

Counting the cost of Solvency II

REGULATION SOLVENCY II

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The cost of funding corporate DB schemes is directly linked to their solvency regime. Regulatory funding requirements define the level of funding deemed necessary to meet current and projected future liabilities. Any tightening in solvency rules intended to increase pension security and systems' stability will have a significant impact on the sponsor's costs and risk situation. Currently, a new solvency regime for insurance companies in the EU, known as Solvency II, is being drafted and is expected to come into force at the end of 2009. So far, DB funds are excluded from the scope of Solvency II but this year regulators are considering separate rules for pension schemes and the question of whether these solvency rules should also be applied to pension funds is being debated. A recent study has revealed that Solvency II, if applied in its current guise to DB schemes, could force sponsors to increase funding, change asset allocation, and move to a risk-sharing structure.

Solvency II aims to ensure adequate policyholder protection in all EU member states through the requirement for a level of funding that more closely matches the true risks of insurance undertakings. However, DB pension schemes are quite different from insurance companies. They have typically built in various forms of risk-sharing agreements between the sponsor and members and are thus less vulnerable to default risks. Any modification of pension regulation needs to reflect these differences and take into account the existing mechanisms to mitigate risk. If the rules, as they are currently drafted for insur-

ance companies, are extended to DB funds, they could increase sponsor costs significantly and have potentially negative implications for the survival of DB pension plans in gen-

eral. Some experts fear it could be the final nail in the coffin for DB schemes.

To support a more factual debate on this highly controversial issue, Risklab Germany, a subsidiary of Allianz Global Investors, together with the Institute of Finance and Actuarial Sciences, carried out a study to address and evaluate the potential impact on DB pension funds if the quantitative funding requirements set by Solvency II were directly applied to DB schemes. The research is part of a joint research project on risk-based regulations by the Organisation for Economic Cooperation and Development (OECD) and Allianz Global Investors.

The study, *Evaluating the Impact of Risk Based Funding Requirements on Pension Funds*, was based on the current version of the Solvency II rules drafted for insurance companies and applied to a range of generic or model pension schemes that are 100% funded under IAS 19. The models reflect the characteristics of typical EU schemes in terms of asset allocations and different membership profiles (the proportion of active, deferred and pensioner members, among other categories). The generic models also reflect different scheme designs, ranging from schemes where 100% of the investment and longevity risk is borne by the sponsor to those where risk-sharing agreements share part of these risks with members. Examples of risk-sharing arrangements include the conditional indexation of benefits, the requirement for increased member

contributions, and the scheme's ability to cut benefits. Such features may be triggered automatically, for example when funding levels drop to a specific level.

The main results of the study draw a rather problematic picture for traditional DB schemes if Solvency II is implemented in its

present form. The biggest impact will be on DB schemes with no risk-sharing features. Figure 1 shows that a typical final pay scheme that is 100% funded under the accounting rule IAS19 would only be 64% funded under the new regime. The main reason for this reduction in funding level is the higher valuation level of the DB pension scheme liabilities under Solvency II. This is due to the lower discount rate required under Solvency II to value the DB scheme pension liability, as well as the requirement to hold a risk margin. In addition, the DB pension scheme needs to hold surplus capital to cover for the solvency capital requirements (SCR), which is the level of capital that enables the scheme to absorb significant unforeseen losses. Under Solvency II, capital requirements are calculated separately for each individual type of risk assuming a worst-case change in the underlying risk factor (eg a drop of 32% in the index for global equity investments). The capital requirements for the different risk factors are then aggregated using pre-defined correlation matrices (the so called variance-covariance approach). For the final pay DB pension scheme the main risks are typically equity risk, interest rate risk and longevity risk as illustrated in figure 2.

The study demonstrates, by means of a series of realistic examples, that the higher valuation level of pension liabilities in combination with the additional solvency capital requirements would require sponsors to increase funding levels substantially, in some cases even up to the equivalent of 169% of IAS19. This is even greater than the 156% that one would intuitively expect to be required on a simple calculation basis in the example shown in Figure 1. The reason lies

in the Solvency II logic requiring solvency capital even for the excess funding required by SCR.

The research also indicates that

pension funds have a strong incentive to change their investment portfolios towards a more liability driven investment (LDI) orientated asset allocation. Considering the main drivers for solvency capital requirement, being interest, equity and longevity risk for a typical pension portfolio, schemes would probably reduce their equity and alternatives exposures and try to create a better match between assets and liabilities through long-duration fixed income investments. This significant change in asset allocation would affect the potential financing costs of the corporate sponsor as well as the future pension payments for the plan members during their retirement.

A key finding of the study is that risk-sharing structures can provide an effective way to reduce solvency capital requirements. A move from unconditional to conditional indexation results in a lower funding requirement due to lower technical provisions and solvency capital requirements. However, this step would not completely eliminate the potential underfunding gap.

Further work needs to be done on risk sharing as a flexible and efficient instrument to mitigate risk. As an extreme version, the employees' agreement to benefit cuts is the most effective arrangement in terms of Solvency II as it currently stands but is unlikely to be favoured by employees and pensioners. Such scheme components and the corporate sponsor's covenant show the difference between corporate pensions and insurance undertakings and underscore that a direct adoption of the Solvency II regulations may miss the intended aim of having the same regulation for the same risks. The same applies for applying different regulation to different risks.

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