Insurers Using Derivatives for Solvency II Optimization

- **Risk ([www.risk.net](http://www.risk.net))**: Insurers testing exotics for Solvency II optimization. Insurers have been using derivatives to optimize their equity holdings and reduce capital requirements under Solvency II, but dealers are still battling with uncertainties in the regulation.

- Risk reports that with just weeks to go until Solvency II comes into force at the start of 2016, European insurers have been turning to complex equity derivatives in a bid to manage their capital more efficiently. But with continuing uncertainty surrounding some of the finer details of the regulation and a lack of clarity over exactly what constitutes excessive basis risk, both dealers and insurers have to make some educated guesses about what will qualify for capital relief.

- "There is always going to be a suite of products whose treatment is not going to be obvious under the directive and left open to regulators' interpretation. This puts the emphasis on firms doing their due diligence and getting legal advice where necessary," says an executive director in the markets structuring team at a major Swiss bank in London.

- Risk reports that the regulatory capital charge insurers are seeking to minimize is for publicly listed equities, defined as a Type 1 exposure under Solvency II, which is calculated based on a pre-defined stress scenario. This scenario assumes a 39% instantaneous decrease in the price of equities listed in European Economic Area or OECD countries...

- ...plus or minus an additional symmetric adjustment of up to 10%, which was introduced to mitigate pro-cyclicality. Put simply, with no symmetric adjustment, an insurer with a EUR 100 (USD 110) equity portfolio would incur a EUR 39 capital charge.

- Risk reports that though equities typically make up a small proportion of an insurer's portfolio – around 6.5% according to data from Insurance Europe, a trade body – Solvency II will drastically hike the amount of capital insurers have to hold against them, particularly in countries where existing capital requirements are small or non-existent.

- "The jump from Solvency I to Solvency II is greatest for French and German insurers. Under Solvency I, a German insurer's whole balance sheet may only have attracted a total regulatory capital charge of 4%. Under Solvency II, holding a 10% equity portfolio could attract a 3.9% capital charge."

- "So if you're not careful, your capital charge for equities could be almost as high as your total capital charge used to be," says a managing director in the asset-liability management structuring team at a Japanese bank in London.

- To read the full Risk article, please [click here](http://www.risk.net).

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- Risk reports that the simplest way to reduce the capital requirements for an insurer's equity portfolio is to overlay a short position, typically in the form of a put option. In the example of the EUR 100 equity portfolio, if the insurer includes an American put option with a strike at EUR 90, the change in the value of this option under the stress scenario would be taken into account, reducing the capital charge from EUR 39 to EUR 10 or less, assuming the option's current value to be zero.

- In practice, however, it is more complex. Solvency II requires insurers to meet certain risk mitigation criteria to qualify for capital relief. Among these is the requirement for the hedge to be in force for at least 12 months, meaning three-month or six-month options would only grant partial capital relief unless they were executed as part of a longer-duration hedging strategy. In that case a written policy must be in place detailing how the options are replaced, but dealers are still in the dark about how such a policy should be drafted.

- "What exactly must this document contain? To what extent must this describe the insurance company's procedure to roll the hedge? How do you objectively assess the risk of not rolling the hedge?" says the executive director in the markets structuring team at a Swiss bank in London.

- Risk reports that given this uncertainty, many insurers are playing it safe by taking out longer-duration strategies that don't require a written policy to be in place. Dealers have seen a pick-up in demand as Solvency II implementation nears, and have focused on offering structures that provide reliable capital relief without costing the earth.

- "There is definitely more urgency in the last few months for equity structures compared to the early part of the year. We've been active across Europe with life insurers and composites," says a managing director in the equity derivatives team at an American bank in London.

- **Pressing reset.** Risk reports that one particularly popular product is the so-called reset overlay. This offers multi-year put-option protection where the strike automatically ratchets up as the underlying equity rallies, ensuring a firm's solvency capital requirement (SCR) does not balloon in a rising market. Citi, Credit Suisse and UBS have all found demand for this type of product among insurers.

- "Resets make sense because they take into account the evolving nature of the portfolio. It is not enough to have a hedge that looks good only on day one of Solvency II but needs replacing in six months' time. This is where longer-dated resetting and look-back structures outperform compared to vanilla," says a London-based head of equity structuring at one US bank.

- Risk reports that it is the ability to stabilise the equity SCR over time that makes the reset structure so attractive, say dealers. "Most insurers are concerned with the volatility of their SCR. The largest are under pressure from shareholders not only to cover the SCR today, but to show they will be able to maintain, with a high degree of confidence, their solvency ratio within a range of, for example, 110–150%, in one year," says the head of institutional solutions structuring at a Swiss bank in London.

- The reset structure also delivers significant cost savings, adds a London-based head of equity and multi-asset structuring for Europe at an American bank. Compared to rolling two one-year puts, a two-year reset put could save an insurer up to 40% in premium, he estimates.

- Risk reports that an even cheaper iteration would be a discretionary reset, where the strike can be altered once in the product's term at a time and to a level of the insurer's choosing. Citi has pitched this as an efficient solution to relieve capital requirements, but has yet to
see significant uptake.

■ "From a governance perspective, it is more difficult for an insurer because they do not necessarily have the reactivity in their internal risk committees to make a quick decision on re-striking," says Fournier.

■ Risk reports that other structures that could deliver economic benefits have been stifled by uncertainty over individual regulators’ requirements. One example is a discretionary instalment put, which is an option with a maturity beyond one year where there is no full upfront payment of premium. Instead, the insurer pays the premium in instalments on a quarterly basis, with the freedom to cancel the contract and any outstanding payments at its own discretion.

■ The structure provides a long-duration hedge at a low upfront cost, but the walk-away feature means the hedge may not be maintained for the 12 months required under Solvency II. The European Insurance and Occupational Pensions Authority (EIOPA) declined to comment on whether such a structure would qualify as an eligible risk-mitigation technique.

■ "We've received excellent feedback on this, and economically it makes perfect sense, but it doesn't translate to 100% compatibility with Solvency II because the regulations are silent on this. This is the problem with principle-based regulation," says an executive director in the markets structuring team at a Swiss bank in London.

■ Risk reports that other structures being considered dispense with upfront payments altogether. "One we have discussed at length with clients and have traded is short contingent forwards," says a managing director in the equity derivatives team at an American bank in London.

■ "The mechanics are simple – imagine you are long a portfolio of stocks. Against that you do not have a put, but instead a forward that activates if the market falls from, say, 100% to 85%. If it falls by that much, you are short that forward with a strike of, say, 83%. The beauty of this structure is you do not pay anything upfront but you are able to claim regulatory capital relief on day one."

■ Risk reports that the path dependency of a barrier-contingent structure is a downside, however. If markets fall below the barrier, the insurer's long equity exposure is forfeited in exchange for the short forward position, meaning it cannot benefit from an equity rally. Another downside is its complexity in comparison with vanilla options.

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■ Risk reports that a managing director in the asset-liability management structuring team at a Japanese bank in London believes any structure designed to minimize an insurer's initial outlay may not get the seal of approval from regulators. "Cheapening up a hedge is what insurers want, but there is no free lunch in Solvency II. The cheaper a hedge, generally the more vulnerable it is. Regulators could disallow full capital relief on a cheaper hedge because it may not pay out in certain circumstances," he says….

■ ……………

■ Risk: Insurers testing exotics for Solvency II optimization.

■ (Source: Risk www.risk.net).

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