19 April 2010

Solvency II

Why 'expected future profits' must be treated as tier 1 capital

Summary

The role of 'expected future profits' in determining a firm's own funds is attracting much discussion, with suggestions that they should be excluded from tier 1 capital. We believe this is at least in part due to a misunderstanding of their nature – even the term 'expected future profits' is misleading and we prefer to refer to them as *in-force cashflows*.

This paper discusses how *in-force cashflows* from existing business should be treated in the calculation of own funds. We argue that *in-force cashflows* should be treated as tier 1 capital under Solvency II, because:

- The inclusion of *in-force cashflows* in the definition of own funds is consistent with the economic basis of Solvency II, and that not including them as tier 1 capital would lead to an arbitrary and unduly conservative approach to capital calculation;
- *In-force cashflows* meet all the requirements of tier 1 capital and their possible variation is allowed for explicitly in setting required capital. Not including them in tier 1 capital would be inconsistent and lead to double counting of risk

The impact of excluding the allowance for *in-force cashflows* from Tier 1 is large. Whilst it is difficult to be precise, our initial analysis suggests that the amount of own funds that would be excluded from Tier 1 would be of the order €100 billion for the European insurance industry.

In-force cashflows (wrongly termed 'expected future profit') relates to existing business

In this paper we use the term *in-force cashflows* (some use the term Value of In-force or VIF). 'Expected future profits' is a misleading term as *in-force cashflows* does not include any profits on future business, only the *in-force cashflows* from business already on the books. For the avoidance of doubt, future contracts from existing customers or from prospects are not included from the Solvency II balance sheet in any form.

Solvency II is a risk-based, economic approach to setting required capital. It uses 'market consistent' values for both assets and liabilities. That is, it values assets at their market value, and values all other cash-flows from contracts already written consistently with the way assets are valued. These we call *in-force cashflows* and include: premiums already received; premiums to be received; related acquisition costs; future claims; future expenses; and future investment income. A firm's available capital (its "own funds") is the net of these assets less liabilities, and therefore a firm's own funds includes its best estimate *in-force cashflows* for existing business.

Impact of an inappropriate interpretation of *in-force cashflows* is of the order of €100 bn for the Industry

There has been some discussion as to whether *in-force cashflows* should be included as tier 1 capital in Solvency II. We understand that CEIOPS considers what it refers to as 'expected future profits', could be defined as the expected best estimate profit margins arising from the receipt of future premiums, less the associated outgo, from contracts already written. This does not include all *in-force cashflows*, but our initial analysis suggests that it is of a similar total size. The total *in-force cashflows* for the European insurance industry is of the order of €200 billion[1]; we believe that the CEIOPS concept could be in the order of €100 billion.

[1] Based on audited Embedded Value statements from 11 of the largest insurers, scaled up to represent the total European market

Consideration of *in-force cashflows* as Tier 1 is consistent with an economic approach
Under an economic (i.e. Solvency II) method of valuing assets and liabilities, these *in-force cashflows* are recognised the moment the contract was sold, as the difference between the value of assets and liabilities. They would therefore be classified as retained profits on the Solvency II balance sheet and meet the requirements for 'subordination and permanent availability' required of the highest quality (tier 1) capital.[2]

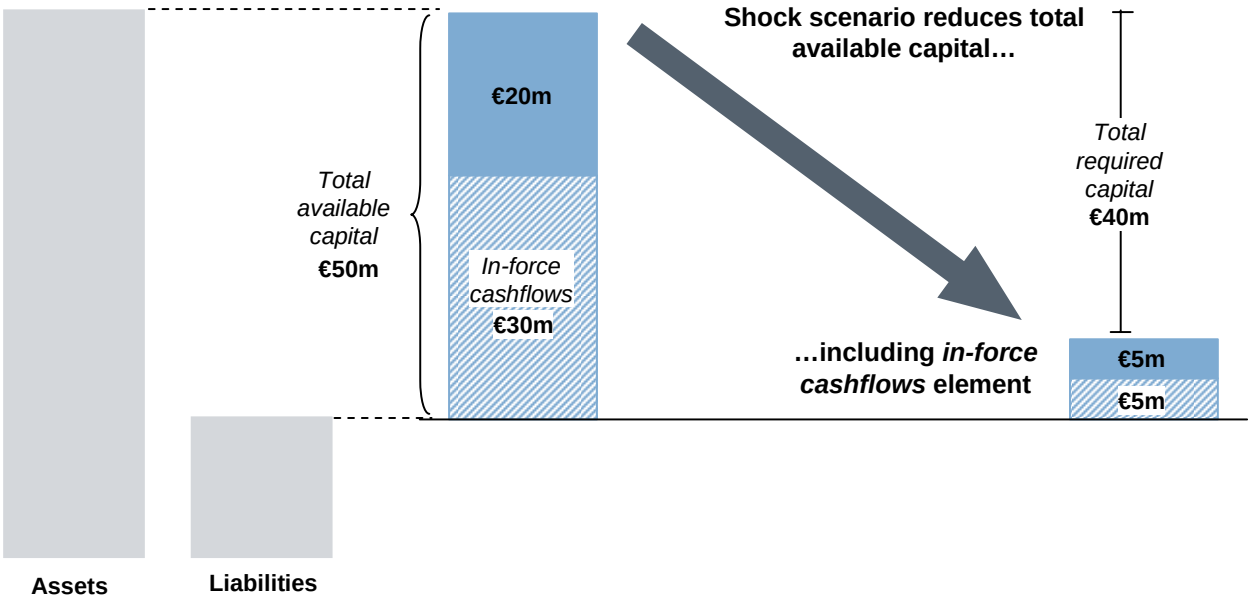
Solvency II subjects both assets and liabilities to stress tests to determine required capital. For example, following a market crash both assets and liabilities will typically fall, but liabilities will typically fall by less than assets, giving rise to a capital requirement. This capital requirement explicitly allows for any reduction in *in-force cashflows* in a stress scenario.

For example, consider the following situation for an insurance company:

	Total	In-force cashflows	Other capital
Total available capital[3]	€50 million	€30 million	€20 million
Less impact of 99.5% stress scenario	*(€40 million)*	*(€25 million)*	*(15 million)*
Total available capital (after stress)	€10 million	€5 million	€5 million

In this case, the insurer would, therefore, be required to hold at least €40 million in capital, which includes €25 million in respect of the impact on in-force cashflows. The diagram below illustrates the situation.

Figure 1 – Example: how risk for *in-force cashflows* is captured



Thus Solvency II explicitly allows for the possibility that *in-force cashflows* will diminish, or become negative in stress scenarios and requires capital to be held to cover this eventuality. These stress tests take into account all events which may vary in the stress event, for example where a market crash also results in policyholders seeking to cancel contracts and these cancellations would further reduce *in-force cashflows*, this would be allowed for in the calculation. Therefore, *in-force cashflows* are loss-absorbent.

[2] CEIOPS Secretary General, Carlos Montalvo, commentary on QIS5 – as reported on www.businessinsurance.com: 'Funds that are recognized as tier 1 capital will need to meet the requirements of "subordination and permanent availability," Mr. Montalvo said, adding that the current value of future cash flows could only be accepted as tier 1 capital if it meets both elements'– 14 April 2010
[3] Where total available capital is calculated as the market value of assets less the market value of liabilities

***In-force cashflows* classified in Tier3 leads to double-counting the risk (on the SCR, on the own funds)**

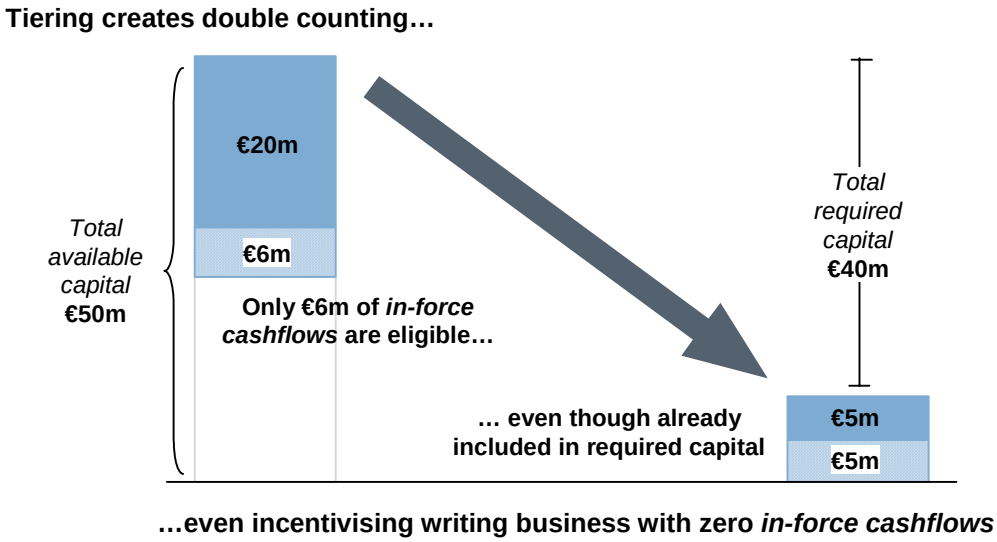
Capital tiering is a concept that aims to reflect the possibility that certain sources of capital may not be available for loss absorption when required. It is used to limit the quantity of lower quality capital that can be used to meet capital requirements. CEIOPS suggests that only 50% of required capital can be met from tier 2 and only 15%[4] from tier 3.

CEIOPS suggested that *in-force cashflows* are classified as tier 3. We strongly believe that this is an inappropriate application of the tiering concept and will lead to double counting of capital requirements.

Tiering is appropriately applied to sources of capital which is exposed to risks that are not reflected in the calculation of required capital. For example, the risk that callable debt may need to be repaid before a stress event, and hence not be available to absorb losses is addressed by placing it in a lower tier rather than increasing required capital. If variations in *in-force cashflows* were excluded from the calculation of required capital then tiering might be appropriate (although it would difficult to see how tiering could be designed to meet the 1 in 200 level stress calibrated in the capital requirements). However, as this risk is allowed for explicitly in setting the level of required capital to also subject it to tiering would be double counting.

An extension of the example above helps make this clear. If *in-force cashflows* were classified as tier 3 capital then a maximum of € 6 million (=15% * € 40 million for the SCR) of the initial *in-force cashflows* of €30 million would be allowed to be used to cover this capital requirement. The risk has been allowed for twice: once in the capital requirement and once in limiting the own funds.

Figure 2 – Example: tiering *in-force cashflows* double counts the risk



The situation is very counter-intuitive. If *in-force cashflows* are treated as tier 3, then the insurer needs to hold capital to cover the risk of a loss in such profits, even though they were not included in the balance sheet to start with. It would put the insurer in an illogical position of having to raise fresh tier 1 capital to cover the potential loss in value (the €24 million) of the tier 3 capital; it would have been better off writing business with no expected *in-force cashflows*.

[4] CIEOPS final advice on the Implementing Measures sets 15% to back the SCR while the Framework Directive sets 33%

This situation arises because in some existing, less risk sensitive capital regimes potential losses in *in-force cashflows* are not included in calculating required capital; in such a regime it is logical to exclude them from the available capital, or at least place a limit on their inclusion. This is not the case in a risk-sensitive approach such as Solvency II.

It is our view that attempting to isolate *in-force cashflows* in the excess of assets over liabilities, and then treating them differently would be inconsistent with the economic basis of Solvency II and contradict Articles 75 and 88 of the Directive.[5] We further believe that failure to classify *in-force cashflows* as tier 1 capital would stand in contrast to recital 48 of the Directive[6]

Basel II Comparison - Treatment of *in-force cashflows* is different under Basel II, and so the direct parallel between the two regimes is not appropriate

Long-term insurance business is fundamentally different to banking in many respects – thus, Solvency II is not equivalent to Basel II, and nor should it be. Nevertheless, it is instructive to consider how *in-force cashflows* are allowed for under Basel II.

The Basel II regime uses two different regimes for different business. For many types of business Basel II takes a historical accounting perspective, in which case there is no equivalent to *in-force cashflows.* The economic-based Solvency II regime takes a prospective view of risk and so is not compatible with the retrospective view taken under Basel II.

For other type of business, Basel II does take an economic perspective. This includes, for example trading in market instruments such as interest rate swaps. Whenever an economic approach to valuation is taken in Basel II, the equivalent to *in-force cashflows* is included, in full. For example in valuing an interest rate swap portfolio, any *in-force cashflows* arising out of the swap transactions are recognised in the mark-to-market valuation of the liabilities. For classes of business where the economic-based Basel II regime applies, Basel II is consistent with the Solvency II, including the use of *in-force cashflows* (that is, future cash flows on existing contracts) in tier 1 capital

Please see also the additional documents on this issue:

- CEA view on the treatment of expected future profits
  http://www.cea.eu/uploads/DocumentsLibrary/documents/1271430232_cea-view-on-treatment-of-expected-future-profits.pdf

- CEA additional contribution to CP46 on Own Funds - Ceiops' proposed treatment of expected future profits and the "winding-up gap"
  http://www.cea.eu/uploads/DocumentsLibrary/documents/1264698471_cea-additional-contribution-to-cp46-own-funds-winding-up-gap.pdf

[5] Article 75 requires assets and liabilities be to valued on a market consistent basis; article 88 requires basic own funds to be calculated as the difference between assets and liabilities (plus subordinated liabilities)
[6] Recital 48 states that the vast majority of the excess assets over liabilities should be treated as tier 1 capital