



Risk Management the new era: 2009 and beyond

# **Solvency II: The Last Regulation of an Old World or the First of a New One ?**

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# Agenda

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- **Pro-cyclicality in Basel II**
- **Solving pro-cyclicality in banking**
- **Pro-cyclicality and Solvency II**
- **Relationship between Accounting Standards and Capital Regulation**

# Pro-cyclicality in Basel II

# Pro-cyclicality in Basel II (1/3)

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**An Academic Response to Basel II: By Jón Daniélfsson, Paul Embrechts, Charles Goodhart, Con Keating, Felix Muennich, Olivier Renault and Hyun Song Shin (May 2001)**

- **The proposed regulations fail to consider the fact that risk is endogenous**
  - Value-at-Risk can destabilise an economy and induce crashes when they would not otherwise occur.
  
- **Statistical models used for forecasting risk have been proven to give inconsistent and biased forecasts**
  - notably under-estimating the joint downside risk of different assets

# Pro-cyclicality in Basel II (2/3)

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- **Heavy reliance on credit rating agencies for the standard approach to credit risk is misguided**
  - They are unregulated and the quality of their risk estimates is largely unobservable
- **Operational risk modelling is not possible given current databases and technology**
- **Financial regulation is inherently procyclical**
  - Our view is that this set of proposals (BASEL II) will, overall, exacerbate this tendency significantly. In so far as the purpose of financial regulation is to reduce the likelihood of systemic crisis, these proposals will actually tend to negate, not promote this useful purpose

## Pro-cyclicality in Basel II (3/3)

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- **Of special concern is how the proposed regulations would induce the harmonisation of investment decisions during crises with the consequence of destabilising rather than stabilising the global financial system**

**Unfortunately, the financial turmoil proved they were right !**

# Solving pro-cyclicality in banking

# **Solving pro-cyclicality in banking (1/3)**

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## **Financial sector pro-cyclicality. Lessons from the crisis:**

**By Fabio Panetta and Paolo Angelini (coordinators), Ugo Albertazzi, Francesco Columba, Wanda Cornacchia, Antonio Di Cesare, Andrea Pilati, Carmelo Salleo and Giovanni Santini (2009)**

- **Several measures have been proposed to mitigate the pro-cyclicality of risk-based regulation**
- **All rules require further harmonisation of accounting standards and of the criteria for consolidation**

# Solving pro-cyclicality in banking (2/3)

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## ➤ Adjusting for expected losses

- Since defaults increase in downturns, dynamic provisioning for expected losses could be introduced (the experience of SPAIN )
- **Problem:** It is not consistent with IAS. But, should the Accounting Standards be counter-cyclical ?
- **Alternatively (Panetta et al., 2009):** Modify banks' own funds by introducing credit value adjustments (CVA) computed on the basis of the deterioration in credit quality experienced in past downturns. Accounting not affected

## ➤ Adjusting for unexpected losses

- Smoothing PD, LGD, EAD, M over time, since ratings proved not to be smoothed over the cycle (Example: Downgrading the customer in good times)
- Repullo et al. (2009): smoothing the output of the capital function using an adjustment factor that depends on the deviation of GDP growth from its long-run average

# Solving pro-cyclicality in banking (3/3)

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## ➤ Adjusting for macro-prudential risks

- Goodhart and Persaud (2008) propose to link capital requirements to the rate of expansion of bank lending and to asset prices in the relevant sectors
- They *“do not advocate doing away completely with a floor to capital adequacy requirements. But this could be lower and simpler than today, say 3 per cent on a ratio of capital to total liabilities or assets”*

## ➤ Contingent capital

- Kashyap et al. (2008): Banks should buy insurance contracts that would pay off in case of a systemic crisis.
- The seller of protection (e.g. a pension fund or a sovereign wealth fund) should put the potential pay-off in a custodial account

## ➤ Target leverage ratio

- Limits on leverage, defined as the ratio between unweighted total bank assets and capital

# Pro-cyclicality and Solvency II

# Pro-cyclicality and Solvency II (1/6)

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Unlike banking, in insurance the major sources of potential pro-cyclicality are to be found in the financial markets:

- Equities and Default risk for bond issuers

The mechanism is quite different:

- in a downturn, the increased likelihood of breaches of the capital requirement might lead insurance companies to sell equities and bonds, exacerbating the market trend
- **Basically, risk is not endogenous !**

# Pro-cyclicality and Solvency II (2/6)

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In order to mitigate potential pro-cyclical effects, the market risk module of the standard formula for the Solvency Capital Requirement should include a symmetric adjustment mechanism with respect to changes in the level of equity prices

## ➤ Article 105a: Calculation of the equity risk sub-module: Symmetric adjustment mechanism

1. The equity risk ... shall include a symmetric adjustment to the equity capital charge ...
2. The symmetric adjustment ... shall be based on a function of the current level of an appropriate equity index and a weighted average level of that index. The weighted average shall be calculated over an appropriate period of time ..
3. The symmetric adjustment ... shall not result in an equity capital charge being applied that is more than 10 percentage points lower or 10 percentage points higher than the standard equity capital charge

# Pro-cyclicality and Solvency II (3/6)

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**In the event of exceptional falls in financial markets ... provision should be made to allow supervisory authorities to extend the time period within which insurance and reinsurance undertakings have to re-establish the level of eligible own funds covering the SCR**

## ➤ **Article 136: Non-Compliance with the Solvency Capital Requirement**

- 3a. In the event of an exceptional fall in financial markets, the supervisory authority may extend the period set out in the second sub-paragraph of paragraph 3 (6 months) by an appropriate period of time taking into account all relevant factors

## ➤ **Article 141: Implementing Measure**

- The Commission shall adopt implementing measures specifying the factors to be taken into account in accordance with Article 136 (3a) including the maximum appropriate period of time, expressed in total number of months, which shall be the same for all insurance and reinsurance undertakings as referred to in the first sub paragraph of Article 136(3a)

## Pro-cyclicality and Solvency II (4/6)

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- **The MCR should ensure a minimum level below which the amount of financial resources should not fall**
- **It is calculated in accordance with a simple formula based on technical provisions, written premiums, capital-at-risk, deferred tax and administrative expenses**
  - **basically, it is a sort of leverage ratio**
- **MCR shall not fall below 25% nor exceed 45% of the undertaking's SCR**

# Pro-cyclicality and Solvency II (5/6)

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- **This approach is a step in a new direction. Solvency II is the first Directive/Regulation which explicitly mentions the risks of pro-cyclicality**
- **The symmetric adjustment mechanism (SAM) - coupled with the definition of MCR (which is a sort of leverage ratio) - designs an approach *a là* Goodhart and Persaud (2008) which doesn't interfere with the accounting**
- **Is it enough ? Difficult to say**
  - *it will also depend on the design of the SAM, which should be defined at Level II*

# Pro-cyclicality and Solvency II (6/6)

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- **One weakness is that the limitation of 10 per cent is not really derived from any direct evidence**
- **Another problem is that the SAM applies only to equities and not to bonds or real estate properties**
- **The provision that extends the time period to recover a breach of the SCR is extremely important**
  - *However, implementation is crucial to judge the effectiveness of the provision*
  - *Possibly, automatic mechanisms are preferable to discretionary, since they eliminate the need for Supervisors to justify forbearance during bad periods, when risk perception is greatly increased in the markets and, most importantly, in public opinion*

# **Relationship between Accounting Standards and Capital Regulation**

# Relationship between Accounting Standards and Capital Regulation (1/3)

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- On procyclicality, the FSF recommends actions that will dampen procyclicality in bank capital, establish more forward-looking loan loss provisions, and mitigate the adverse interaction between the build-up of leverage, maturity mismatching and fair value accounting (Draghi, 2009)
- A key point is whether or not IAS should be counter-cyclical
  - *Accountants do not accept the concept of “latent” or expected losses, on which dynamic provisioning is based. They prefer to focus on actual losses, information that is more relevant for short-term investors (and, very often, for managers with misaligned incentives as well as Governments looking for hefty anticipated taxes)*

# Relationship between Accounting Standards and Capital Regulation (2/3)

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- My impression is that prudential supervision alone cannot do the whole job. If this were attempted, huge incentives for regulatory arbitrage between sectors and areas would arise
- If the IAS want to be really global (and functional) they should face the problem of forward-looking provisions
  - *Think about Cat-risks: without equalisation reserves, the insurance mechanism is not efficient*
- But the very general point is made by Diamond and Rajan (2009):
  - *“in boom times, the market requires banks to hold very low levels of capital, in part because euphoria makes losses seem remote ...*
  - *Attempts to reduce capital requirements in busts are equally fraught. The risk-averse market wants banks to hold a lot more capital than regulators require, and its will naturally prevails”*

# Relationship between Accounting Standards and Capital Regulation (3/3)

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- Accounting based on “fair value” cannot ignore that the appetite for risk varies through the cycle. **In other terms, the risk-free rate is not observable directly from the market**
- A sound and simple principle: no gains from fair value can be distributed until the risk that originated them is completely expired
- Easy to say, hard to do ...
- ... and quite distant from the IASB approach !