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## The Complexity Risk of Regulation: an Article on the Complexity of Solvency II

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### Increasing complexity of regulation

The complexity of the financial system is undoubtedly increasing, and increasingly complex regulations has been the political response to this development. Beyond this background, in recent years a controversial discussion has emerged on the intensity, number and complexity of regulations in the insurance industry. Is the growing number and complexity of regulations the optimal answer to the financial world's increasing complexity? Many opinions argue that this is not necessarily true, and these opinions are not only provided by the industry. For example, Pottier and Sommer (2002) demonstrated that the equity-to-assets ratio is an equally good or even better indicator of financial distress than the much more complex U.S. risk-based capital (RBC) standards. Given these results, one might argue that an easy and clear regulation is the better model for handling the complexity of the real world.

Regarding the complexity of regulations, particularly the new EU insurance regulations, Solvency II has been the subject of much debate. The main goals of Solvency II are to protect policyholders and create a safe and sound industry. However, given the inherent complexity, it might be questionable as to whether Solvency II achieves its goals. The aim of this article is to outline why Solvency II might fail to achieve its goals and what the unintended consequences of the complexity of the new Solvency II regulations might be.

### Will Solvency II be a black box?

Due to such complexity, one might argue that Solvency II is less comprehensible, less transparent and, thus, less effective. The model started with the first Quantitative Impact Study (QIS 1) with a technical description of only 8 pages; by QIS 5, it comprised 330 pages (not including the annexes). Only a few experts will be able to review the model completely. The risk is that, at the end of the day, Solvency II is a black box that only a few people will understand. Another layer of complexity is added by the use of different models in insurance companies (such as local GAAP, Solvency I, Solvency II, ratings, international financial reporting standards (IFRS), market consistent embedded value (MCEV)), which respond very differently under economic scenarios. This is of special concern as regulators want the managers of insurance companies to base their decisions on these models. What type of decisions will be made with the Solvency II model? Solvency II gives ineffective incentives, which are heavily influenced by political decisions.

### Ineffective investment incentives

Market participants have already noticed that the new market-consistent valuation rules are having a significant impact on asset allocation. Solvency II encourages companies to hold a relatively undiversified portfolio of government bonds, as the required capital for these bonds is very low. This would counteract any macroprudential instruments with the goal to avoid risk. Basel III also favours sovereign debt, so interconnectedness and aligned

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behaviour between banks and insurers might increase. In addition, investments in low-rated and high-duration private-sector debt become less attractive, which might affect the ability of banks to issue long-term unsecured bonds (see European Commission, 2010, pp. 123, 131; Al-Darwish *et al.*, 2011; Kaserer, 2011; Fitch 2011).

However, whether Solvency II will affect insurance companies' investing strategies is not yet clear. Capital requirements for a BBB rating from S&P exceed those of the market risk module under the standard model of Solvency II. Thus, based on the assumption that insurers want to maintain a good rating, the influence of Solvency II on investing behaviour might not be as severe as it first appeared (see H6ring, 2012, for life insurance companies, and a report by Morgan Stanley and Oliver Wyman, 2010, for non-life insurers). Nevertheless, it is absolutely unacceptable that capital requirements in the market risk module are not risk based, but instead, are based on political considerations (especially European governments' debt financing). If the larger insurers do not follow the wrong incentive because they want to maintain a good rating, then we might expect especially smaller non-rated insurers to invest in riskier government bonds. Solvency II thus promotes ineffective investment incentives.

### Regulatory arbitrage

New regulations always cause concern regarding regulatory arbitrage, especially when they are very costly and complex. If entities in the financial services industry are regulated according to different principles, less restrictively regulated institutions could obtain a competitive advantage, and a run on the least restrictive regulatory environment might take place. Examples include:

- Banks versus Insurers: According to Solvency II, insurance companies must apply the fair value method with regard to assets and liabilities. In contrast, banks can use a hold-to-maturity approach for their banking book, which could be an advantage for the banking industry. However, it is not yet known whether the Solvency II capital requirements will indeed be tighter than those of Basel III. Furthermore, no empirical evidence exists as to what impact such a difference in capital requirements would have on competition.
- Systemically Important Financial Institutions (SIFI) versus Non-SIFI: As soon as an entity is labelled systemically important, a massive potential for moral hazard is created because such a designation guarantees that the bank or insurance company will receive a government bailout, if necessary (see, e.g. Grace, 2011; Harrington, 2011).
- European Insurers versus Rest-of-the-World Insurers: If capital requirements in the EU are too strict, risks might be transferred to non-EU insurers via reinsurance in order to lower the capital requirements and thus the cost of capital. This would be the case if other supervisory regimes considered to be equivalent are not appropriately set (see Al-Darwish *et al.*, 2011, pp. 21–53).

Despite such reasoning, one might think that the risk of regulatory arbitrage is minor from a macroprudential perspective. Since the AIG crisis, regulatory bodies all over the world have realised that there should not be any regulatory loopholes. However, regulatory arbitrage is still a significant problem that must be continuously monitored by regulators. For example, regulators in the United States recently realised that American life insurers increasingly cede their liabilities to affiliated and less regulated off-balance-sheet entities (so-called shadow reinsurers; see, Koijen and Yogo, 2014).

### Conclusion

The aim of this article was to discuss the complexity of regulations and identify some of the unintended consequences that might arise. We used Solvency II as an example. Potential negative consequences are incentives for economically ineffective decisions and regulatory arbitrage. Yet it is absolutely unacceptable that capital requirements in the market risk module are not risk based, but instead based on political considerations. In addition, regulatory arbitrage is a significant problem that must be carefully examined by regulators. In general, the complexity of the model might make insurance regulation less comprehensible, less transparent, and thus less effective.

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