

Solvency II in a nutshell

Tim Vandenabeele



This article provides an introduction to the new regulatory Solvency II framework. After the introduction, the main drawbacks of the current Solvency I framework are addressed in the second part. Third, the basic principles of the Solvency II framework are explained. Next, the Lamfalussy process which was used for the setting up of the Solvency II framework is discussed. Finally, the three main pillars of the Solvency II framework are broadly reviewed in the last part of the paper. The paper concludes that Solvency II is a useful new regulation for insurance undertakings as well as for national supervisors, but requires multiple implementation efforts from both sides.

INTRODUCTION

Over the last years, the European insurance sector was subject to some serious, fundamental alterations. The very hard conditions the insurers suffered from at the beginning of the previous decade, as well as the shortfalls in the current regulatory and supervisory framework, Solvency I, encouraged European policymakers to change the way in which the solvency position of insurance undertakings is regulated (NBB, 2011). This new, European-wide framework is codified in the so-called Solvency II Framework Directive 2009/138/EC, approved in 2009. At the time the directive was published, the new framework was planned to enter into force as of the first of January 2012. However, because of some unanticipated implications, dealt with in the Omnibus II directive, the application date was postponed several times. As long as the Omnibus II directive, solving these unintended implications, was not finalised, a final implementation date for Solvency II was hard to predict. Since recently, the Omnibus II directive has been finalised and adopted by the European Parliament and the Council, and Solvency II is very likely to enter into force as of the first of January 2016.

WHY DO WE NEED SOLVENCY II?

The solvency margin is generally known as the amount of regulatory capital an insurance undertaking is obliged to hold over and above its technical provisions that cover the liabilities (Bowles, 2011). The margin, acting as a buffer against adverse business fluctuations, is an important element in the system of prudential supervision for the protection of insured persons and policyholders against unforeseen events.

Member of the European Parliament Sharon Bowles states in her article (2011) that solvency margin requirements have been in place since the 1970s. She added, however, that 'it was acknowledged in the third-generation insurance directives, adopted in the 1990s, that the EU solvency rules should be reviewed.' The third-generation insurance directives required the Commission to conduct a review of the solvency requirements and, following this review, a limited reform was agreed by the European Parliament and the Council in 2002. This reform is known as Solvency I.

Under Solvency I, the solvency requirements are calculated as a percentage of the technical provisions or the mathematical reserves. The percentage depends on the kind of assurance the requirement is calculated for. The undertaking is deemed solvent if the solvency requirement is covered by sufficient available capital including, amongst others, paid-in ordinary share capital, subordinated liabilities and surplus funds. The solvency of an insurance undertaking is measured as a fixed ratio (available capital over required capital), being transparent, easy to calculate and simple to audit.

Despite the advantages, the Solvency I ratio suffers from some serious shortcomings. First, the required solvency margin is a volume-based measure because it is a percentage of the provisions and therefore punishes good governance. Indeed, well reserved and hence more prudent undertakings will have a higher solvency margin requirement. Second, the ratio is only focusing on the liability side of the balance sheet. By calculating the capital requirements as a percentage of the provisions and determining the available own funds based on the statutory accounts, the asset side of the balance sheet as well as the risks linked to those assets are entirely ignored. Finally, in line with the previous remarks made, the Solvency I ratio is not risk-based. This means that the ratio does not take into account the risks linked to the underwriting liabilities or the economic and market circumstances applicable in the insurance sector. Therefore, the Solvency I ratio does not differentiate between high-risk-based undertakings and low-risk-based undertakings. From an economic perspective, one would expect undertakings subject to higher risks to have higher capital requirements. As a consequence, under Solvency I, there is no incentive to improve the risk management of an undertaking.

To address these inadequacies, national supervisors across the European Union started a progressive strengthening of local insurance regulations (CEA & Towers Perrin, 2006). Well-known examples are the supplementary provision (flashing light provision) or the provisions for equalisation and catastrophes in Belgium. These were prudential measures to increase the level of technical provisions and hence policyholder protection. The drawback of these local regulatory developments was that they were done in a 'piecemeal fashion' (CEA & Towers Perrin, 2006), resulting in a divided landscape of regulations, the one being more severe than the other. The evolving regulatory practice was drifting far away from the level playing field that European policymakers had

in mind when they developed the Solvency I regime back in 2002.

As a consequence of the ongoing regulatory disintegration, European policymakers decided to change the way in which the solvency position of insurance undertakings is regulated. On 10 July 2007, the European Commission proposed a new solvency framework containing the basic principles for a new solvency regime, which is entirely orientated around the risk profile of insurance or reinsurance undertakings and replaces the current Solvency I requirements (NBB, 2011). The text, which was enacted as the Solvency II Directive, was approved by the European Parliament and the European Council on 25 November 2009 and will be applicable to all European insurance and reinsurance undertakings. With the new framework the Commission intended a better regulation, a robust integration of the EU insurance market, an even better policyholder protection than before and an increased competitiveness of the sector (NBB, 2011).

WHAT IS SOLVENCY II?

Solvency II is 'an opportunity to improve the insurance regulation by introducing a risk-based system defining the capital requirements with a standard formula or an internal model and taking into account diversification and risk-mitigation effects' (CEA & Towers Perrin, 2006). It thrives on an integrated approach for insurance provisions and capital requirements and tends to be a comprehensive framework for risk management.

As a risk-based system, Solvency II strives first to identify the risks an undertaking is exposed to and second to allocate capital accurately to the identified risks. The capital requirements are hence aligned with the underlying risks of the company. This is a big difference from Solvency I. Other than under Solvency I, undertakings with more risk exposures will now have higher capital requirements. Risk-averse undertakings will thus be rewarded for their aversion by lower capital requirements. For instance, an aggressive investment strategy characterised by investments in high-risk assets will require more solvency capital than a defensive investment strategy.

Undertakings can either rely on the standard formula's prescriptive approach or develop a partial or full internal model to calculate appropriately their capital requirements. The standard formula is a general approach provided by the legislators in the solvency framework. The calculation of the capital requirements with the standard formula aims to take into account all material quantifiable risks that an

average undertaking is exposed to (European Commission, 2009). The formula, however, might not cover all the exposures of a specific undertaking. It is, by its very nature and design, a standardised calculation method and therefore not tailored to the individual risk profile of a specific undertaking. For this reason, in some cases, the standard formula might not reflect the risk profile of a specific undertaking and consequently its capital needs (EIOPA, 2014). If this is the case, the undertaking should use a (partial) internal model to calculate the capital needed to 'withstand various adverse circumstances that can arise' (CEA & Towers Perrin, 2006). The use of an internal model is obviously more complex and therefore subject to a supervisory approval process to ensure the quality and accuracy of the model.

Both methods have their relative advantages, and the best solution will depend on the firm's individual circumstances. A common perception is that building an internal model enables a firm to hold less capital relative to those firms relying on the standard formula (CEA & Towers Perrin, 2006). In general, this is a fallacy, and it is important to understand the drivers of capital under the standard

The entire Solvency II regulation is adopted by a rather complex process of comitology which is called the 'Lamfalussy process.' Comitology refers to a set of procedures through which EU countries control how the European Commission implements EU law. This has become a standardised approach for the development of financial service industry

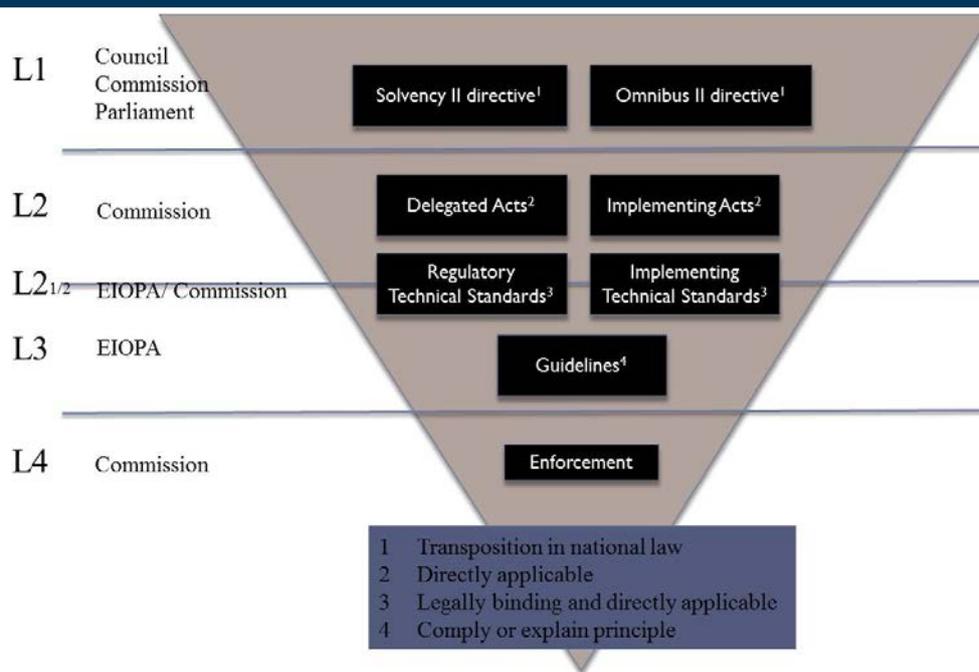
formula and internal model in order to make an informed decision about capital measurement. The Solvency I rules make no explicit allowance for diversification effects and risk mitigation. Therefore, undertakings are not provided any incentive to manage their businesses in a way that achieves high levels of diversification or to develop appropriate risk-mitigation strategies (CEA & Towers Perrin, 2006). This is not the case under Solvency II, where diversification effects are, for example, taken into account when the capital requirements are aggregated with the use of correlation matrices. Thanks to the recognition of diversification effects, the aggregated capital requirements for an insurance undertaking will be less than the sum of the single requirements calculated for each component separately.

THE LAMFALUSSY PROCESS

So far, this article has only focused on the Solvency II Directive. The Solvency II Directive is a framework directive, however, and only states the main principles of the new regulation. These principles are further elaborated in 'Implementing Measures, Delegated Acts and Recommendations.'

regulations in the European Union. As shown in Figure 1, the 'Lamfalussy Process' represents a 'four-level approach.' Consistency between the states will be achieved through a process of supervisory cooperation and peer review by the European Commission.

Figure 1: The Lamfalussy Process



Level 1: Primary legislation

The first level is the highest level and generally presents a basic framework with generic rules. Under Solvency II, the framework directive, formally entitled 'Directive 2009/138/EC of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II),' is considered as the main part of Level 1 legislation. As mentioned in the introduction, this new framework was planned to enter into force as of the first of January 2012. After having analysed the Solvency II Directive, the insurance sector noticed that the framework directive does not appropriately take into account the long-term business model of life insurance companies. The directive does not differentiate between companies trading assets and insurance companies holding those assets to maturity because of their long-term liabilities (Insurance Europe, 2013). A company which is actively trading assets is exposed to all intervening market value movements in its assets. While, on the other hand, an insurance company which intends to hold its assets to maturity is only partly exposed to the intervening market value fluctuations in its assets. Insurance companies have argued that without appropriate adjustments, which take into account the long-term nature of their activities, the Solvency II principles would create unnecessary artificial volatility and pro-cyclicality. The stated problems were clearly identified in the quantitative impact assessments conducted by European Insurance and Occupational Pensions Authority (EIOPA). Accordingly, the solvency directive had to be amended to reflect the long-term nature of an insurance undertaking. To do this, a new directive, the Omnibus II Directive, was created. The Omnibus II Directive amends the Solvency II Directive on several parts, such as on the valuation of long-term liabilities, the adoption of transitional measures, an increase of the supervisory powers and a change in the final application date. The European Parliament, the Council and the Commission recently approved the Omnibus II Directive, which effectively brings Solvency II into force as of January 2016.

Level 2: Implementing acts and delegated acts

The Level 2 implementing acts and delegated acts are more detailed technical rules set by the European Commission following advice from EIOPA. They are a detailed elaboration of the Level 1 Solvency II and Omnibus II Directives and are rules-based. The European Commission is currently redrafting the delegated acts following the outcome of the Omnibus II Directive. At the beginning of August, the Level 2 regulation is expected to be formally proposed by the European Commission to

the European Council and the European Parliament. The final agreement on the Level 2 regulation is expected by February 2015. Once published, it will have the form of a binding regulation with direct implementation in all EU member states.

Level 2-1/2: Regulatory and implementing technical standards

The Level 2-1/2 regulations are somewhere in between the Level 2 and the Level 3 texts. They are not Level 3 standards because they are legally binding. This means that they will have a direct effect in the different EU member states. Nor are they Level 2 regulation, as they are drafted by EIOPA and not by the European Commission. Despite the fact that they are drafted by EIOPA, they still have to be adopted by the Commission and approved by the European Council and the European Parliament before they become legally binding. EIOPA is currently carrying out a public consultation on a first set of implementing technical standards. A second set is planned for consultation between December 2014 and March 2015. The final sets of implementing technical standards are expected to be provided by EIOPA to the Commission on, respectively, 31 October 2014 and 30 June 2015.

Level 3: Guidelines

Guidelines are drafted and produced by EIOPA and meant for national supervisors to ensure that the rules are consistently implemented across member states. Other than the Level 2 regulations, they are not legally binding but have to be adopted following the 'comply or explain' principle. This means that national supervisors will have to comply with guidelines or otherwise explain to EIOPA why they won't comply. In line with the implementing technical standards, EIOPA carried out a public consultation on a first set of Level 3 guidelines at the beginning of June 2014. A second set of guidelines is planned to be carried out for public consultation in December 2014. The two final sets of guidelines are expected to be provided by EIOPA to the Commission, respectively, in February 2015 and July 2015. As a result of the Omnibus II agreement, Solvency II is now likely to start on 1 January 2016. EIOPA has considered it wise to use the interim time to prepare both insurance undertakings and supervisors to Solvency II by introducing a preparatory phase with the implementation of some Solvency II elements. On 27 September 2013, EIOPA has therefore published preparatory guidelines that are meant to ensure a consistent and convergent approach with respect to the preparation of Solvency II. Of course, under the current status of Omnibus II, these interim

measures are not meant to replace the current Solvency I regime. The purpose of the interim measures is to prepare companies and supervisors for a prospective and risk-based system of supervision, which is consistent across Europe.

The elements covered by these guidelines relate to:

- System of governance (cf., the three-pillar approach)
- Submission of information (reporting)
- Pre-application of internal models
- Forward Looking Assessment of Own Risks, based on Own Risk and Solvency Assessment (ORSA) principles

These guidelines will be dilapidated and replaced by new final guidelines once Solvency II is in force.

Level 4: Enforcement

Once the above-mentioned set of regulations is implemented in the EU member states, the European Commission is responsible for ensuring that member states comply with the new rules. In case of noncompliance, the European Commission is allowed to take enforcement action against these member states.

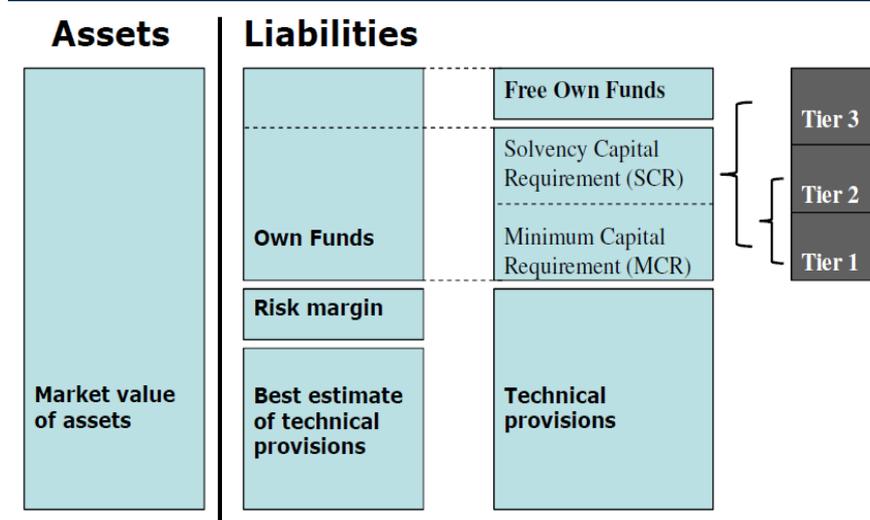
SOLVENCY II: A THREE-PILLAR APPROACH

The rules-based Solvency II requirements as laid down in the Level 1 Solvency II directive can be grouped into three main pillars, including a quantitative pillar, a qualitative pillar, and a reporting pillar. This structure is more or less a copy of the Basel II framework, which contains very similar requirements under the second and third pillars. The quantitative requirements described in pillar 1 are obviously different and specific for insurance undertakings (NBB, 2011).

Pillar 1: The quantitative requirements

As shown in Figure 2, pillar 1 covers all components of the economic balance sheet. In particular, quantitative requirements are set out relating to the valuation of assets and liabilities, technical provisions, own funds, Solvency Capital Requirement and Minimum Capital Requirement. One of the main principles under Solvency II is the valuation of assets and liabilities. According to the Solvency II Directive (2009), these elements should be valued 'at the amount for which they could be exchanged between knowledgeable willing parties.' For assets, undertakings can use the market value of the asset as the transfer value. Regarding the technical provisions, being part of the liabilities, the notion of transfer value should be seen as the 'current amount insurance undertakings would have to pay if they were to transfer their insurance obligations immediately to another party' (European Commission, 2009). This amount is equal to the sum of a best estimate of the technical provisions and a risk margin.

Figure 2: The Economic Balance Sheet



The best estimate was initially calculated as the probability-weighted average of the future liability cash flows, taking into account the time value of money (i.e., expected present value of future cash flows) and using the relevant risk-free interest rate curve (European Commission, 2009). Because technical provisions are discounted at a relatively stable risk-free interest rate curve, while assets are valued at very volatile market values, Solvency II was creating unnecessary volatility on the balance sheet. This volatility is reflected in the net asset value, being the difference between the value of the assets and the value of the liabilities, representing the own funds. As insurance undertakings are not necessarily exposed to this volatility, given the long-term nature of their activities (see *supra*), this volatility is presumed to be artificial. To solve the problem of artificial volatility, European policymakers introduced several measures to adjust the risk-free discount curve for the liabilities in the Omnibus II Directive. These adjustments, including the matching adjustment and the volatility adjustment, tend to adjust the risk-free discount curve in such a way that the value of the liabilities evolves in the same direction as the evolving value of the assets.

Because the technical provisions are calculated as a probability-weighted average, it is very unlikely that a third insurance undertaking will take over the liabilities if only the best estimate is transferred to the new undertaking (NBB, 2011). Therefore, in order to be compliant with the transfer value requirement, the best estimate has to be increased with a risk margin. This risk margin equals the cost of capital for the acquiring insurance undertaking to maintain the liabilities on the Solvency II balance sheet. If an insurance undertaking hands over its liabilities to a third party, the sum of the best estimate and the risk margin is transferred.

The pillar 1 requirements display two different capital requirements, the Solvency Capital Requirement (SCR) and the Minimum Capital Requirement (MCR). The Solvency Capital Requirement is the capital needed when taking into account all material quantifiable risks the undertaking is exposed to. It is a risk-based capital requirement calibrated to a VaR 99.5% target, which means that assets need to continue to exceed the technical provisions and other liabilities with 99.5% confidence over a one-year time horizon. As mentioned before, this capital amount can be defined by using the standard formula, an internal model or a partial internal model. The Minimum Capital Requirement is designed to be the solvency threshold and corresponds to the level of capital, below which the insurance undertaking is

exposed to an unacceptable level of risk. Supervisory intervention will then follow inevitably.

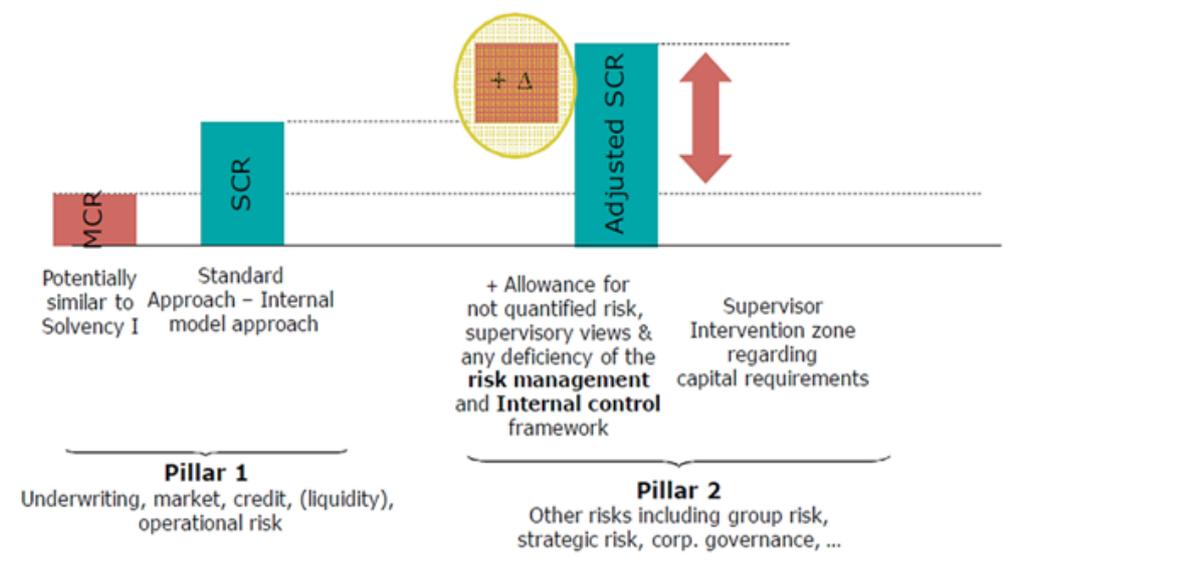
The own funds under Solvency II are calculated as the sum of two parts. On the one hand, undertakings have to report their basic own funds, which consist of the excess of assets over liabilities, valued in a market-consistent manner, and the subordinated liabilities. On the other hand, undertakings may also use ancillary own funds, subject to prior supervisory approval, which consist of off-balance-sheet own fund items that can be used to absorb losses (e.g., unpaid share capital or initial funds that have not been called up). The Solvency II Directive (2009) classifies all own fund items into tiers depending upon their level of compliance with the classification criteria.

Pillar 2: The qualitative requirements

Pillar 2, also known as the qualitative pillar, is as important as pillar 1. While pillar 1 prescribes how to build up the economic balance sheet, pillar 2 contains 'the requirements regarding the way the undertaking should be organized' (NBB, 2011). As part of pillar 2, all insurance undertakings are required to have in place an effective system of governance with written policies in relation to the risk management system, the internal control and organisation of the undertaking and the key functions. An effective risk management system covers all material risks and requires, among others, an appropriate own risk and solvency assessment (ORSA).

Under the own risk and solvency assessment, undertakings are required to execute periodically a profound self-assessment of the risks they are exposed to in the medium or long term. The aim of the ORSA is to go beyond the standard formula or the internal model and think about additional risks the undertaking is exposed to in the long term, but which are not necessarily covered in the standard formula. For additional risks, the undertaking should allocate an additional capital requirement, named the adjusted SCR, as shown in Figure 3. After having identified the additional capital requirements, the undertaking should assess whether it has enough resources to cover all these requirements. If this isn't the case, the national supervisor can impose a capital add-on under pillar 1 (in the economic balance sheet) as part of the supervisory review process. The supervisory review process is a set of conditions that guides the regulators' review of an insurer's risk management and governance. It aims to ensure that an insurer is well run and meets risk management standards.

Figure 3: The Adjusted SCR



Pillar 3: The reporting requirements

Pillar 3 describes the disclosure requirements or the information that should be reported by the undertakings. The aim of the predefined disclosure requirements is to enhance market discipline among insurance undertakings through public disclosures and to provide additional (non-public) information to the supervisors. This objective is achieved by narrative reporting requirements and quantitative reporting requirements.

NARRATIVE REPORTING

The narrative or qualitative reporting requirements result in two different reports, a solvency financial conditions report (SFCR) and a regulatory supervisory report (RSR).

The solvency and financial conditions report (SFCR) is a publicly available report that should be made on a yearly basis by the undertaking. The report shall contain a qualitative description of the business and the performance of the undertaking, the system of governance and an assessment of its adequacy in relation to the risk profile of the undertaking, its capital management and the valuation of assets and liabilities.

The regulatory supervisory report (RSR), on the other hand, is the report to the supervisor and should contain at least the same information as the SFCR. A 'full' RSR should be conducted by the undertaking at least once every one to three years, depending on the intensity of the supervisory review process. Next to the 'full' RSR, the undertaking should at least annually conduct a summary RSR highlighting the most important changes.

QUANTITATIVE REPORTING

Whereas the RSR and the SFCR contain qualitative descriptions, the quantitative reporting contains the figures of the undertaking. An insurance undertaking is obliged to report quarterly some, and annually all, its figures to the national supervisor through an extensive set of templates (i.e., quantitative reporting templates). These templates are standardised and hence harmonised for all European undertakings. The harmonisation is important for comparison of data between countries, for exchange of information between authorities, and for aggregation of figures at a European level. The templates entail amongst others the balance sheet, asset values, technical provisions and capital requirements. All templates should be reported periodically to the supervisor as part of the RSR. Only a limited number of annual reporting templates should be added the SFCR.

CONCLUSION

The current European regulatory framework to determine the solvency position of an undertaking, formally known as Solvency I, is suffering from serious drawbacks. The framework punishes good governance, is only focusing on the liability side of the balance sheet, entails no single incentive to improve risk management, and entirely ignores the risks an undertaking is exposed to. All these inadequacies started a progressive strengthening of local insurance regulations resulting in a diversified European landscape of regulations which created an unlevel playing field across Europe. Therefore, in 2009, European policymakers introduced a new regulatory framework entirely orientated around the risk profile of the undertakings. This new regulation, called Solvency II, is almost finalised and will replace the Solvency I regulation as of 2016.

In contrast with Solvency I, Solvency II is introducing a risk-based prudential regulation based on a total balance sheet approach taking into account diversification and risk mitigation effects. The capital requirements depend on the risk exposure of the undertaking and are calculated with a standard formula or an internal modal. The framework advances a harmonised regulation for prudential supervision of insurance companies, enhancing the level playing field among European member states and increasing policyholder protection.

Solvency II is a major program of regulatory change with a lot of benefits, but also a heavy workload for European insurance companies. Since the discussions concerning the long-term guarantees have now closed and the application date of 1 January 2016 is fixed, the remaining time of insurance undertakings to prepare themselves for the new requirements is shrinking. In cooperation with national insurance associations and their supervisors, insurance undertakings are currently implementing the new requirements into their structures and activities. EIOPA uses this interim period until 2016 proactively to appropriately prepare the undertakings for the application of Solvency II by already requiring the implementation of some aspects of the Solvency II framework.

REFERENCES

- Bowles, S. (26 May 2011). What are Solvency I and Solvency II? Retrieved December 5, 2014, from <http://sharonbowles.org.uk/en/article/2011/489873/what-are-solvency-i-and-solvency-ii>.
- Comité Européen des Assurances (CEA) & Towers Perrin (June, 2006). Solvency II introductory guide.
- EIOPA (30 April 2014). Technical Specifications for the preparatory phase (part II). Available at: https://eiopa.europa.eu/fileadmin/tx_dam/files/publications/technical_specifications/B_-_Technical_Specification_for_the_Preparatory_Phase_Part_II.pdf (requires registration).
- European Commission (EC, (2009). Directive of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II) (recast).
- Nationale Bank België (NBB, (2011). Verslag 2011: Financiële stabiliteit en prudentiële regelgeving. Retrieved December 5, 2014, from http://www.nbb.be/doc/ts/Publications/NBBreport/2011/NL/T1/verslag2011_TIII.pdf.



ABOUT MILLIMAN

Milliman is among the world's largest providers of actuarial and related products and services. The firm has consulting practices in life insurance and financial services, property & casualty insurance, healthcare, and employee benefits. Founded in 1947, Milliman is an independent firm with offices in major cities around the globe. For further information, visit milliman.com.

MILLIMAN IN EUROPE

Milliman maintains a strong and growing presence in Europe with 250 professional consultants serving clients from offices in Amsterdam, Brussels, Bucharest, Dublin, Dusseldorf, London, Madrid, Milan, Munich, Paris, Warsaw, and Zurich.



CONTACT

For more information, please contact:

Kurt Lambrechts

kurt.lambrechts@milliman.com

+32 499 22 16 36

Tim Vandenabeele

tim.vandenabeele@milliman.com

+32 474 66 64 38

milliman.com