

# Impacts of Solvency II on the investment policy of insurers

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With the final translation, in September 2015, of the second set of implementing technical standards and guidelines from EIOPA into all European languages, as well as the new draft of the amended delegated acts published at the end of September 2015, the Solvency II project is beginning to take shape.



From 1 January 2016, the new supervisory regime for insurers comes into effect. It delivers an impact far beyond the originally planned scope of its application, especially where investment management companies (KVGs in Germany) provide investment services to insurers, who will also be affected by the impact of Solvency II.

For the affected KVGs, Solvency II firstly results in a necessity to identify the own capital requirements of the insurer at the individual investment level. At the portfolio level, diversification effects must also be generated as far as possible, optimizing the investment allocation. Over and above this, the regulatory reporting requirements for the insurers in the context of the supervisory reporting process must be taken into

account. However, the main focus of this article clearly lies in the discussion: "How far will Solvency II influence the investment policy of insurers that strive for optimal investment allocation and thus influence the products that will be offered by the KVG?"

The starting point for the analysis lies in a few essential considerations for the investment policy of insurance companies. These will be especially determined in the area of personal insurance, through the requirements and the performance profile of the insurance products themselves. Above all the actuarial interest rate assumptions (guaranteed interest rate) have to be achieved. Over and above this, it should be possible to achieve a surplus participation for the insured person, as well as adequate interest on equity capital for the company.





In the context of the investment policy of the insurer, an optimization takes place by means of risk calculations on rates of return, taking account of the minimum rate of return that must be achieved, and targets which can only be missed within a predefined probability range. With Solvency II comes the transition from direct investment regulations with qualitative and quantitative requirements regarding the allowed investment classes of investments, to a preferably risk based calculation of the insurer's own solvency capital requirements as an additional limiting factor.

The solvency capital requirements can be found in the optimization calculation. e.g., in the form of cost of capital for the required solvency capital requirement, or as an input to the risk adjusted amount of "expected rate of return/solvency capital required" in the calculation. The additional condition that must also be taken into account is that the solvency capital requirements which must always be available may not exceed the as-is equity capital. This is made more difficult by the fact that the allowable as-is equity capital is derived from the solvency balance sheet and thus because of present value fluctuations is subject to a certain pro-cyclical volatility.

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## For KVGs in this environment, the task remains above all to be innovative in the development of the individual instruments and to develop products that require less equity capital, but which are nevertheless in the position to be able to generate a significant contribution towards the predefined target rate of return

Besides the limiting factor of the solvency capital requirements, the qualitative regulations for all of the investment classes remain as an additional restriction and must also be taken into account in the form of the so called prudent person principles. Simply put, an insurer can only hold investments that can be properly handled by its own risk management team. This means—as the supervisory authority (BaFin) officially communicated during the Solvency II regulatory preparation phase—that an insurance company must develop its own performance and risk management ratios for monitoring its own investments (this is very similar to the CRA-Ordinance on rating agencies, which states that the insurer may not only simply rely on the rating from the rating agency but must perform their own rating). Here BaFin states that the insurer may not only simply rely on the knowledge of its asset manager, but must prove that it has considered all relevant material for managing the risk of the investments and manages this on an ongoing basis.

Alongside is the discussion about the effects of Solvency II on the investment policy of the insurance company and to differentiate between, on the one hand, the level of the individual investments and the corresponding Solvency capital requirements and, on the other, the portfolio level and the ongoing accompanying diversification effects. One consideration on the level of the individual investments that makes sense is derived from the look through approach, by which the individual investment classes are assigned to the respective sub-risk module. This also applies to investment funds.

At the level of the individual instrument, not only is a longer-term return expected from the respective investments for achieving the predefined minimum rate of return for the insurance companies, but also the rate of return as defined in the Solvency II solvency capital requirements is of vital importance. However, not only are the respective sub-risk modules resulting from the solvency capital requirements to be respected, but the circumstances of the risk sub-modules—such as interest rate risk, concentration risk or currency risk—must also be taken into account.

Bonds form the basis of the core investments for insurers. Above all and as far as possible, they should have a similar duration, to enable the reproduction of the actuarial obligations and to match the resulting promised rate of return requirements in the current low interest environment. In addition, the achievable rate of return across all asset classes is moderate, irrespective of the credit worthiness or rating of the issuer, and is associated with a corresponding large setback potential most notably connected with long-term instruments. By application of the standard formula stipulated for corporate bonds in the spread risk sub-module, the Solvency capital requirements in principle are dependent upon the rating and time to maturity of the security. Reduced capital requirements have been established for covered bonds and most recently also for infrastructure loans.

As a concept of organizing intrinsic value incentives for state financing, bonds of EU Member States are in principle to be considered as having a zero solvency capital requirements in the context of spread risk. However, it should be noted that bonds in the context of the interest rate risk module will still be subject to the interest rates' upward and downward stress, via which the duration gap on both the active and passive sides (the asset liability mismatch) is increasingly reflected in the solvency capital requirements.

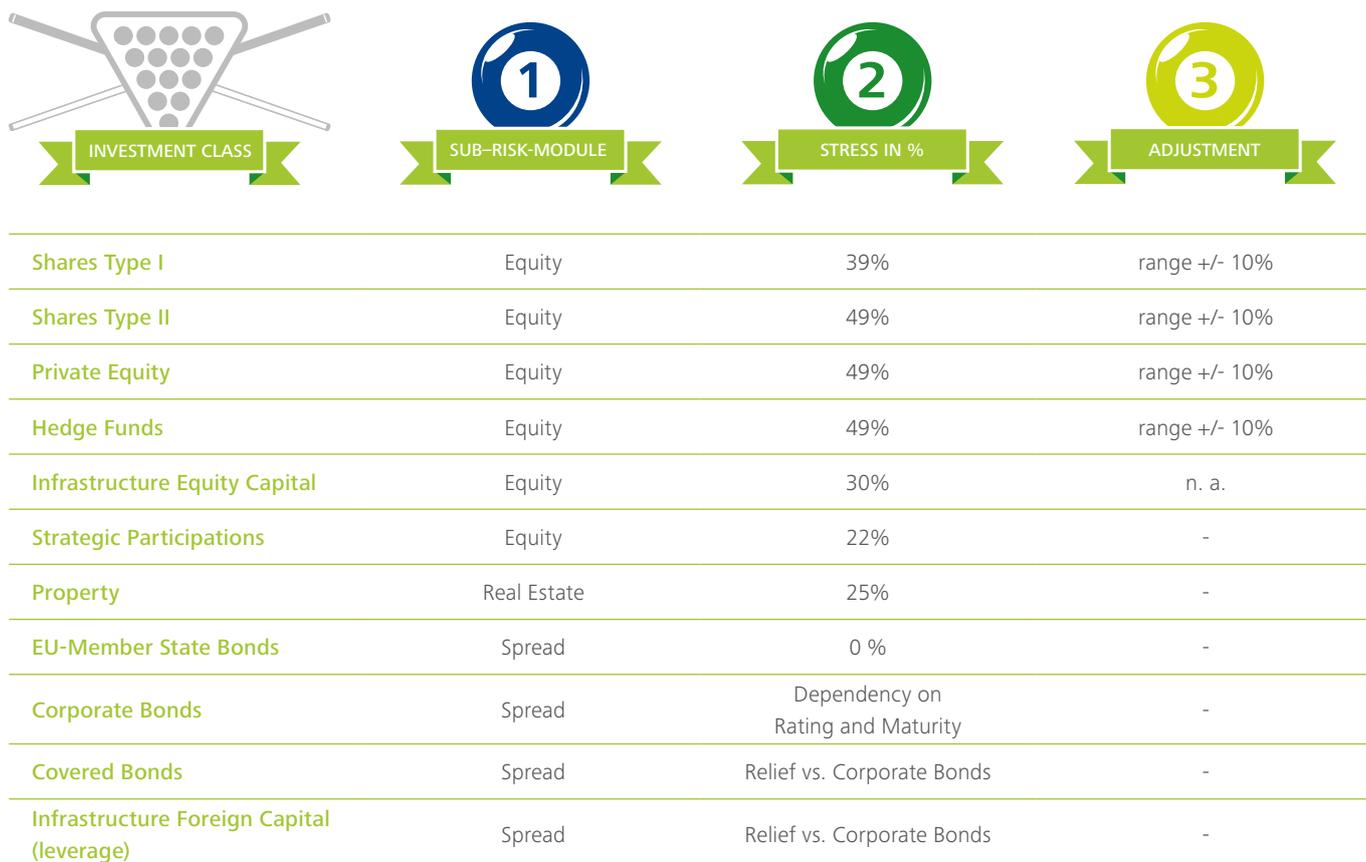
For equity investments, empirical data for Germany over the last 50 years suggest that an expected rate of return of 7 to 8 percent per annum is justified. For the purposes of Solvency II it is necessary to distinguish between shares that are registered in OECD or EEA Member States and those registered in emerging markets. The first group are subject to the principle of an own funds stress factor of 39 percent and the second group are subject to 49 percent. In addition, those assets under 49 percent stress are more likely to be classed as alternative investments, because of the higher expected rate of return and because they carry a risk of total loss. Such assets are especially suitable for grouping under the subgroup of alternative investments similar to private equity, hedge funds or commodity commitments (see the table on next page: "Overview of Stress Factors Standard Model").

To avoid pro-cyclical effects, both stress factors use a symmetrical adjustment mechanism that can, depending on the position in the market cycle, lead to an increase or reduction of the basic stress factor by up to 10 percent. This gave the result that, as of 31 December 2013, an additional increase in the stress factors occurred, amounting to 7.5 percent to 46.5 percent up to 56.5 percent. For share engagements, the transitional rules are still to be observed. Recently, this has applied to both types of shares. It can then be assumed from a 22 percent stress factor with a linear increase within the seven-year transitional period until the final stress factor applies accordingly that these transitional measures can be used in the form of a right to choose.

Furthermore, it is worth pointing out that infrastructure investments with their own special equity capital characteristics should from now on be subject to a 30 percent stress factor. A special case exists for strategic participations, which are expected to see a major reduction in market value volatility over the next 12 months and which, because of the strategic characteristics of such investments, justifies the application of a 22 percent stress factor. Nevertheless, it should be noted that the necessary requirements to satisfy the characteristics for justifying a strategic investment are relatively restricted in their development. For insurance companies, property provides hope of long-term value increases as part of the mixed deposit investments, because of the low volatility compared with other own funds investments. Property investments are still subject to a 25 percent stress factor despite huge criticism, and the fact that the stress factor is calibrated based on the development of prices in the commercial property market in London. It must also be noted that the uptake of credit from outside the insurance group to finance property requires the same stress factor as for the second group of equity engagements. This means that leverage financing can definitively lead to an even higher stress factor on the unstressed investment than the 49 percent figure.



Figure 1: Overview of Stress Factors Standard Model



At the portfolio level, the optimization of investment allocation and above all the diversification effects must be taken into account. This can be done using standard formulas in the supervisory authority standardized correlation matrices (see illustration below), both within the risk module for market price risks as well as at the level of the risk modules. Although it must be noted that apart from concentration risk and currency risk, above all between equities and property on the one hand and interest instruments on the other, compensation effects regarding the solvency capital requirements can occur. In such cases, it depends primarily on the extent of the supervisory regulation standardized diversification effects as to whether the downward interest rate or increasing interest shock of the adverse scenarios is represented. In the first case, the correlation factor of 0.50 will be used and in the second, independence would be assumed.

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Figure 2: Correlation Matrix Market Risk Module

CorrMkt	Interest Rate	Shares	Property	Spread	Exchange Rate	Concentration
 Interest Rate	1					
 Shares	A*	1				
 Property	A*	0.75	1			
 Spread	A*	0.75	0.5	1		
 Exchange rate	0.25	0.25	0.25	0.25	1	
 Concentration	0	0	0	0	0	1

A\* the correlation amounts to 0 as far as the interest rate rise scenario in the interest rate risk module represents the adverse scenario, otherwise 0.5

In summary, it can be stated that with the standardized supervisory regulation and Solvency capital requirements that a unique feature of the risk dimension is to be found in the input to the optimization calculation for the investment allocation of the insurer. Against the backdrop of the current investment environment, this hinders the already difficult task of generating the predefined minimum rate of return prescribed by the insurance companies in that alternative high interest bearing forms of investment are afflicted with the equivalent high solvency capital requirements. This means the capitalization of the insurer will finally determine how far the targets for its required rate of return goals can be achieved.

For KVGs in this environment, the task remains above all to be innovative in the development of the individual instruments and to develop products that require less solvency capital, but which are nevertheless in the position to be able to generate a significant contribution towards the predefined target rate of return.

At the portfolio level, it is the optimization of the investment capital allocation that makes the best use of the potential diversification effects. This could correspond to the perception of clients acting on the assumption of a widely diversified bond portfolio, but in fact realized in short maturity investments with a mix of property and equity instruments and by entering into alternative investment engagements, especially in infrastructure investments but also private equity and hedge funds, etc.

To the point:

- The impact of Solvency II goes far beyond the scope of insurers and reinsurers. Investment companies, for example, will also be affected
- With Solvency II, direct investment regulation is replaced by risk-based calculation of the solvency capital requirement as an additional limiting factor
- Solvency capital requirements find their way into portfolio optimization e.g., in form of cost of capital or as an expected return adjusted for required solvency capital and as a limiting constraint
- Solvency capital requirements (e.g., stress factors) have to be identified at the level of each individual investment or asset group
- Diversification effects determined by standardized correlation matrices should be taken into account when performing portfolio optimization
- The capitalization of the insurer will determine to what extent the required rate of return specified by the insurer would be reached
- For investment companies, the final goal is to develop products needing less solvency capital, and at the portfolio level, to generate an investment allocation making maximum use of diversification effects



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