



Implementing the Solvency II directives in the Asset Management of Insurance Companies

As of 1 January 2013 all insurance companies within the European Union (EU) will be required to implement the Solvency II provisions of the European Insurance and Occupational Pensions Authority (EIOPA), modelled on the requirements of Basel II pertaining to banks, at the national level pursuant to the proposed Omnibus II Directive of the EU Commission dated 19 January 2011. A transitional period of up to 10 years will apply. The Swiss Financial Market Supervisory Authority (Eidgenössische Finanzmarktaufsicht - FINMA) had already introduced the Swiss Solvency Test (SST) as a counterpart to the European Directive, within the Swiss insurance sector on 1 January 2006; it has been binding since 1 January 2011, with a transitional period of 2 years.

The goal of both of the Directives is the protection of insurance policyholders from the consequences of insolvency on the part of insurance companies by means of a comprehensive, risk-based system for the supervision of such companies. Pursuant to Solvency II, insurance companies quantify the risks to which they are exposed in respect of insurance policies on the liabilities side and capital investments on the asset side. This objective is pursued by means of a three-pillar model: the first pillar determines the amount of the capital adequacy (the minimum and the solvency capital requirement) in relation to the deductible amount of own equity capital (available solvency capital), the second pillar relates to risk management and compliance processes, and the third pillar comprises reporting structures in conformity with other statutory reporting obligations, such as accounting in accordance with the IFRS. Insurance companies can choose either to

apply a standard formula – a less complex approach, which nonetheless has the effect of increasing the capital – or to create an internal model tailored to the transaction structure in question, which is a more elaborate but less capital-intensive undertaking.

In order to be able to handle the complex requirements imposed by Solvency II, insurance companies will need to have an efficient and flexible IT infrastructure in place, which must provide the necessary functions for the controlling of the capital investments and, by facilitating the required asset classification, assist in establishing an integrated risk assessment approach.

Experience with the SST

In Switzerland it has emerged that the requirements imposed by FINMA, pursuant to which the amount of additional expense incurred by insurers in carrying out the solvency test should remain proportionate, cannot be implemented in practise. The main point of contention here is the standardised SST model, which does not address the risk-related provisions in respect of either large or small and medium-sized providers and, in particular, disregards the life insurance business in which considerably more capital is tied up than in other areas. This results in greater expenditure in terms of both time and money for the introduction of internal risk models that must be individually approved by the authorities.

Furthermore, the risk-free yield curve for the evaluation of the insurance assets and the evaluation model for share and real estate investments are subject to debate. On the one hand, the discount rate is based on government bonds, which do not reflect the time frame of insurance companies with regards to the

risks to be hedged. On the other hand, real estate and shares are both declared to be risky investments. In addition to capital increases and shifts to less risky classes of investments, which obviously generate less revenue, group companies are permitted, to a limited extent, to provide guarantees for the purposes of minimising risk. However, as a result, the Swiss subsidiaries of foreign insurance companies have a competitive advantage over domestic insurance companies, given that they receive favourable guarantees from their foreign parent companies and thus have to provide less equity capital. Swiss insurers emphasise that both Directives diverge significantly from each other and that Solvency II is less strict than the SST.

Status of the Current Debate regarding Solvency II

Although Switzerland has assumed a leading role in Europe thanks to the SST, the experience gained in this regard appears to have only had a minor influence on the implementation of Solvency II within the EU. The statements made to date in respect of Solvency II are similar to the criticism expressed as regards the SST: the requirements are generally too detailed and the evaluation rules too complex. Smaller life insurance and health insurance companies are at a disadvantage, particularly where their legal form is that of a mutual insurance association, which are only able to obtain new funds via the capital markets to a limited extent.

Pursuant to Solvency II, liquid swap rates and not bonds form the basis of the yield curve. The discounted value of the insurance liabilities is, however, highly sensitive to even small changes. The incidental curve progression at year end is consequently the decisive factor as to whether the equity ratio to be attained will decrease, or increase, in the

case of low interest rates. The projected stress factor of 25 % for real estate investments, which is based on assumptions of the British real estate market, is also the subject of debate, given that fluctuations in value in Great Britain are not representative of those in all of the other markets within the EU. Even where the extent of the determined stress factor is explained on the basis of the internationally diversified real estate portfolios of the insurers, the fact that the majority of the market participants in Germany invest in domestic real estate contradicts this argument. A stress factor of 15 % is thus considered to be reasonable. Nevertheless, the allocation of real estate funds to equity risk is not considered to be particularly meaningful.

Presentation of the Capital Investments

There is a danger that the lingering debate over Solvency II will have a direct effect on the legislation, which will then have to be incorporated in the companies’ IT infrastructure on short notice. The primary focus in this respect lies on the recording of all investments. Traditional and exotic financial instruments are to be captured according to a uniform concept and with the inclusion of various data providers. The subsequent transactions need to be recorded as freely configurable transaction types. The entire transactional process can then be tailored to the cus-

tomers in conjunction with automated and workflow-controlled front-to-back processing.

The modelling of financial instruments also comprises the setup of (callable) promissory note bonds and pre-emptive acquisitions, which frequently form part of the portfolios of German insurers. Pre-emptives may, depending on the relevant provisions, be recorded as either annuity transactions with a long value term or as futures contracts. Externally managed positions, such as alternative investments, real estate property or loans, that are recorded for information purposes but must be evaluated and booked for the purposes of the monitoring of the capital investments, can be imported at the level of individual positions or grouped together as aggregate positions in maturity bands. Freely definable information fields are highly advantageous when recording financial products as, for example, various ratings can be maintained on a parallel basis within the master data for the purposes of assessing the default risk. At the same time the various ratings can be harmonised, or internally ranked by applying «business rules» (consistent rule language). The results thereof are kept in historical records. Business rules and flexible data fields can be employed throughout the system and are used, among other things, to define workflows and key

ratios, as well as attributes enabling the separation of positions.

Given that the evaluation of all assets is essential for the calculation of the equity capital pursuant to Solvency II, access to all data is assured at all stations within the system. As a result, the master data can also be used for the pricing of the individual assets such as, for example, in the theoretical evaluation of interest-bearing securities by means of yield and spread curves.

Calculation of the Risks

The «prudent person» principle requires an appropriate reconciliation of the capital investments and the liabilities, as well as the undertaking of diversified investments in assets for the benefit of the insurance policyholder. The allocation of the individual positions in accordance with the market and default risk module for the solvency capital requirement according to the Standard Formula of the Quantitative Impact Study (QIS) 5 (Fig. 1) may be based on the existing master database or on a range of key factor bands.

With a view to optimising capital investments and hedging market risk, additional key factors such as «economic exposure» and «systematic risks» aris-

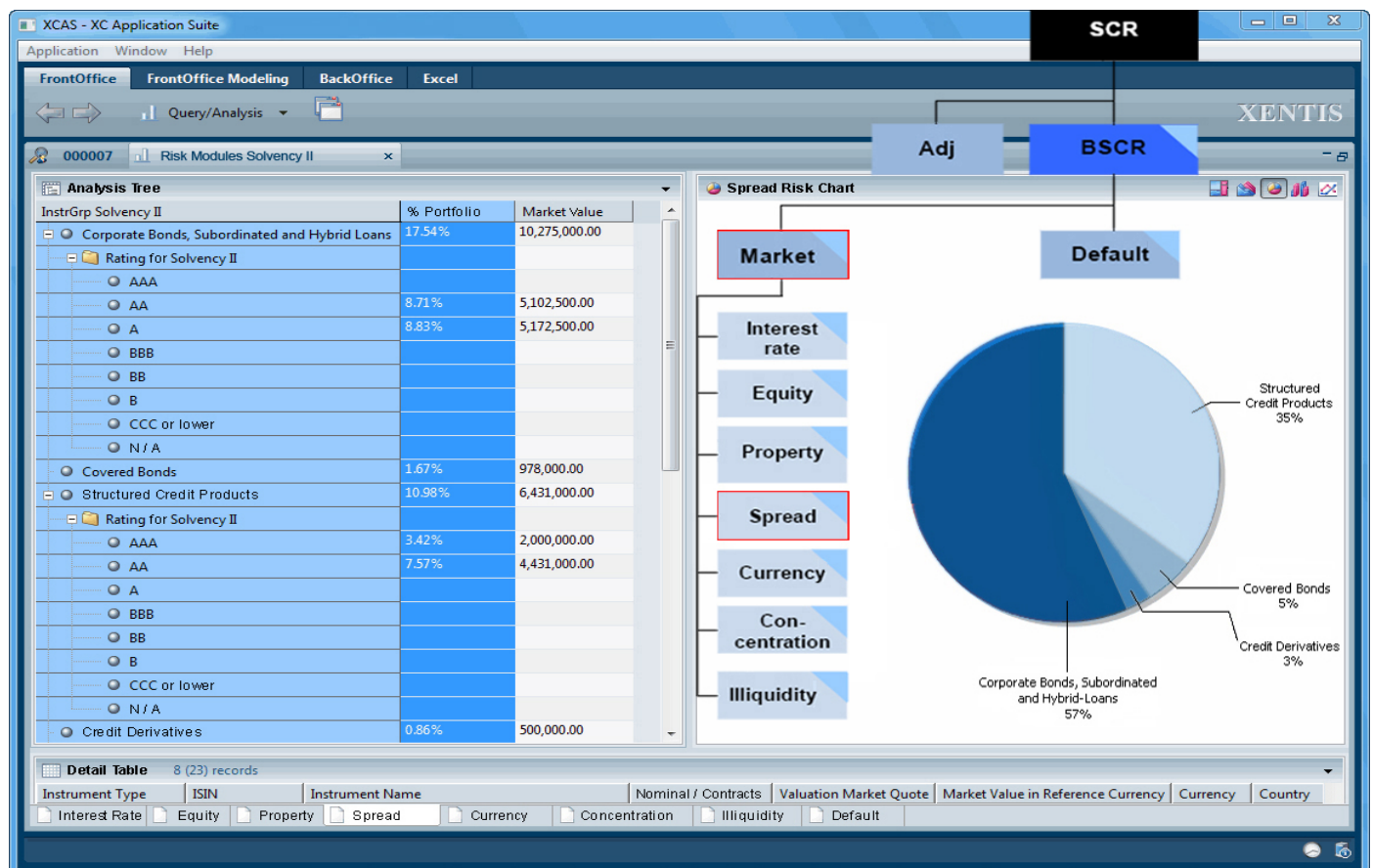


Fig. 1: Risk module in accordance with the Solvency II QIS 5 Standard Formula

ing from selected positions are weighted and the number of derivatives contracts required for the attainment of the stipulated targets is calculated. Parameters can in turn be defined for these optimisation models by applying business rules. The same applies to compliance rules, by means of which compliance with statutory, contractual and internal limits is verified on an ex ante and ex post basis, in order to avoid the concentration of risk specified in Solvency II. Default risk, which arises in connection with off-market transactions but which can be kept at a low level by means of effective collateral management, must also be considered in this context. In the compliance context, indirect investments must be reviewed, i.e. fund certificates, etc. must be decomposed into fundamental individual positions, which are to be allocated to the pertinent market risk category. Furthermore, market data scenarios and stress tests (shifting of the yield curve, loss of market value, foreign currency shocks, etc.) must also be simulated, having regard to any correlations, with a view to reducing market risk. More advanced techniques, such as the application of parametric and non-parametric Value at Risk models, are also available within an integrated system and their ability to represent internal risk models in addition to the Standard Formula can be assessed by means of back testing.

Accounting and Reporting

The reporting to the German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht - BaFin) stipulated by Solvency II presupposes the existence of corresponding quarterly financial statements. Parallel accounting in compliance with national and international accounting standards is a standardised and integral element of an investment management system. Item types can be generated on the basis of systems of rules and transaction types and booked in accordance with the maintained charts of accounts. A complete evaluation of the categorised balance sheet items also includes a simulation of period-end financial statements - which can be carried out at any time - as well as the determination of the existence of possible amortisation requirements and the generation of cash-flow projections for liquidity planning purposes. In addition to the entering of quantitative information as to the solvency balance sheet and capital management in the registration forms, specific information as to risk management must be provided and performance results disclosed in the qualitative supervisory report and in the report on the solvency and financial position of the company.

Given that an asset management solution will not depict insurance liabilities, the entire reporting obligation pursuant to Solvency II cannot be satisfied by

referring to the capital investments. An integrated data warehouse or an external system can at all times be supplied with data packages which comply with the requirements of the QIS 5 risk module (Fig.2) by means of a flexible reporting engine or export function. The data supply process also comprises direct access to transactions and evaluated positions. Time-consuming calculations on a period basis can be avoided through the use of cache technology, which is characterised by the fact that the entire data inventory upon which an evaluation, for example, is based is uploaded from the database on the first run-through and thereafter only changes to the data are taken into account.

Conclusion

The upcoming adjustments to be made by insurance companies in accordance with Solvency II may be facilitated by software providers, provided that close contact is maintained with the supervisory authorities, industry associations and the affected insurance companies or pension funds, and statutory directives are constantly subjected to analysis. However, prompt reactions to the regulatory changes introduced by the EIOPA will only be possible if the structural modules of the software systems allow for quick and easy configuration and additional software development can be largely dispensed with.

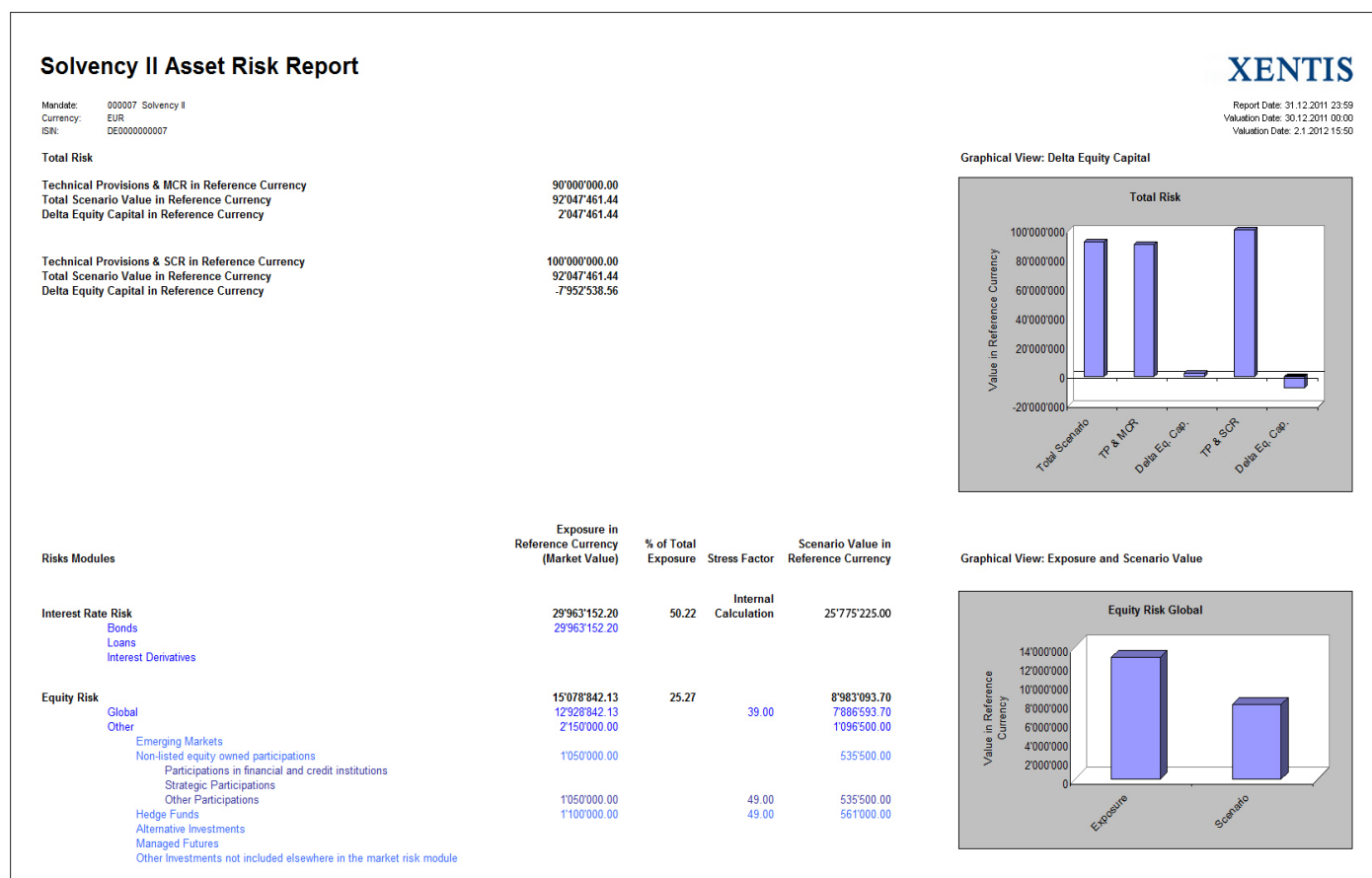


Fig.2: Solvency II Reporting

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