

## LUPUS ALPHA CONVERTIBLES REPORT 06/2017

## Solvency II – Convertible Bonds: Indirectly benefiting from equity potential with lower capital requirements

Since January 2016, EU insurers have been subject to Solvency II, which aims to protect policyholders and make the financial markets generally more stable. With this in mind, Solvency II therefore regulates, for example, the capital requirements of insurers to cover their investment risk. Convertibles consequently present significant advantages over equities as investments, since they provide insurers with returns that are potentially similar to those on equities. Convertibles are subject to materially smaller capital requirements as an investment in equities and therefore offer an interesting and compliant investment alternative for insurance companies.

The main focus of Solvency II is to ensure that insurers make annual reports of their financial strength—their financial position and solvency in particular. In May this year, 350 European insurers published their first solvency ratio and financial condition reports. The **solvency ratio** indicates **if the cash flow of an insurance company is sufficient to meet its liabilities**, even in extreme conditions. Where solvency is adequate, the insurer's risk status will be given the green light. If solvency does not meet this standard, the insurance supervisor will step in and take any steps needed to reinstate solvency levels.

**The key item** in Solvency II is the **calculation of capital requirement**. This is based on two indicators: MCR (minimum capital requirement) and **solvency capital requirement** (**SCR**). Insurers that fail to achieve or maintain MCR risk losing their licenses. SCR makes sure that big, unexpected losses can be absorbed and that the insurer remains solvent at all times.

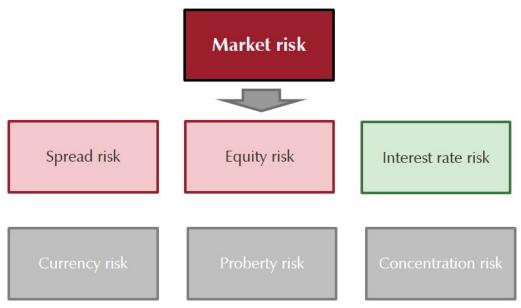
**SCR** is a one-year **Value-at-Risk indicator** with a 99.5% confidence level. Under Solvency II, this takes into account both the market risk on the different asset classes and also underwriting and operating risk. **Market risk is the most important risk** because the capital it requires form the largest proportion of total solvency capital. Market risk is the volatility on the insurer's investments, i.e. the risk components that are equities, interest rates, credit spread, currency, property and concentration, as identified by the EU committee (see graph 1).

Lupus alpha 1



Graph 1: Calculation of the market risk on convertibles includes sub-modules

Structure of the market risk module under Solvency II



Source: Bafin, Lupus alpha

Under Solvency II, risk capital requirements for investment in convertibles are lower than for investment in comparable equities. Convertibles offer a capital-efficient alternative to equities. Direct investments in type 1 equities (listed in EEA/OECD States) are subject to a 39% stress test. Type 2 equities (not listed in an EEA/OECD State) are subject to a 49% stress test. In both cases the adjustment range is +/-10%.

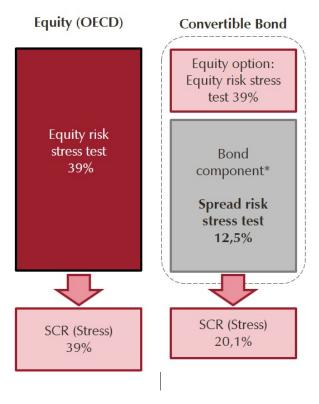
In the calculation of the capital requirement, convertibles are split into the components: corporates and call options. As convertibles can be hedged against currency risk and property and liquidity risk rarely appear, this leaves just the spread and interest-rate risks on the bonds themselves. Longer terms and higher issuer risk mean that spread stress tests regularly result in higher capital requirements. In the case of convertibles, equity risk is reduced to the relatively low-weighted option component (unless the bond has already been converted) (see graph 2).

Lupus alpha 2



Graph 2: Capital requirements are lower for convertibles than for equities

## Convertibles in comparison with equities



<sup>\*</sup> Assumptions: 5-year remaining term, BBB rating; Solvency-II correlation matrix, simplified schematic view; Source: Lupus alpha, EIOPA, DBConvertibles.com, own calculations

A convertible bond with OECD underlying, a remaining term of 5 years, BBB rating and average equity exposure (delta) will have 20.1% SCR (graph 2). On a comparable corporate without option, SCR will be 12.5%. On a type 1 equity, however, there will be a 39% stress test—almost double the figure.

Although the capital requirement on convertibles is higher than on comparable corporates, it is materially lower than on equities. For the insurer this means that equity-comparable returns can be achieved on convertibles. These chances arise from the equity call option. This can also diversify the investment portfolio and thus generate a risk capital requirement that is not significantly bigger than on corporates.

For the purposes of **Solvency II, an optimised convertibles portfolio should** contain **convertibles with 'classical Profiles' where investors have the option to convert or let the bond repay its notional amount**. These are convertibles show a high degree on convexity that need not necessarily be converted with loss of the relative advantages offered by this asset class. The focus must be on good quality issuers and systematic currency hedging. Embedded options and equity delta must be actively managed.

Lupus alpha <sup>3</sup>



**'At-the-money' Convertibles** with average equity delta of 30 – 60% **participate more when the underlying rises than when it falls.** Convertibles can therefore produce higher returns than traditional forms of debt and can be used by equity investors to reduce equity risk without losing the benefit of equity potential.

Due to the complexity of investing in convertibles and the high minimum denominations required, investment is recommended through specialist funds. Qualified fund managers have both the professional experience and the extensive market contacts needed to keep down the transaction costs and improve the management of new issues, for example. The wide range of convertible structures provide investors a strategic element in a balanced portfolio, whatever its purpose. Solvency II also makes them an attractive alternative to equities for insurers, offering a defensive position without loss of the opportunities provided by equities.

Portfolio Management: Marc-Alexander Knieß E-Mail: marc-alexander.kniess@lupusalpha.de

Portfolio Management: Stefan Schauer E-Mail: stefan.schauer@lupusalpha.de

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Lupus alpha 4