Countercyclical Regulation in Solvency II: Merits and Flaws

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1. Background [1]

- Solvency II EC Directive 2009: general principles for valuation of liabilities.
  - "Liabilities shall be valued at the amount for which they could be transferred, or settled, between two knowledgeable willing parties in an arm's length transaction." (75)
  - "The value of technical provisions shall be equal to the sum of a best estimate and a risk margin." (77.1)
  - "The best estimate shall correspond to the probability-weighted average of future cash-flows, taking account of the time value of money (expected present value of future cash-flows), using the relevant risk-free interest rate term structure." (77.2)
  - "The risk margin shall be such as to ensure that the value of the technical provisions is equivalent to the amount that insurance and reinsurance undertakings would be expected to require in order to take over and meet the insurance and reinsurance obligations." (77.3)
  - "However, where future cash flows associated with insurance or reinsurance obligations can be replicated reliably using financial instruments for which a reliable market value is observable, the value of technical provisions associated with those future cash flows shall be determined on the basis of the market value of those financial instruments. In this case, separate calculations of the best estimate and the risk margin shall not be required." (77.4)

Background [2]

- Principles of 'market-consistent' valuation of insurance liabilities.
- What discount rate is to be applied when determining the value of insurance liabilities, for the purpose of calculating technical provisions?
- Should the discount rate include a liquidity/matching premium and/or a countercyclical premium?
- Solvency II EC Directive 2009 to be complemented with level 2 implementing measures: QIS, ...
  - Liquidity premium in QIS 5 (mid 2010).
  - The effect of the introduction of the liquidity premium in QIS 5 is estimated at about 1% of the total value of technical provisions (about 15% of SCR).
- Upon the introduction of the liquidity premium in Solvency II's QIS 5, the language of discounting in insurance has altered.
- Adjustments (top-ups) to the risk-free interest rate term structure now play a prominent role in the design of Solvency II (October 2011 draft level 2 implementing measures).
- Two adjustments in particular: the matching premium and the countercyclical premium (CCP).

Background [3]

- Current proposals for matching premium, or matching adjustment, such that it has quite narrow applicability, and is relevant mainly for UK and Spanish insurance companies.
- We focus on the CCP.
- The Solvency II draft level 2 implementing measures envisages a CCP, which
  - is activated whenever markets do not provide reliable values for supervisory purposes;
  - is to be added on top of the risk-free interest rate term structure;
  - applies broadly to insurance liabilities, except to those liabilities to which a matching premium already applies;
  - is implemented upon decision of EIOPA (both when and by how much);
  - is a crisis management measure in insurance at the EU level.
- It is presented as an instrument that is meant to reduce balance sheet stress for insurers in times of stressed asset markets, in particular bond markets, with heavily widened credit and liquidity spreads, considered to be temporary distortions.

2. Some Fundamental Issues: General

- What is the goal of solvency supervision? Dual:
  - Do you want to have sufficient funds to honor guarantees also in case the portfolio would be restructured and the assets would have to be liquidated, or do you assume that the entity under supervision will not be interrupted (e.g., taken over) and require that under the assumption that the assets will never have to be sold prematurely sufficient funds is available.
- Valuation principles in EC Directive suggest former.
- Adoption of matching premium is suggested by possibility of replicating insurance liabilities by illiquid assets (illiquid bonds). In principle based on a hold-to-maturity perspective: adoption of matching premium suggests the latter.
- For prudential purposes, the former seems more natural.

Some Fundamental Issues: Market-Consistent Valuation

- Market-consistent valuation in Solvency II is an important step forward, improving the comparison between asset values and liability values. However,
  - Computation of the risk margin for non-traded liabilities quite arbitrary!
  - Reliability of market values in times of financial stress?!

Some Fundamental Issues: Liquidity and Matching Premium

- We discussed the liquidity premium of QIS 5 with EIOPA on March 18, 2011, (and with the European Parliament in March, 2012) and concluded that
  - There is no solid theoretical justification
    - it mixes market-consistent valuation and hold-to-maturity view;
    - it assumes utopia ignoring unhedgeable risks at the core of insurance (longevity, expense, revision,...).
  - nor a proper operational procedure
    - econometrically very challenging;
    - widely varying estimates, model risk (basis of supervision?).
- Transparency, which is key to the success of third pillar supervision, is at stake.
- Narrow applicability of matching premium desirable.

Some Fundamental Issues: CCP [1]

- It is by now recognized that there is a need to consider variations in the risk cycle, which manifests itself in credit, liquidity, risk taking and asset prices.
- In exuberant times, liquidity is abundant and asset prices may form overpriced bubbles, as risk is underestimated and underpriced. This boosts credit volumes and enhances risk shifting incentives.
- In distress times, liquidity shrinks and credit contracts. Assets become illiquid and may become underpriced.
- This excess volatility has consequences and may make prices unreliable for supervisory purposes.
  - $\Rightarrow$ There is a need to counteract the effects of market distress on values for supervisory purposes.
- Furthermore, usual rules of Solvency II have a procyclical nature.
  - $\Rightarrow$ Need to symmetrically counteract this procyclical nature: build up buffers in booms, provide leniency in downturns.
- There is a relevant issue.

Some Fundamental Issues: CCP [2]

- In its current form, quantification of mispricing is required.
  - $\Rightarrow$ Development of measurement techniques (even formula as industry desires?).
- In its current form, trigger event is required.
  - $\Rightarrow$ Development of techniques to assess (even in a predictive manner) status of the cycle.
  - $\Rightarrow$ Trigger VIX says something about volatility, not excess volatility.
  - $\Rightarrow$ Updated regularly and account for CCP risk.
- How to prevent that CCP induces risk-taking (bailed out by EIOPA!) and herding, as it is likely to do in its current form?

3. Advice [1]

If adopted, the minimal conditions are:

1. The CCP ought to be symmetric. The current proposal is not countercyclical. In periods of financial stress it reduces balance sheet stress for insurers, yet in times of excessive exuberance the CCP is 0 and not negative.
2. The CCP should be estimated conservatively.
3. The procedures for applying the CCP should be reviewed regularly and account for CCP risk.
4. There should be further high-level research on the questions of (i) how to reliably determine a time-dependent, maturity-dependent, and liability-dependent CCP, and (ii) under what market circumstances to apply a CCP.

Advice [2]

But beware that:

1. There is no proper operational procedure underlying the CCP in its current form.
2. The CCP does not reduce balance sheet volatility.
3. The CCP may provide undesirable incentives.
4. Transparency, which is key to the success of the arguably paramount third pillar supervision, is at stake. (And, related to transparency, why adjust the liability side and not the asset side, if asset values are unreliable?)

Advice [3]

- If offering leniency is only goal, why not discretionally (or not?) adjust the ladder of intervention if excess volatility is present and insurers under consideration have solid ('illiquid') long term matched liabilities?
  - Insurance companies differ from other financial institutions in the typical (very) long term nature of their liabilities.
  - As such, many insurers inherently feature a high intertemporal risk bearing capacity.
  - The time dimension should be more explicitly embedded in solvency supervision.
  - Insurance companies with unredeemable long term matched liabilities have more time to recover from financial economic shocks, without directly jeopardizing payments to policyholders.

Advice [4]

- In the current design of Solvency II, there exists a possibility to extend the recovery period up to 7 years.
- The duration of the liabilities is an important input variable, dictating the extension of the recovery period.
- This is a basic countercyclical measure that may be developed further and applied in full generality.
- It is economically sound and moreover transparent.
- High-level research on the exact implementation of such measures is urgently needed and will be carried out.

Advice [5]

- To design more explicit countercyclical regulatory measures, the creation of countercyclical buffers may be desirable.
- This is perhaps most naturally done by creating a revaluation reserve.
- It creates additional buffers in good times, when capital is relatively cheap, which may be run down in bad times, when excess volatility is present and capital is expensive.
- Such a reserve would set aside capital upon revaluation, which would no longer automatically flow into the insurer's own funds.
- It reduces balance sheet volatility and is truly countercyclical.
- It is economically sound and transparent.
- As any countercyclical measure, it requires assessment of the risk cycle, and high-level research on the exact implementation of this measure is urgently needed.

Going Forward

- EIOPA was asked on September 26, 2012, to assess the impact of solvency rules on long-term guarantees (LTG) (LTG package) and to report back to the European Commission by February 1, 2013.
- The European Systemic Risk Board (ESRB), which has been criticizing the CCP approach, is currently working on potential alternative countercyclical measures, including the creation of a revaluation reserve.
- Academic advice has been called for by the ESRB.