risk metrics it can afford

- Including **all risks** that can be measured across all activities
  - Structured products, hidden exposures, pension funds,…
- Exploiting internal **databases** to capitalise on past experience
  - Data definition, completeness, freshness, reliability
- Using the best **models** depending on available data, AND knowing their limitations
  - Constant volatility models; distribution assessment (binomial,…); applicability (return to the mean FX different from IR);…

2. Measure risks

What is new with Basel3?

Solvency constraint will be much heavier than today: Around 9% tier1 (vs. 4%) and 13-15% total (vs. 8%)

- More risk weightings: RWA will increase as much as +200%
  - Securitization, CVA, market risks, inter-financial exposures, SIFIs,…
- Less eligible capital: Reduced as much as -60%
  - Minority interests, DTA, holdings in other financial institutions,…
- Buffers, haircuts, add-ons and « counter cyclical » capital

Quantified liquidity constaints appear too

- LCR: Liquidity Coverage Ratio
- NSFR: Net Stable Funding Ratio
- Leverage

This will impact profitability and the business models

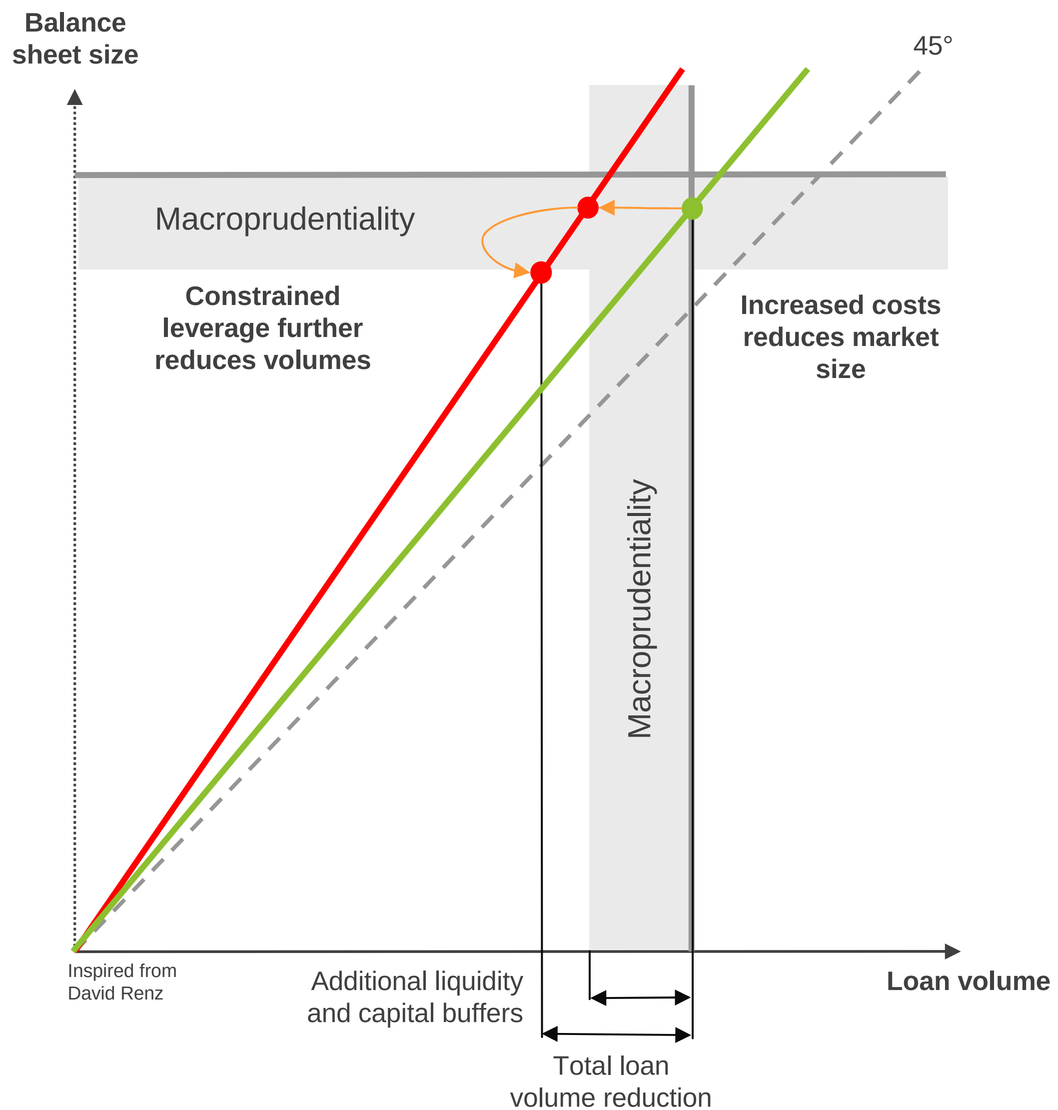
- Less credit and more expensive; also less competition

2. Measure risks

What is new with Basel3? Less credit

Buffers and leverage constraints mean <u>reduced loans volumes</u>

- On average, balance sheet grows quicker than loans production
- Because of extended coverage and buffers, this effect is reinforced

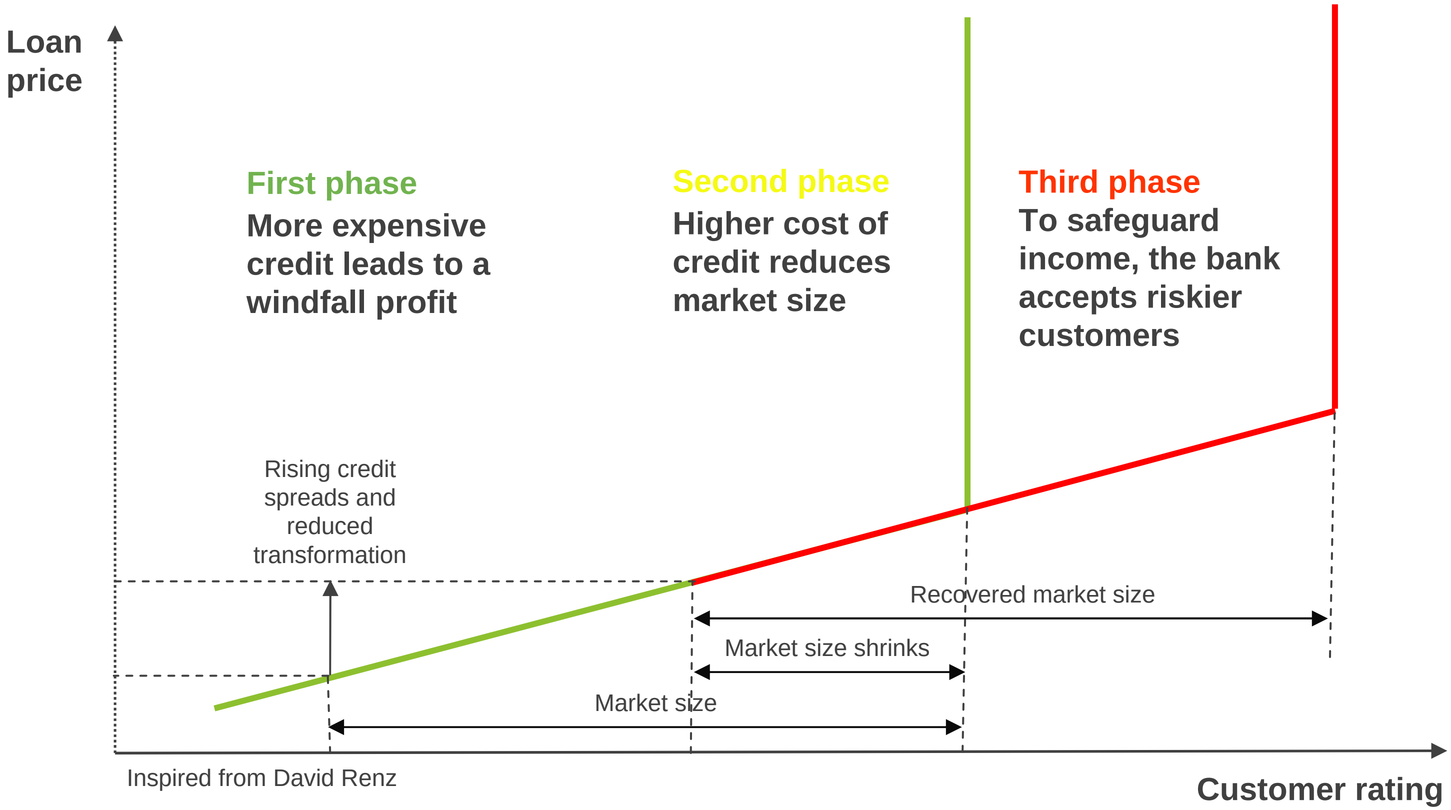


2. Measure risks

What is new with Basel3? More expensive credit

Cushions lead to an <u>increase in pricing</u> and market shift to higher risk

- It will become harder for banks to serve customers with good ratings
- Banks will be compelled to accept riskier customers to safeguard income



3. Manage risks

How can risk measurement influence the management of the institution?

Risk Management is slowly becoming part of the game

- CROs have only recently become CoMex members
- But they still find it difficult to be heard

Indeed, usual Management referentials remain central:

- Accounting
- Regulators
- Rating agencies

But these referentials have serious flaws as far as economic risk assessment is concerned…

ACCOUNTING has serious internal inconsistencies from an economic viewpoint

Conflicting goals…

- Reflect the economic reality -> fair-value, mark-to-market
- AND form a stable base to assess taxes -> historical, accrued

… result into a twisted solution

- Historical/accrued for certain assets and liabilities, mark-to-market for others
  - Example: Accounting treatment of a customer or counterpart rating downgrade, leads to completely different treatments:

Instrument:	Cash in/out	P&L impact	Capital impact
Loan	No	No	No
AFS bond	No	No	Yes
Sale of a CDS	No	Yes	Yes
Bond trading	Yes	Yes	Yes

Consequence: A biaised framework

- Correction: Make sure that risk assessment is based upon homogeneous assessments of assets and liabilities values

3. Manage risks

The REGULATORY framework also carries serious inconsistencies

How can domestic regulators manage global players?

- How can national regulators regulate an international actor?
- Intragroup guarantees move risks to the less severe places

Incoherence between the regulatory framework and laws?

- What capital if banks are not « allowed » to default?

Conflict #1: Sovereignty or Safety ?

- PIGS, Ländesbanken, Mutual banks,…

Conflict #2: « More capital » or « More credit »?

- Don’t you dare…

Contradiction across regulatory frameworks

- Commercial and Investment Banks: Different regulators
- Banking and Insurance: Different severity levels
- Financial Institutions and Hedge funds: Different constraints

3. Manage risks

The REGULATORY framework is evolving: What can be expected from Basel3?

Impacts on banks

- Less profitability
- Less business models alternatives; business drop outs may reduce competition
- Less transformation; impact on pricing
- Legal entities must reorganize to deal with local capitalization and local funding
- and … institutions must retain flexibility to accomodate years of fine tuning and future reforms

Menu of actions to be considered

- Capital management
  - Business models review
  - Review performance and incentives to introduce quantified capital objectives
  - Review models and data
  - Review pricing
  - Branch vs. Subsidiarly
  - Charge correctly capital costs
  - Focus on capital light areas (attention to cross selling and brand values!)
  - Sale of non core businesses (insurance subs)
- Liquidity management
  - Improve stickiness of deposits
  - Liquidity planning and stress tests
- Leverage management
  - Turn to higher risk / higher return lending
  - Sell low margin assets

3. Manage risks

The REGULATORY framework is evolving: Will Basel3 work?

Basel3 will make the financial system smaller and safer when stable

- Reduced risk of individual bank failures and reduced interconnectivity
- Reduced lending capacity
- Reduced investors appetite for bank debt and equity

Basel3 will NOT increase the overall stability of the financial system because of a non-levelled playing field between countries

- Implementation is expected to diverge on a number of issues
  - Performance and compensation, taxes and levies, SIFIs (to be resolved by the French presidency of the G20), living wills, supervision, accounting and disclosures,…
- Inconsistent implementation will require international arbitrage

Basel3 will NOT reduce the risk of systemic liquidity crises

- Liquidity is a matter of trust, not capital
- Keeping the markets working is the responsibility of the Central banks
  - They implicitly endorse this as they act as last resorts when markets are down
- But there is a growing mistrust in the strength of central banks, as they manage the countrie’s liabilities ASSUMING the quality of its assets
  - … and MOST COUNTRIES DO NOT HAVE BALANCE SHEETS.

3. Manage risks

RATING AGENCIES are in a challenging posture

Ratings agencies work out a link between Risk and Capital on the basis of available data

- Most of the available data is from the accounting or the regulatory frameworks, both of which are biaised
- Even with a good dose of intelligence and extra internal information, ratings agencies can hardly generate a better risk assessment than what Financial Institutions a capable of building up for themselves

Ratings agencies also suffer from potential conflicts of interests

- Being paid (at least partially) by those being rated
- Rating of their own work, like ABS tranches
  - More than 50% of Moody's revenue in 2007
- And observers that become (involuntarily?) actors
  - Downgrades « black hole »

3. Manage risks

How to make the management understand and use risk information?

Use risk measures that can be understood by the management

- What risk metrics?
  - Are VaR, expected shortfall, correlations,… understood by the management?
  - Are « potential losses » or economic capital somewhat clearer concepts?
- Can it be compared with return, expected profitability?
  - More P&L impact than potential value reduction
- Is it coherent with capital assessment? As executing a strategy means allocating capital
  - Financial planning otfen looks more like a discussion on volumes and revenues than a review of business performance aligned with the projected implementation of a strategy

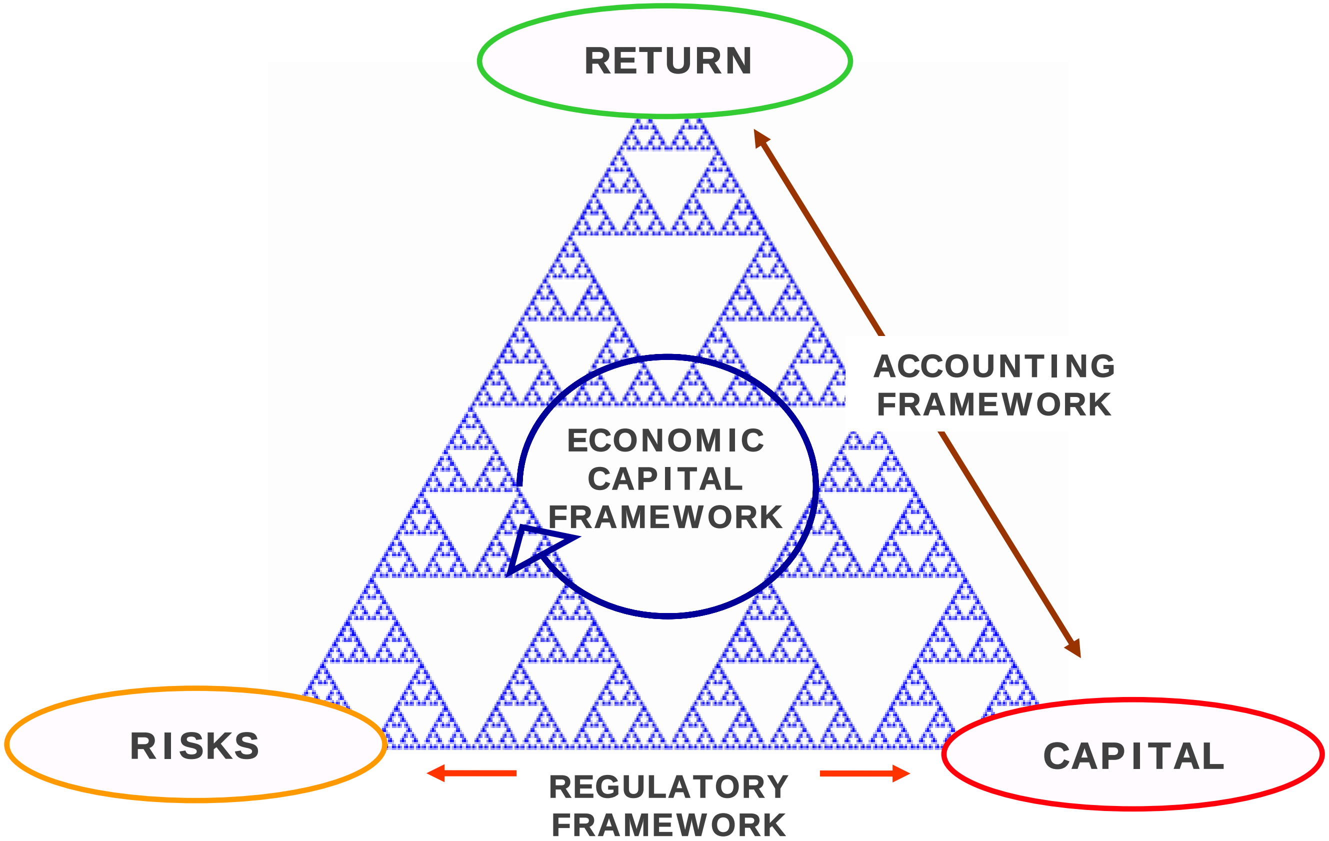
And that can be integrated into the management framework

- By adjusting already existing measures of return and capital and using them in the management processes
  - ICAAP
- The regulatory focus is also on having the Financial Institutions work out the best for themselves

> "Economic capital measures may be one of several key factors used to inform decision-making in areas such as profitability, pricing, and portfolio optimisation"
>
> *(Basel Committee on Banking Supervision, March 2009)*

3. Manage risks

Towards the magic triangle?

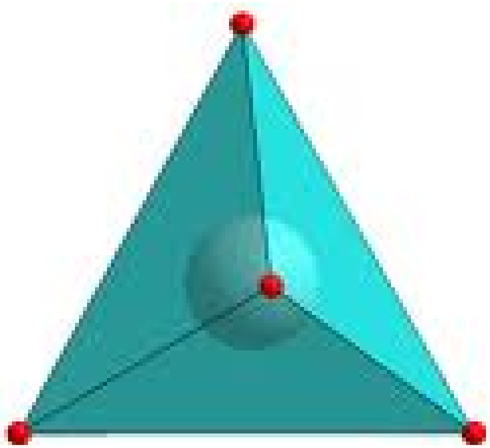


To infiltrate successfully a risk framework within the management of a financial institution, it has to be made coherent with the existing return and capital frameworks.

- Only the Economic Capital framework fits this constraint, doesn't it?

How to work out a safe and sound Risk Management framework?

Conclusion



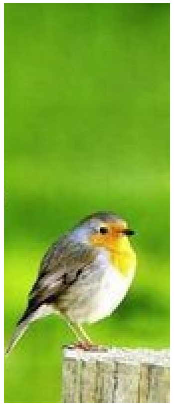
Building up a safe and sound Risk Management framework requires a much larger view than Basel3

- Identify, measure and manage risks
  - Measure risks with the best internal metrics you can afford, i.e. economic capital; generate regulatory capital as a by-product
- Articulate adequately risks, return and capital
  - To support shareholders ambition to create value
- Basel3 will create more constraints
  - Still, the ambition remains to create value – even though it is under the regulatory constraint

Basel3 will improve the safety of the Financial system, at the expense of reducing its size and role as an economic actor

- But Basel3 will not protect against liquidity crises, nor it will make the financial system more stable because of national discrepancies.
- And it contains the ingredients for more risk-taking and unfair practices.

Diffuse a risk culture … be aware …



- Worst threats result from the combination of high visibility and blindness
  - **Basel 3**
  - **Sovereigns**

Thank you for your attention