Solvency 2
The Long and Winding Road

We still see Solvency 2 as a “force for beneficial change in the insurance industry” – however, the road to implementation has been longer and more circuitous than we originally hoped. The process has been delayed by a lack of political and industry consensus due to its negative impact on certain types of insurance products – this has been exacerbated by record low interest rates and the credit and sovereign crises.

Solvency 2 is likely to fall short of the original vision. We think it will now launch on January 1, 2014. However, the desire to accommodate political and industry concerns has a number of consequences: i) it is likely there will be a ‘soft launch’ phase with use of grandfathering in a number of areas; ii) there is a risk of national variations in the rules; and iii) many of the advantages originally envisaged by the large players have been lost.

Liability discount rate and spread risk are the key controversies. Three separate adjustments to discount rates are being proposed: i) yield curve extrapolation; ii) the matching premium; and iii) the counter-cyclical premium. We remain confident that industry’s desire for a mechanism that offsets the impact of credit spread widening on capital – in a stressed scenario – will be permitted in the final Solvency 2 framework.

Lowering our expectations for industry change. Although we still believe Solvency 2 will have a profound impact on European insurers, this is likely to take longer to materialise due to the delayed implementation and transitional arrangements (e.g. consolidation, pressure on the traditional life insurance business model and shifts in asset allocation). We continue to see strong, well-diversified reinsurers as relative winners.
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Overview

The Long and Winding Road

We still see Solvency 2 as a “force for beneficial change in the insurance industry”, as we commented in Solvency 2: The Tide is Going Out, Morgan Stanley / Oliver Wyman, September 22, 2010.

However, the road to implementation has been longer and more circuituous than we originally hoped. The process has been delayed by the lack of political and industry consensus due to Solvency 2’s negative impact on certain types of insurance products and companies, which has been sharply exposed by persistently low interest rates and the turmoil of the current credit and sovereign crisis.

Following last year’s QIS5 results, the leaders of the European industry (in the form of PEIF, Insurance Europe – formerly the CEA – CFO Forum and the CRO Forum) wrote to Michel Barnier from the European Commission expressing “strong concerns with developments in the Solvency 2 process” which would “risk driving insurers out of their long-term business and would introduce pro-cyclicality into the framework”.

Since QIS5, although there has been progress, the process has not been smooth. The draft rules circulated on a private basis in October 2011 were widely perceived by the industry to be even more controversial, especially in relation to the proposed methods for dampening the effect of interest rate and spread volatility on solvency ratios.

Recently, lobbying efforts have intensified as the industry seeks to influence the direction of Solvency 2 and the next draft of the ‘level 2’ rules – this has been evidenced by an increase in press commentary accentuating potentially bearish outcomes. We understand from some of the insurers that PEIF has recently sent a further letter to several influential MEPs arguing the case for the large listed companies.

We continue to believe that the politicians will avoid an onerous outcome for the industry. For example, we do not anticipate industry-wide equity capital raising given an inevitable degree of ‘reverse engineering’ in the ultimate calibration. However, there is nonetheless a risk of a sub-optimal outcome, which we argue could diminish the attractiveness of the sector to investors.

Exhibit 1

Summarising the impact of Solvency 2 on the insurance industry

Source: Morgan Stanley Research, Oliver Wyman
Solvency 2 could fall short of the original vision

Despite the controversy, we believe that a Solvency 2 framework will be introduced, most realistically launching on January 1, 2014 given current discussions, and preceded by a one-year ‘soft launch’ phase. However, a delay until 2015 is possible, which could coincide with IFRS 4 Phase 2. Indeed, many of the largest players have been vocal about not wanting any further delay.

While we are confident that there will be a new solvency regime, the desire to accommodate a wide range of political and industry concerns means we believe that it could fall short of the original vision – specifically:

- it is likely that there will be a ‘soft’ launch phase, with possible use of grandfathering in a number of areas (e.g. liabilities, equivalence), and transitional arrangements;
- there is a risk of material national variations in the rules that are ultimately adopted; these could be explicit (for example, the inclusion of a matching premium expected in the UK, Spain and Ireland for their annuity businesses) or implicit (inconsistency of application);
- acceptance of non-EU solvency regimes will be decided on a pragmatic basis to contain the impact on EU insurers in particular with US interests; and
- many of the benefits foreseen by the large players have been progressively lost (for example, credit for diversification and rationalisation of the mutual / co-operative sector).

The difficulty of finding agreement on the way forward is compounded by the idiosyncratic nature of European life insurance liabilities, which were typically conceived under a very different solvency and accounting framework (and interest rate environment) that allowed insurers to manage their solvency over the long term. In contrast, Solvency 2 ensures mark-to-market solvency at each point through the cycle.

Overall, we see an even greater risk that the unintended consequence of Solvency 2 is that the cost of capital for the sector is increased.

Lowering our expectations for industry change

Given the significant compromises and grandfathering that we envisage, we believe that the framework is likely to be evolutionary rather than revolutionary. Indeed, given the delayed and incremental nature of Solvency 2, we believe that the winners and losers will take longer to emerge.

Our expectation is that insurers with business models that might have been expected to be severely challenged by Solvency 2 (for example, pure traditional life players) will be under less immediate pressure to adjust strategy.

Given this, we expect several of the outcomes we envisaged in our original report to be further delayed:

- we envisaged a significant uptick in M&A activity as a consequence of Solvency 2. Near-term activity is likely to remain modest due to the uncertainty over capital requirements, while transitional arrangements could delay the ‘strategic decision point’ for some of the weaker players;
- the phasing out of the traditional with-profits business will take longer. Ultimately, we think these products are often uneconomic when backed by shareholder capital – however, the rate of decline is likely to be slower than we forecast; and
- the goal of global consistency seems further away than ever. We previously hoped that Solvency 2 would become a global blueprint for insurance prudential regulation. In our view, this looks unlikely to happen.

Non-life insurers and reinsurers are still winners

We stand by our previous contention that financially-strong diversified reinsurers are relatively well placed for Solvency 2:

- their existing capital levels are substantially in excess of the ‘BBB’ calibration of the Solvency 2 framework;
- many reinsurers have significant experience with managing economic capital and already run sophisticated internal models; and
- there is a significant business opportunity to provide capital solutions to those players that might become capital constrained as a consequence of the transition to the new framework.

We also believe that the non-life names will be less affected by the implementation of Solvency 2. Companies already tend to operate with higher capital than the minimum required by Solvency 2 (in particular, if a certain credit rating is demanded by corporate customers),
asset risk tends to be modest and liabilities do not contain embedded guarantees.

Life insurers – especially those that focus on traditional life products with embedded interest guarantees – remain the likely losers. While pure risk products and unit-linked life products will look attractive under a Solvency 2 capital framework, these remain relatively small parts of the overall European product mix.

‘Volatility squared’

While the basic market consistent framework of Solvency 2 has been known for some time, the sheer volatility of the methodology is becoming increasingly clear.

We have dubbed this ‘volatility squared’, in that capital market movements can have an amplified impact on solvency capital ratios:

- asset and liability values are very sensitive to market movements – inconsistencies with ALM strategies can arise; for example, assets might move in value with interest rates or credit spreads, while liabilities move with swaps rates; and

- capital requirements also alter with movements in yields and asset prices if, for instance, financial guarantees become more ‘at the money’ and the convexity of option values takes over.

The resulting extreme volatility in reported solvency ratios makes it very difficult for insurers to manage capital levels and is also likely to result in a higher cost of capital for European insurers.

We believe that an increase in the cost of capital for a sector where capital is the principal raw material is one of the key unintended consequences of the way in which Solvency 2 is being implemented.

Liability discount rate and spread risk are the key controversies

Although many aspects of the rules are still unclear, the key controversy surrounds the discount rate that will be used to value insurance liabilities, and how the impact of spread volatility can be contained.

While it is accepted that discounting should be based on ‘risk-free’ market rates, it has become increasingly clear in the crisis that this cannot always be based on currently observed rates in any one fixed-income market. In particular, three separate adjustments to discount rates are being proposed:

- **yield curve extrapolation** – to take account of the fact that deep and liquid long-term assets do not exist in many of the currencies across Europe. This approach reduces artificial volatility in the long-term liabilities of insurers where there are insufficient assets to allow insurers to match and risk manage these long-duration liabilities;

- **the matching premium** – to take into account the higher returns on illiquid investments and eliminate the effect of spread volatility for certain types of closely matched, illiquid liabilities (in particular, UK annuities); and

- **the counter-cyclical premium** – which allows for the addition of a premium to discount rates during times of market distress, contingent on a decision by EIOPA. The quantum of the premium is based on various market variables but includes a discretionary component set by EIOPA.

In addition to these adjustments to the discount rates, a new ‘Symmetric Adjustment Mechanism’ for the spread-risk capital charges, similar to the existing ‘equity dampener,’ has now been proposed in the European Parliament. This reduces capital requirements when the spreads on a typical fixed-income portfolio rise above their average, but would increase them when spreads become compressed.

The counter-cyclical premium is widely supported by the industry but the current proposals as to how it is determined are generally seen as inadequate, due principally to its contingent nature. The industry is lobbying for an entirely predictable illiquidity premium that is automatic and would be calculated on a formulaic basis (in order to facilitate ALM, hedging, for example).

It is possible that only a very restrictive matching premium will be made available as part of a compromise on the overall package – or indeed that an extension of the matching premium to cover a broader range of liabilities could be considered. The proposal discussed in the European Parliament implies that the most likely outcome is that the UK, Ireland and Spain will be allowed to use it in the proposed form, while the other markets will not go ahead with it.

We believe that the situation is extremely fluid. However, we remain confident that a pragmatic decision on the discount rate will be reached.
A word on SIFI

The debate on the future capital framework for insurers is dominated by Solvency 2; however, insurers may also be subject to additional requirements as a result of being classified as a Systemically Important Financial Institution (SIFI).

The International Association of Insurance Supervisors (IAIS) – which, along with the Basel Committee on Banking Supervision and International Organisation of Securities Commissions, constitutes the ‘Joint Forum’ – is investigating whether any insurers should be considered SIFIs.

While it is widely accepted that insurers pose far less of a threat to the international financial system than banks, there is nonetheless a serious debate about the systemic risks posed by certain non-traditional activities of insurers.

The IAIS is likely to launch a consultation on the methodology used to determine whether an insurer should be considered to be a SIFI.

This should be followed later this year by the publication of additional policies that will outline the consequences of being designated as a SIFI. These could include the potential for resolution regimes and / or additional capital buffers.

Although we believe it is too early to foresee the ultimate outcome of the debate, in our view investors have not been discounting any financial consequences from the SIFI regime.

Asset allocation – still uncertain

We think that asset allocations will remain differentiated across different types of products; however, there will be a much stronger focus on managing the volatility and optimising risk with return.

Insurers have already started to de-risk their traditional businesses. We believe this will continue and become more sophisticated as insurers try to better match the guarantees, while still seeking some excess return.

Annuity businesses under matching premium rules will invest further in illiquid assets to provide enhanced returns for shareholders and support annuity pricing.

Although the rules are still fluid, short-dated highly-rated credit and real estate lending look relatively attractive assets under Solvency 2, while long-dated lower-rated credit and equities appear less attractive.

In Exhibit 2, we highlight the relative attractiveness of different asset classes.

Exhibit 2

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Excess Return / Capital Requirement (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>10.3</td>
</tr>
<tr>
<td>Private equity</td>
<td>12.2</td>
</tr>
<tr>
<td>Property</td>
<td>12.0</td>
</tr>
<tr>
<td>Real Estate Lending</td>
<td>23.3</td>
</tr>
<tr>
<td>AA (5y)</td>
<td>23.1</td>
</tr>
<tr>
<td>AA (10y)</td>
<td>11.8</td>
</tr>
<tr>
<td>A (5y)</td>
<td>24.6</td>
</tr>
<tr>
<td>A (10y)</td>
<td>16.4</td>
</tr>
<tr>
<td>BBB (5y)</td>
<td>23.8</td>
</tr>
<tr>
<td>BBB (10y)</td>
<td>13.1</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research, Oliver Wyman
Note: For credit, focus on credit spread capital. Interest rate risk and asset / liability duration mismatch capital requirements are not considered nor do we consider the effect of ‘Symmetric Adjustment Mechanism’ for both equities and spreads.
EU sovereign crisis creating significant challenges

The stress in European sovereign debt markets has led some to question whether the Solvency 2 framework needs significant revision.

However, we believe that neither the industry nor the European authorities have any desire to introduce formal capital requirements for European sovereign debt.

In our view, the EEA sovereign debt will continue to be treated as a credit-risk free asset under Solvency 2, as was the case under the draft QIS5 specification.

Although the bond markets are clearly differentiating between the credit risk of various EEA sovereign debt issuers, we think from a political perspective this is unlikely to be recognised formally in the framework.

Rather, we expect sovereign risks to be reflected in the ORSA process and in internal models.

Equivalence requirements

The need for insurers to capitalise foreign subsidiaries to a Solvency 2 standard where those units operate in a non-equivalent regime has generated significant comment – especially as the US is unlikely to meet the requirements for equivalence.

In our view, it seems reasonable to assume the European Commission would have no desire to put European insurers at a competitive disadvantage relative to international peers.

Internal models – worth the effort?

We originally felt that internal models would be an area where sophisticated, multi-national insurers could gain an advantage over smaller, more localised entities.

However, we now believe that insurers are likely to struggle to get credit for internal models that show a material capital reduction compared to the standard formula.

Furthermore, in some jurisdictions, the model approval process is proving to be very cumbersome. We believe increasingly that the complexity and opacity of the solvency calculation framework could lead to investors penalising insurers with the higher cost of capital.

Could S2 catalyse closed block deals?

We believe that the transition to Solvency 2 will create an active closed block market in Continental Europe; we anticipate this will be driven by the tougher solvency conditions for traditional life books.

The UK market saw a significant back-book market created in response to the crisis in with-profits in the early 2000s and the subsequent move to the risk-sensitive ‘realistic balance sheets’ solvency regime.

We note that SNS REAAL has publicly announced its intention to pursue closed block transactions in the Netherlands.

On hybrid debt – workable solutions already in place for Tier 2 capital

The material changes to hybrid capital rules that have been proposed will in our view render existing instruments redundant and ultimately force their accelerated and full-scale replacement.

We believe the challenge remains greatest for insurers with current capital positions most reliant on hybrids. An investor base is already in place for Tier 2 hybrids (the form of debt we expect will be issued most commonly by insurers in future). Most recently, issued subordinated debt has been structured to meet draft Solvency 2 requirements.

However, we believe the jury is still out with regards to Tier 1 instruments, both in terms of whether insurers want to issue them, and whether fixed income investors want to buy them. We anticipate grandfathering arrangements designed to help smooth the transition of capital structures to ones compliant with the new regime.
## Solvency 2 Key Debates

<table>
<thead>
<tr>
<th>What are the debates?</th>
<th>Possible Outcome?</th>
</tr>
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</table>
| **Liability Measurement** | - What is the appropriate discount rate to value liabilities?  
- Low bond yields making the implementation of Solvency 2 problematic  
- Discretionary 'counter-cyclical premium' viewed as impractical  
- Specification of 'matching premium' is still uncertain | - Compromise on discount rate with spread adjustments and long-term 'ultimate discount rate'  
- Formulaic approach to counter-cyclical premium – removing its contingent nature  
- 'Matching premium' (or similar approach) supporting certain illiquid products  
- Grandfathering of existing liabilities and transition period |
| **Asset Allocation** | - What are the likely changes to insurers’ asset allocation strategy as a result of Solvency 2?  
- When are insurers likely to implement investment strategies and what impact could this have? | - Still a lot of confusion / uncertainty over implications of the rules  
- Asset allocations differentiated according to product, focus on optimizing risk / return  
- Greater appetite for corporate credit (especially short-dated), with 'symmetric adjustment mechanism' reducing capital requirements when spreads are high  
- Equities and direct real estate appear less attractive  
- Matching premium creates demand for long-dated illiquid assets (e.g. mortgages) |
| **Timetable** | - When will Solvency 2 actually come into force?  
- When will the rules and technical requirements be defined? | - Timetable remains uncertain, but we expect more clarity in H2 2012  
- Omnibus 2 legislation is key hurdle, allowing delay and transition arrangements  
- Our best guess is January 1, 2014 with a 'soft launch' phase, but could easily be delayed  
- Full impact likely to be delayed through long transition phase and grandfathering |
| **Sovereign debt risk** | - Should EU peripheral sovereign debt face capital charges?  
- Mismatch between 'risk-free' swap yield discount rate and sovereign yields | - Unlikely to be explicit EU sovereign risk charges in Standard Formula  
- Sovereign risk to be addressed through Level 3 and local regulatory ORSA overlay  
- EU insurers increasingly 'domesticating' sovereign bond exposure in Eurozone |
| **Equivalence of non-EU regimes** | - Which non-EU regimes are 'equivalent' to S2, allowing non-EU cap requirements to be taken into account?  
- Particular sensitivity around US life, a major market for EU insurers | - Partial grandfathering to avoid Solvency 2 being applied to US businesses  
- Decision on US equivalence revisited after period of time  
- US life subs of EU insurers pulling out of non-S2 friendly products to limit risks |
| **Internal Model vs. Standard Formula** | - To what extent will insurers use internal models rather than standard capital requirements?  
- To what extent can regulators / analysts follow internal models? | - Significant use of internal models, especially for non-life / reinsurance industry  
- But enthusiasm cooling due to supervisory approval process and opacity  
- Large deviations from Standard Model unlikely for Market Risk |
| **Supervisory landscape** | - To what extent can S2 create a 'level playing field' supervisory landscape for EU insurers? | - Although S2 better than S1 for promoting consistency, likely to be different  
- ORSA, capital add-ons, internal model approval could differ in different regimes  
- Likely to be grandfathering of existing business, limiting near-term consistency  
- Clash of regimes (SIFI, IFRS 4 Phase 2) may elevate CoE |

Source: Morgan Stanley Research, Oliver Wyman
Liability Measurement – the Most Crucial Aspect of the S2 Debate

KEY Debates

- There is considerable uncertainty about the liability discount rate to be used under Solvency 2.
- The proposed counter-cyclical premium is seen as unsuitable in its current form, while the specification of a matching premium is still uncertain.
- The very low levels of bond yields are making the implementation of Solvency 2 more problematic for the industry than originally envisaged.

Morgan Stanley / Oliver Wyman View

- We believe a compromise will be reached on the discount rate – allowing the inclusion of spread adjustments and stabilization of long-term discount rates under certain conditions – and we regard this as necessary to support existing business models, in particular in life insurance.
- We see no evidence of a desire by the politicians to create capital stress, hence we expect there to be some element of ‘reverse engineering’ in the ultimate calibration.
- We expect a formulaic approach to be introduced in calculating the counter-cyclical premium – removing its contingent nature.
- In our view, the matching premium approach will be preserved or replaced with an economically similar combination of back-book grandfathering and an illiquidity premium on new business at least in the UK, Ireland and Spain.
- We expect the extrapolation method for discount curves to be used widely by regulators in Germany and northern Europe to help stabilise long-duration liabilities where fixed-income markets are not sufficiently deep and liquid.

Since QIS5, the European Commission has not released any further proposals for Solvency 2 – although private consultations have been conducted with the industry. Our analysis in this section is based on communication with national regulators and insurance companies, the Omnibus 2 draft, as well as the proposals contained in amendments tabled by European Parliamentarians and the compromise agreed by ECON.

How should one value insurance liabilities?

Of all the remaining issues in the final design of Solvency 2, the rules about how to measure the ‘market-consistent value’ of insurance-technical liabilities have become the ‘make or break’ issue for the new solvency regime. This is because the measurement of best estimate liabilities affects the capital available as well as capital requirements under stress.

The basic principle of Solvency 2 is for liabilities to equal the present value of ‘best estimate’ cash flows (adjusted for market risk if there are financial options and guarantees) discounted at ‘risk free’ interest rates.

As the insurance balance sheet is highly geared to the technical liabilities, and insurance cash flows often extend over many years, even a small change in discount rates can have a huge impact on capital.

Early on in the process, it was suggested that ‘market’ discount rates should be defined as the local inter-bank swap curve and modified by the appropriate inclusion of an illiquidity premium and an adjustment for credit risk.

Applying hindsight it is clear that industry created material problems for itself when it successfully lobbied for ‘risk free’ to be based on swaps rather than government bonds.

Although, at the time, swaps typically had a higher yield, with the sovereign debt crisis in Europe swaps now often trade tighter (although this is country specific). This has resulted in higher liabilities and, hence, some capital pressures.

Currently, swaps are still being considered as the basis for the risk-free discount rate with an adjustment for credit risk.

We see two key outstanding questions

When defining a suitable rate curve for discounting Solvency 2 insurance liabilities, we believe there are two key as yet unanswered questions:

- How should the industry extrapolate yield curves beyond the point where there is a market? Liability cash flows in insurance can extend over many years; for instance, German life insurance can have durations well beyond 40 years. In some currencies, fixed-income markets in long durations are not liquid enough to provide adequate yield information for insurance liabilities.

- What level of illiquidity premium or spread adjustment should be included in the discount rate? In particular, life insurers can be quite certain how long they can invest the assets that cover insurance liabilities; therefore they...
can invest in illiquid assets that pay higher yield, and mitigate the risk of spread changes through matching strategies for certain businesses. In contrast, yield curves are based on the yield of highly liquid instruments.

While it is agreed that these are the two principal outstanding questions, the respective answers are intensely debated between industry and regulators with some significant differences of opinion remaining. In the rest of this section, we cover this debate in considerable detail.

**Falling yields have highlighted issues in the design**

Throughout the Solvency 2 discussions, the interest-rate environment – at least for traditional life insurers – has deteriorated, and has highlighted increasingly the gearing of the sector’s economic capital to bond yields.

We illustrate this in Exhibit 3 — during the QIS4 process the average prevailing 10-year bund yield was around 4% (materially above the average German life back-book guarantee); during QIS5, the yield had fallen to just over 3%; and now the yield is below 2%.

Even allowing for the likely inclusion of an illiquidity premium or spread adjustment, it is clear that this situation is creating significant stress for the sector.

**The industry has been lobbying for adjustments**

For instance, at the beginning of 2011, just after the completion of QIS5, the CEOs of large European insurance groups in the Pan-European Insurance Forum (PEIF), the European insurance federation CEA, and the CFO & CRO Forums wrote a first, public letter to the responsible Commissioner Barnier, stating that the options tested by QIS5 and the draft Solvency 2 implementing measures may drive insurers out of long-term business and would introduce pro-cyclicality to the regulatory balance sheet.

**Exhibit 3**

**Government bond yields: lower yields in core markets and the rise of ‘government bond spreads’ in peripheral markets** — during QIS4 the 10 yr bund yielded ~4%; this fell to ~3% during QIS5 and is now below 2%. This environment has created significant stress for the industry under the current proposed framework.
To ensure that long-term guarantee products can continue to be offered, their key proposals were a formulaic approach to the application of the illiquidity premium and the appropriate determination of the risk-free rate curve with counter-cyclical dampeners.

We understand from several insurers that PEIF recently wrote a similar letter addressed to several Members of the European Parliament (MEPs) that are particularly influential in framing the debate.

Since QIS5, the European Commission has been working closely with the industry on the proposals from regulators in an intensive but non-public consultation process. There are elements of a solution emerging, but it is not yet clear what a comprehensive framework that addresses all the different challenges, which include the consistency of use across different products and member states, will look like. The current discussion focuses on the definition of the ‘correct’ risk free rate to discount future insurance cash flows, and the design of a more appropriate way to capture the stabilising influence of spreads and illiquidity in insurance portfolios.

**Liability Key Debate 1: Base curve and extrapolation**

Solvency 2 is based on the market consistent valuation of assets and liabilities. In accordance with the Solvency 2 Directive, the “relevant risk-free interest rate term structure” should be used to value the liability cash flows.

While there are many possible options for the base discount rate, the two options that have been debated the most are the inter-bank swap curves and the government bond curve, adjusted for credit risk as appropriate.

QIS5 used the swap curves as the base discount rate with an adjustment (10bps) for the credit risk of swaps. This is currently still considered as the most appropriate option for the base discount rate for currencies where swap curves are available.

As explained above, the long-duration characteristics of insurance liabilities make it difficult to find appropriate market instruments to determine the base discount rate for all durations. This requires the extrapolation of market data to be able to calculate the value of the liability. The choice of the extrapolation method affects the liability value directly but also the sensitivity of the liability value to changes in the market data (and therefore the SCR). While there are many possible options, two that have received the most discussion are:

- constant extension of the last observed liquid point;
- grading from the last observed liquid point to long-term ultimate level.

The first method can lead to much greater volatility, as a large portion of the liability value is dependent upon the last observed rate. The second method provides more stability, which would appear reasonable where hedging and matching is not possible (due to lack of availability of assets).

QIS5 used the grading from the last observed liquid point to a long-term ultimate level using macroeconomic factors. This ‘ultimate discount rate’ was a fixed assumption (varying by region) based on assumed long-term real interest rates and long-term inflation (e.g. just over 4% for the Euro region).
This methodology currently is still considered as the most appropriate option for extrapolating, although some of the underlying assumptions may change.

The assumptions as to both the cut-off duration beyond which the curve is extrapolated and the ultimate level of the rate are controversial and can have a very material impact on liability values. We have tried to illustrate this point in Exhibits 4-5.

In its compromise position adopted on March 21, 2012, the ECON committee of the European Parliament proposes a

Exhibit 6 shows a simplistic example of a flat base yield curve of 2% that is observable (i.e. liquid) for up to 20 years. After a cut-off date of 20 years, we assume a linear extrapolation of this base yield to an ultimate discount rate of 3%, 4% or 5% over a subsequent 30-year period.

In public disclosures, Storebrand’s Swedish life insurance unit SPP has given a recent example of how it extrapolates the yield curve in order to calculate its IFRS liabilities

For liabilities >20 yrs a normalised rate is calculated equal to: real interest rates (2%), plus inflation (2%), plus a term premium (0.5%) for a total of 4.5%.

This is adjusted by 25% of the difference between the normalised 10 yr rate (4.0%) and the actual 10 yr rate.
Exhibit 7 shows how varying the cut-off date and the ultimate discount rate, in this simplistic example, affects the liability valuation – assuming a starting liability of 100% based on a flat 2% yield curve for all durations.

The impact of assuming a higher ultimate discount rate relative to the base yield curve is clearly positive. However, the impact of extrapolation is obviously more pronounced when the cut-off point for extrapolation is early. The outputs in Exhibit 7 are shown as the percentage of the base case liability.

Exhibit 8 from the public disclosures of a Swedish insurer (Storebrand’s subsidiary SPP) illustrates a method for extrapolating the yield curve (which it currently uses for the purposes of IFRS). Given their very long-dated liabilities, German insurers with traditional with-profits portfolios are focused particularly on this element of the final rules.

**Liability Key Debate 2: the illiquidity premium**

One of the great advantages of the insurance business model is that insurers can act as long-term investors, able to invest in illiquid assets, with (depending on the underlying product) limited risk of redemption.

This means insurers should be able to hold assets to maturity and realise an illiquidity premium, untroubled by any volatility in the credit spread (as long as this does not translate into higher than assumed credit defaults).

**The inclusion of an illiquidity premium in a solvency framework has a significant impact,** in the solvency levels but also on investment behaviours and pricing. Recognition of an illiquidity premium benefits insurers’ capital positions in two ways; it will:

- reduce liability values and consequently increase the amount of available capital for a given amount of assets backing these liabilities; and

- reduce the required capital, as the liquidity premium is linked to spreads and therefore will lead to liabilities that move in tandem with assets when spreads change.

However, the inclusion of an illiquidity premium in the valuation of insurance liabilities – both for the ‘best estimate’ and under shock – has been controversial. As we show in the illustrative example in Exhibit 9, both required capital and the level of liabilities are highly sensitive to the use of an illiquidity premium, and the level of this premium.

Initially discarded entirely by almost anyone except the UK annuity writers, it has now become accepted as an important element of the future design of the Solvency 2 framework. In particular, this is because it can reduce the capital requirements for spread volatility.

**Academic evidence supports an illiquidity premium**

Academically, the existence of an illiquidity premium has been the subject of a significant body of research, and there is strong consensus that liquidity premia exist in corporate bond markets (and other illiquid assets). They can be substantial but vary over time.

However, there is no universally accepted approach to estimating liquidity premia, and as a result the values attributed to it by different researchers vary widely.

In Exhibit 10 we summarise some of the most influential publications on the illiquidity premium, both in terms of the absolute size of the premium and, perhaps more importantly, the possible proportion of the observed credit spread.

One methodology that historically has been used to demonstrate the existence of an illiquidity premium has been the so-called ‘negative basis trade’.

This is where there remains a positive spread over the risk-free rate for a senior unsecured corporate bond net of the cost of buying Credit Default Swap protection on the
Historical calculations of illiquidity premium – various academic studies have supported its existence; however, there is no consensus over the quantum. A further complication is that the illiquidity premium is a dynamic phenomenon and is likely to change with time and the nature of the observed asset.

<table>
<thead>
<tr>
<th>Source</th>
<th>Illiquidity Premium as a proportion of observed spread</th>
</tr>
</thead>
<tbody>
<tr>
<td>De Jong (2006)</td>
<td>60 bps</td>
</tr>
<tr>
<td>EUR Houweling (2004)</td>
<td>13-23 bps</td>
</tr>
<tr>
<td>USD Chen (2004)</td>
<td>37 bps</td>
</tr>
<tr>
<td>USD Longstaff (2001)</td>
<td>9-16 bps</td>
</tr>
<tr>
<td>USD Lin, Liu (2009)</td>
<td>23 bps</td>
</tr>
<tr>
<td>USD Longstaff (2004)</td>
<td>23 - 49 %</td>
</tr>
<tr>
<td>USD Huang (2003)</td>
<td>39%</td>
</tr>
<tr>
<td>USD Delianedis (2001)</td>
<td>70 - 80%</td>
</tr>
<tr>
<td>USD - 95%</td>
<td>76 - 86%</td>
</tr>
</tbody>
</table>

Source: Academics / practitioners cited by name in the Exhibit, Morgan Stanley Research, Oliver Wyman

Illustrative breakdown of the credit spread. In our view, insurers are able to harvest a material ‘risk-free’ yield pick-up due to long-term illiquid liabilities. We believe this is a fundamental investment attraction for the insurance sector – and a major bull point versus the banking and fund management industries.

### Illustrative Spread Composition

#### 5 year BBB bond yielding 350 bps spread

- **Spread**: 350 bps
- **Risk free**: 160 bps
- **Illiquid funding**: 120 bps
  - Spread volatility: Say 60 bps
  - Downgrade risk: Say 60 bps
- **Expected losses**: 45 bps
- **Default volatility**: 25 bps

What is the risk to the insurer?

- **Low risk to insurer**
- **Full risk to insurer**

Source: Morgan Stanley Research, Oliver Wyman
underlying issuer (although this is not a 100% pure liquidity deal as there remains residual – albeit collateralised – exposure to the provider of the protection). Although there is a broad range of outcomes, generally we believe that the illiquidity premium is considered to comprise around 50% of the credit spread.

Deconstructing the credit spread further

Exhibit 11 shows an illustrative breakdown of a corporate bond spread and the potential risks the insurer may be exposed to for the different elements of the spread.

In our view, insurers are fully on risk for the pure default risk of a corporate bond and the volatility of that risk. There is also some moderate risk from ratings migration.

We believe there to be a very modest economic risk from spread volatility, and even here this risk can be considered to be immaterial if assets are genuinely held to maturity (rather than traded on an active basis).

This leaves a genuinely risk-free yield pick-up of around 160 bps, which in this instance would comprise some 45% of the credit spread.

In our view, reflecting this economic reality is fundamental to the success of any future Solvency 2 framework.

The intricate history of the illiquidity premium in S2

Illiquidity in an insurance liability portfolio depends on the specific nature of the block of business and ALM strategy, and the premium is not directly observable (only in combination with credit risk).

Therefore, it is very difficult to define the ‘appropriate’ illiquidity premium for regulatory purposes.

Supervisors have thus been reluctant to recognise it in the Solvency 2 framework. Initially, no adjustments were made to the risk-free discount rate (in CEIOPS’ proposals for the risk-free rate, for example).

However, in QIS5 a simple illiquidity premium was applied to certain products based on a reference portfolio (regardless of an insurer’s assets, a proportion of a maximum illiquidity premium was allocated based on the nature of the underlying liabilities, with all liabilities of longer than one year receiving at least a 50% allocation).

The illiquidity premium tested in QIS5 satisfied neither supervisors (who believed it should be applied more restrictively) nor industry (who argued for a dynamic and potentially higher illiquidity premium that reflected an insurer’s actual assets and spread levels).

Matching premium and counter-cyclical premium

Given this tension, the discussion has bifurcated, and two different adjustments have been proposed to deal with different situations:

- a ‘matching premium’ would be available in normal times, but only to blocks of business that meet very stringent conditions intended to ensure cash-flow matching between assets and liabilities; and
- a ‘counter-cyclical premium’ to counteract the effects of market turmoil in distressed markets on statutory valuations.

We summarise the key points of the two approaches in Exhibit 12. However, there are strict eligibility criteria for the matching premium, which limits its utility for the European industry significantly.

Matching premium – currently for certain UK / Spanish products

Under current thinking, insurers would only be eligible to use the matching premium to ‘top up’ their discount rates for insurance liabilities in a block of business if a number of requirements were met:

- highly predictable cash flows from assets and liabilities;
- no future premiums expected and no option for surrender;
- assigned ‘held to maturity’ high-quality bond portfolio with specific minimum credit quality requirements (for example better than BB, with a maximum allocation of 15% to BBB or worse);
- liabilities and matching assets are managed separately and may need to be ring-fenced from other operations; and
- only underwriting risks are longevity risk, expense risk and revision risk.
In its compromise position adopted on March 21, 2012, the ECON committee of the European Parliament proposes that Member States can choose to allow their insurers to use the matching premium, under the additional condition that insurers using matching premiums cannot operate outside of their home market in activities relating to the business that the matching premium applies to without authorisation.

The details of these requirements lead to the current expectations that only annuity writers in the UK and in Spain have any chance to avail to the matching premium, and even these insurers would need to restrict their business practices in order to meet all criteria.

The matching premium is set as the spread (over swaps) on the assigned assets minus the spread that covers for credit risk (‘fundamental spread’). The fundamental spread is to be calculated using long-term default and credit-migration metrics but needs to be, for instance, at a minimum 75% of the 30-year average gross spread.

In Exhibit 13 we compare credit spreads with a projected matching premium over time. For the matching premium we assume a ‘matching’ bond portfolio with average ‘A’ credit quality. One can see that when credit spreads are low, the matching premium will be very low, as well, as was the case between 2005 and 2007.

In times of stress, the full spread widening over and above the fundamental spread can be captured in the matching premium. However, we note that at current spread levels, the matching premium may fall below the QIS5 illiquidity premium.

To illustrate the impact of the matching premium, we consider how a switch to a matching premium approach might affect the balance sheet of a typical UK annuity writer. Exhibit 14 shows the impact of the potential changes in the balance sheet (best estimate liability, risk margin and SCR) of an illustrative UK annuity product under Solvency 2 compared to existing capital requirements.

Exhibit 12
The October 2011 draft rules proposed replacing the broad illiquidity premium regime with two discrete approaches – the “matching premium” (which has strict qualification criteria) and the more broadly applicable “counter-cyclical premium”. However, both are proving to be controversial and are subject to change.

<table>
<thead>
<tr>
<th>What is it for?</th>
<th>Matching Premium (MP)</th>
<th>Counter-cyclical Premium (CCP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eliminate artificial volatility due to spread movements for products that are fundamentally not exposed to short-term spread movements (e.g. bond assets held to maturity and illiquid liabilities) – e.g. applies to UK annuities.</td>
<td>Applied in abnormal market circumstances to avoid the pro-cyclicality inherent in Solvency 2. This would allow insurers to continue offering reasonably priced long-term products and take a long-term investment view.</td>
<td></td>
</tr>
<tr>
<td>When can it be used?</td>
<td>At all times, but only for portfolios that allow and actually follow a strict cash-flow matching strategy with appropriate matching assets.</td>
<td>Only in times of crisis (as determined by EIOPA), but for all businesses (except those with MP to avoid double counting).</td>
</tr>
<tr>
<td>How determined (as currently proposed)?</td>
<td>Illiquidity premium of the insurer’s matching assets, with an adjustment for credit risk.</td>
<td>By EIOPA based on various market inputs measuring distress.</td>
</tr>
<tr>
<td>Industry proposals</td>
<td>Less restrictive application. At the moment, only some UK and Spanish annuities qualify, and only if they follow very restrictive investment strategies.</td>
<td>Need for a predictable CCP and removing discretionary element set by EIOPA. This allows the industry to plan appropriately and better hedge liabilities. Ensure benefits of CCP are not offset by higher capital requirements during periods of stress.</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research, Oliver Wyman
Exhibit 14 shows the following calculations (based on 2011 market conditions):

- **Existing UK solvency requirement and liability valuation.** The chart shows two calculations: first, the standard Solvency 1 liability and capital requirement, and second, the more onerous ICA requirement (Individual Capital Assessment). The latter is an additional realistic risk-based capital regime introduced in the UK in 2004.

- **Solvency 2 liability and capital requirement based on QIS5 assumptions.** This assumes a QIS5 illiquidity premium approach to value liabilities and capital requirements. We show two calculations: assuming a 100% allowance for the illiquidity premium (which was the standard for annuity business under QIS5) and an additional calculation showing the impact of using only 75% of the illiquidity premium.

- **Solvency 2 liability and capital requirement based on a ‘matching premium’.** Again, we show two alternatives: the impact of using a matching premium approach using either an internal model or standard model.

Exhibit 14 shows stark differences between the different calculations. The most obvious initial observation is that for UK annuity writers all the Solvency 2 approaches shown are likely to result in higher balance sheet resources (i.e. liabilities and capital requirements) than the existing capital regime.

Many UK annuity writers already hold higher balance sheet resources than pure Solvency 1 capital requirements under the UK ICA regime. Under this calculation, insurers can use a higher discount rate based on an internal model and have a high degree of freedom in their choice of illiquidity premium. However, capital requirements compensate for this and are relatively high compared to Solvency 1 – resulting in higher overall resource requirements.

Under QIS5, however, even with a full allowance for an illiquidity premium, resource requirements are even higher. The liability valuation in Exhibit 14 is slightly higher than Solvency 1 due to the decline in bond yields. Capital requirements are higher than Solvency 1 and comparable to the ICA regime.

Solvency 2 also requires the addition of a ‘risk margin’ – an addition to liabilities that represents the likely cost of winding down and transferring these liabilities to a third party if an insurer fails.

The use of a lower illiquidity premium (at 75% of the full premium) clearly results in a lower discount rate and higher liability – as well as slightly higher capital requirements.

When comparing the QIS5 basis to a ‘New Solvency 2’ basis, in which a matching premium is used instead of an illiquidity premium, there are two main effects:

- **The liability valuation actually increases** since we estimate a matching premium that is lower than current illiquidity premiums, resulting in a lower discount rate to value liabilities.

- **However, capital requirements reduce substantially due to lower credit risk.** This is because under the matching premium approach, any widening of credit spreads is offset by a higher matching premium in the discount rate for liabilities. This is at the heart of the matching premium approach, where the underlying risk of default is already taken into account in the deduction made to the matching premium.

Exhibit 14 shows that the overall resources required under a matching premium methodology are lower than under QIS5. UK annuity writers, who have been the most vocal advocates for an illiquidity premium, would be very much in favour of a matching premium solution, although it is probably less attractive than the current regime.

However, requirements could be reduced further through the use of an internal model matching premium calculation. As Exhibit 14 illustrates, this may result in balance sheet requirements that are comparable with the existing ICA regime.

The internal model differs from the standard model in one key area. Using an internal model, insurers can assume that any credit spread stress test is offset completely by a higher discount rate.

However, under the standard approach insurers have to include a stress-test of the full credit spread in their portfolio, including the ‘fundamental spread’ that represents the long-term underlying credit risk (i.e. a minimum of 75% of 30-year average spreads). Since the ‘fundamental spread’ is not included in the calculation of the matching premium in valuing liabilities, this means that insurers still have to hold some capital against credit-spread risk – although at a significantly lower level than under QISS5.
Exhibit 13
Morgan Stanley / Oliver Wyman estimate of a typical matching premium compared with the illiquidity premium under QIS5 – currently the matching premium is lower than the full QIS5 illiquidity premium

Source: Bloomberg, Morgan Stanley Research estimates, Oliver Wyman estimates

Exhibit 14
Comparing Solvency 2 discount rate approaches to existing capital regimes for UK annuity writers; Solvency 2 will require greater balance sheet resources, but a matching premium approach with an ‘internal model’ is the least disruptive

Source: Morgan Stanley Research estimates, Oliver Wyman estimates
Calculations based on mid-2011 macroeconomic conditions
Given our observations on the impact of the matching premium, what are the likely implications of this methodology for UK annuity writers?

- Regardless of the matching premium approach taken, UK annuity writers will require greater balance sheet resources to write business than under Solvency 1. This could result in upwards pressure on pricing – or alternatively lower benefits for customers. We estimate that pricing may have to rise by 3-5% (based on existing macroeconomic conditions) to compensate.

- Cash generation could also be affected in the near term. Companies using Solvency 1 or the ICA regime currently need to hold lower resources (liabilities plus capital) on their balance sheet than may be required under Solvency 2. Therefore, cash payback periods and the level of cash return could be negatively affected, even if a matching premium was to be adopted.

Inevitably, any additional strains to balance sheet requirements or cash generation would be minimized if UK annuity writers are permitted to use an internal model approach.

The counter-cyclical premium

In contrast, the counter-cyclical premium is a crisis management instrument at an EU level. As proposed in the Commission’s original Omnibus 2 draft, it would be activated by EIOPA if markets no longer gave reliable values for supervisory purposes. In contrast to the matching premium, when activated by EIOPA the counter-cyclical premium would be available for all blocks of business (except those using the matching premium to avoid double counting).

EIOPA’s decision to recognize such a situation would be based on any of three observations: (1) spreads rise to excessive levels not due to any increase in credit risk; (2) the ‘normal’ rules of Solvency 2 would trigger cyclical behaviour in the insurance sector; or (3) there are sharp and sudden falls in markets.

Like the decision when to ‘switch on/off’ the counter-cyclical premium, EIOPA also has the discretion to set its quantum, to reflect its assessment of the distressed levels of market liquidity and government bond prices.

The ECON committee proposes that the counter-cyclical premium should be based on the spread between the yield on a representative asset portfolio that an insurer is invested in, and risk-free interest rates. Also, ECON proposes that the counter-cyclical premium can be used only for ‘illiquid liabilities’.

In effect, by including the counter-cyclical premium in the valuation of their liabilities, insurers can compensate for the effect of asset falls if these are due to extreme rises in spreads that are not justified by credit risk. It is therefore a very powerful tool to reduce volatility in the Solvency 2 balance sheet.

To illustrate the effect of the counter-cyclical premium on an insurance balance sheet, we show a hypothetical example of how a counter-cyclical premium may work in Exhibits 15 and 16. Since we do not have any concrete details on how a counter-cyclical premium may work in practice, this example is for illustrative purposes only.

These charts simulate a scenario of pressure on sovereign bonds, through a ‘shock’ in government bond yields, resulting in a ‘spread’ between government bonds and swap yields used to value liabilities.

As we show in Exhibit 15, we assume a sharp widening of sovereign bond yields in the second half of Year 1, which as Exhibit 16 shows, results in a substantial drop in an insurer’s capital resources at the end of that year.

Given this pressure, our example assumes that EIOPA decides to introduce a counter-cyclical premium at the beginning of the second year of the crisis. As the insurer is now able to include the counter-cyclical premium from Year 2, its liability value decreases, and its solvency position is restored.

While this example is entirely hypothetical, it shows how the counter-cyclical premium works. However, it also illustrates a key concern that the discretionary nature of both when and by how much the counter-cyclical premium provides relief makes it impossible for insurers to plan ahead, do ALM and manage capital, in particular at the critical early stages of a crisis.

For example, insurers may be encouraged to take on a greater quantity of asset risk than they might otherwise do in the expectation that they may be ‘bailed out’ by EIOPA. In addition, insurers may find themselves reluctant to hedge interest rate or market risk since they cannot be sure how liabilities might change during a negative market event.
An illustrative example of how a counter-cyclical premium (CCP) may work during a sovereign shock: rising bond yields at the end of Year 1 are compensated for by a CCP addition to liability discount rates in Year 2...

...this allows pressure on capital resources at the end of Year 1 to be relieved at the start of Year 2
The industry therefore insists that EIOPA should develop and publish a formula and objective trigger points for the counter-cyclical premium.

While these obviously need to address the risks of ballooning bond spreads observed in the current crisis, the industry agrees that EIOPA should have discretion to update its methodology to address new types of crises (‘unknown unknowns’).

**Where are we likely to end up?**

The concept of using two different adjustments instead of one single illiquidity premium – matching premium and counter-cyclical premium – seems to be established with the different stakeholders, and we expect that the eventual solution will be along those two concepts.

While there is still significant disagreement about the exact design and scope of application of both, we expect that a compromise will be reached along the lines of the current discussion.

For the matching premium, we expect that the conditions will be somewhat relaxed, but may not include products other than annuities. It is quite possible that it will be left to the Member States to decide whether a matching premium can be applied in their markets; only the UK, Ireland and Spain would be likely to exercise this option.

For the counter-cyclical premium, we expect that a relatively simple ‘base line’ formula with triggers will be defined. This will likely be tailored to the current crisis, and therefore it is possible that in the next crisis it will be ineffectual and need to be changed ad hoc. Potentially, the counter-cyclical premium will apply only to illiquid liabilities, which would cover typical insurance business but not some banking-type products.

While the current discussion focuses on the design of the matching premium and counter-cyclical premium, this is unlikely to resolve the broader valuation challenges. For instance, Germany is a market where the traditional life insurance business model is under significant pressure from QIS5 and current market conditions, but where no adjustment will be available for ‘normal’ times. Relief is likely to come here from a quick extrapolation of the discount curve to a relatively high ultimate forward rate.

Also, the different markets in the EU have so far used a variety of valuation methods – some more static and formula-based, and others with greater reliance on current asset information. These different ‘valuation cultures’ are slow to converge, and some segments of insurers are struggling to upgrade their methodologies to the stochastic valuation required by Solvency 2 for most types of life-insurance businesses. For instance, the German industry is attempting to design a spread-sheet-based ‘cash-flow’ model to do market-consistent valuation of its complex participating business.

We therefore expect that there will also be ‘grandfathering’ rules that at least to some extent shield the existing businesses from the new valuation rules of Solvency 2.
Asset Allocation – Still Uncertain, but Change Is Likely

KEY DEBATES
- What impact will the increased sensitivity of insurers’ balance sheets have on their strategies?
- How will insurers look to manage market risk in the new environment and what impact will this have on investments and asset allocations?
- When will insurers decide and implement their new investment strategies, and what impact will this have on markets?

MORGAN STANLEY / OLIVER WYMAN VIEW
- Asset allocations will remain differentiated across different types of business, in particular traditional with profits, vs. shareholder funded products such as annuities and in P&C, but there will be a stronger focus on managing the volatility and optimising risk with return.
- Insurers have already started to de-risk their traditional businesses. This will continue and become more sophisticated as insurers try better to match the guarantees, whilst still seeking some excess return.
- Annuity businesses under matching premium rules will invest further in illiquid funding to provide returns for shareholders and support annuity pricing.
- Although the rules are still fluid, short-duration, high quality credit and real estate lending look relatively attractive assets under Solvency 2, while equities and direct real estate appear less attractive.

Since QIS5, the European Commission has not released any further proposals for Solvency 2 – although private consultations have been conducted with the industry. Our analysis in this section is based on communication with national regulators and insurance companies, recent press reports on the discussions between members of the European Parliament, plus comments by rating agency Fitch on the private consultations (see comment ‘Fitch Ratings says European Commission proposals to lower capital charges for longer-dated unsecured corporate and financial institution bonds should mitigate the capital flight from these asset classes that is a likely side-effect of Solvency II’, November 22, 2011).

Impact of Solvency 2 on asset allocation
The impact of Solvency 2 on insurers’ asset allocation and ALM is still a very open question. On the face of it, short-duration, highly rated credit appears more attractive from a regulatory capital perspective under the new Solvency 2 rules, but longer-duration credit could offer a better economic match to liabilities with better overall value pick-up. However, unfortunately the picture is not that simple and is clouded by the uncertainty over the illiquidity premiums (matching premium and counter-cyclical premium), and a potential ‘dampener’ for spread volatility.

In Exhibit 17 we illustrate how Solvency 2 may affect the relative attractiveness of asset classes – this is based on our understanding of the latest draft rules.

It is also worth remembering that all EEA sovereign bonds are likely to remain risk-free, at least as far as the standard formula is concerned (please see pages 34-37 for a more in-depth discussion). Consequently, sovereign bonds are very attractive assets for EU insurers under Solvency 2; thus, deciding on an appropriate risk appetite for sovereign risk should be a first step in any ALM optimisation exercise.

Exhibit 17 shows the available excess return (i.e. the yield minus the appropriate swaps rate) divided by the capital requirement. We would stress that this is a relatively simplistic calculation as – for example – it does not include any benefit from diversification or consideration of whether a longer-dated asset might reduce any duration mismatch capital charge.

In Exhibit 18, we show the underlying calculations of the return assumptions. In particular, we show the differences between the standalone capital requirements for various asset classes based on QIS5 and our latest estimates. We would highlight the following points:

- we are not expecting changes in capital requirements for equities, private equity, direct property, real estate lending or short-dated credit; however
- we expect the framework will encourage investment in higher quality, investment grade credit assets. We assume external ratings will be a prime source of determining credit quality, though given recent rating migration experience, it is possible the authorities may seek to reduce where possible the influence of the rating agencies by not automatically hard coding their ratings into Solvency 2.
• In the wake of successful industry lobbying post QIS5 we expect to see reductions in the capital requirement for some longer-duration credit assets – for example, 10-year ‘AA’ credit from 11.0% to ~9.0% and 10-year ‘BBB’ credit from 25.0% to ~20.0%.

• We believe insurers will continue to be active users of equity and interest rate derivatives to manage ALM.

Based on these assumptions, the most attractive risk asset classes appear to be short-duration credit and real estate lending.

We consider the prospects for insurers in real estate lending in some detail in a recent Morgan Stanley Blue Paper – see “Banks Deleveraging and Real Estate – Implications of a €400-700bn Financing Gap” (Gysens, Tondi et al, March 15, 2012). Although we expect to see allocations here increase, for practical purposes we do not think this will be dramatic.

Exhibit 17
Our estimate of the likely relative attractiveness of different asset classes under the current draft Solvency 2 rules – short-dated credit and direct real estate lending look particularly attractive to us

<table>
<thead>
<tr>
<th>Excess return / capital requirement</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity</td>
<td>10.3</td>
</tr>
<tr>
<td>Private equity</td>
<td>12.2</td>
</tr>
<tr>
<td>Property</td>
<td>12.0</td>
</tr>
<tr>
<td>Real Estate lending</td>
<td>23.3</td>
</tr>
<tr>
<td>AA (5y)</td>
<td>23.1</td>
</tr>
<tr>
<td>AA (10y)</td>
<td>24.6</td>
</tr>
<tr>
<td>A (5y)</td>
<td>16.4</td>
</tr>
<tr>
<td>A (10y)</td>
<td>23.8</td>
</tr>
<tr>
<td>BBB (5y)</td>
<td>13.1</td>
</tr>
<tr>
<td>BBB (10y)</td>
<td></td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research, Oliver Wyman

Note: For credit, focus on credit spread capital. Interest rate risk and asset / liability duration mismatch capital requirements are not considered nor do we consider the effect of ‘Symmetric Adjustment Mechanism’ for both equities and spreads.

Exhibit 18
Underlying calculation of expected return on economic capital – we show estimated movement since QIS5

<table>
<thead>
<tr>
<th></th>
<th>Equity</th>
<th>Private equity</th>
<th>Property</th>
<th>Real estate lending</th>
<th>AA</th>
<th>AA</th>
<th>A</th>
<th>A</th>
<th>BBB</th>
<th>BBB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Excess return + capital requirement</td>
<td>10.3%</td>
<td>12.2%</td>
<td>12.0%</td>
<td>23.3%</td>
<td>23.1%</td>
<td>11.8%</td>
<td>24.6%</td>
<td>16.4%</td>
<td>23.8%</td>
<td>13.1%</td>
</tr>
<tr>
<td>Expected excess return (%)</td>
<td>4.0%</td>
<td>5.0%</td>
<td>3.0%</td>
<td>3.5%</td>
<td>1.27%</td>
<td>1.06%</td>
<td>1.72%</td>
<td>1.72%</td>
<td>2.97%</td>
<td>2.62%</td>
</tr>
<tr>
<td>Standalone capital requirement S-II (%) (OWIMS prediction based on currently available info)</td>
<td>39.0%</td>
<td>49.0%</td>
<td>25.0%</td>
<td>15.0%</td>
<td>5.5%</td>
<td>9.0%</td>
<td>7.0%</td>
<td>11.0%</td>
<td>12.5%</td>
<td>20.0%</td>
</tr>
</tbody>
</table>

For comparison: Standalone capital requirement QIS 5 (%) | 39.0% | 49.0%          | 25.0%    | 15.0%              | 5.5%| 11.0%| 7.0%| 14.0%| 12.5%| 25.0%|

Source: Morgan Stanley Research estimates, Oliver Wyman estimates

Note: For credit, focus on credit spread capital. Interest rate risk and asset / liability duration mismatch capital requirements are not considered nor do we consider the effect of ‘Symmetric Adjustment Mechanism’ for both equities and spreads.
Exhibit 19

Allianz’s view of the implications of the current draft Solvency 2 rules on various asset classes

<table>
<thead>
<tr>
<th>Asset Class</th>
<th>Capital charges¹</th>
<th>Solvency II framework</th>
<th>Economic implications</th>
</tr>
</thead>
<tbody>
<tr>
<td>Government bonds</td>
<td>0% for EU member states²</td>
<td>Sovereign crisis not reflected</td>
<td>Sovereigns become preferred asset class</td>
</tr>
<tr>
<td>Corporate bonds and loans</td>
<td>0.9% - 7.15%</td>
<td>Loans treated like bonds</td>
<td>More limited financing possibilities, esp. for banks</td>
</tr>
<tr>
<td>(AAA rating, 1 - 10 yrs duration)</td>
<td></td>
<td>Equal treatment of all industry sectors</td>
<td>Increased pressure to shorten liability duration</td>
</tr>
<tr>
<td>Covered bonds (AAA rating, 1 - 10 yrs duration)</td>
<td>0.7% - 6.0%</td>
<td>Charges too high compared to corporate bonds</td>
<td>Reduced financing possibilities for banks</td>
</tr>
<tr>
<td>“Repacked Loans” (ABS/MBS) (AAA rating, 1 - 6 yrs duration)</td>
<td>7% - 42%</td>
<td>Very high charges</td>
<td></td>
</tr>
<tr>
<td>Equities</td>
<td>39% - 49%</td>
<td>In combination with IFRS 9, high charges drive insurance sector more and more out of this asset class</td>
<td>Role of insurance industry as equity investor becomes less important</td>
</tr>
<tr>
<td>Real estate</td>
<td>25%</td>
<td>Proposed charges calibrated to UK market (traditionally high volatility - unlike many markets in continental Europe)</td>
<td>Attractiveness of real estate investments decreases</td>
</tr>
</tbody>
</table>

¹ As in “Draft Implementing Measures Solvency II” (Oct 2011). Before diversification, not taking into account interest rate risk. Equities without participations
² Includes also other institutions like the European Central Bank or multilateral development banks

Certainly not in the short term (we note that even insurers experienced in this space have capacity constraints, of, for example sufficiently-skilled personnel).

Although we believe the current situation is more favourable towards long-dated credit than QIS5, we think the industry would like to see a further relaxation here – the spread between asset returns and liability discount rates can still expose even a well matched balance sheet to significant volatility. Part of the solution for some businesses is the application of the matching premium on the liability side, which eliminates spread risk.

One potential refinement would be to introduce a ‘Symmetric Adjustment Mechanism’ to lower the capital requirement for credit-spread risk in the standard formula when spreads rise. Such a mechanism is already provided for in the Solvency 2 directive with the ‘equity dampener’. The ECON committee of the European Parliament proposed this in its compromise position adopted on March 21, 2012.

The impact of such a ‘spread dampener’ would likely be capped (to, say, 20% of the standard SCR charge for spread risk), but could be substantial when spreads widen dramatically (see Exhibit 20).

In our view, policy-makers will want to incentivise insurers to provide longer-term financing to the broader economy, which would lend support to allow broader application of an illiquidity premium or a spread dampener. We continue to believe that insurers are unlikely to find equities an attractive asset class for Solvency 2 purposes. However, we would stress that all of this is subject to change.

In Exhibit 19 we reproduce a slide from Allianz’s recent investor presentation where it highlighted its current thoughts on the implications of the October 2011 draft rules for insurance company asset allocation decision.

But risk-adjusted return is not the only consideration for insurers’ asset allocation. They also need to aim to generate investment returns greater than the discount rate for liabilities. This is an important source of profit for life companies. In situations where the liability discount rate is greater than sovereign returns, government bonds will become less attractive despite the fact that they attract no capital charges.

Asset allocation considerations by type of liability

There are many different investment approaches across Europe, often driven by differences in products and

Source: Allianz 2011 Full Year Results Presentation, Morgan Stanley Research, Oliver Wyman
Solvency 2 puts a stronger lens upon asset allocation due to the higher focus on market risks and also the high volatility of the solvency position. In preparation for Solvency 2, many insurers are investing in building the new ALM capabilities needed to optimise their asset allocation, both to manage regulatory capital and to balance risk, return and capital.

We believe that the asset allocation trends will vary for different types of business:

1) Traditional / with profits – de-risking is the game

Solvency 2 penalises traditional business by forcing insurers to recognise a conservative valuation of the client guarantees at all times without the ability to smooth market developments over time.

This could lead to a pan-European repeat of the experience of the UK insurers since the introduction of the ICAS regime in the mid 2000s, which led to a widespread de-risking across most asset portfolios in the industry. In continental Europe, we are now seeing similar activity across a number of insurers and markets.

Insurers will be exposed to ‘Volatility-Squared’ with both sides of the solvency position deteriorating at the same time, and this increased sensitivity may also lead to higher...
regulatory capital buffers being required. Therefore, optimal asset allocations will be more volatile and insurers will need to develop new management techniques to avoid being forced sellers in falling markets.

**Exhibit 21 shows the overall capital requirement for an illustrative insurance company that is heavily exposed to a particular type of life insurance with investment guarantees.**

As equity markets fall, the market risk component in the SCR increases substantially due to the impact of the minimum investment guarantees, resulting in an almost 2.5 times increase in the overall SCR.

As equity markets recover, the SCR reduces, however not immediately back to its pre-market fall level, as the buffers that dampen the impact of the volatility of policyholder assets on shareholder capital have been depleted.

Note that this is an extreme example as we do not assume any hedging activities in the portfolio and no management actions are taken over the period. These would reduce the impact of the equity market falls on the SCR.

In reality, we expect insurers to remain active users of hedging to help control interest rate risk in these products (e.g. through swaptions). In addition, equity derivatives and collar strategies can help limit equity capital requirements and improve returns on capital.

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2) **Unit-linked – little change, but more volatility**

Solvency 2 incentivises unit-linked business, removing some of the arbitrary regulatory capital requirements that apply to this business across Europe.

As the assets are selected by the customer, we anticipate no direct change to the unit-linked asset allocation. Unit-linked funds with significant market risks themselves contribute more to the volatility of the solvency position of the insurer: this is because capital includes the present value of future fees, which in turn are typically dependent on unit values. We believe that insurers will change their fee and cost structures and put in place hedge overlays to deal with the worst of the volatility on these books.

3) **Shareholder assets – annuity asset optimisation**

The profitability of investment strategies will be strongly dependent on whether they meet the strict requirements to qualify for the matching premium. The matching premium criteria will likely require that a ‘held-to-maturity’ high-quality bond portfolio needs to be held in a ring-fenced fund, as discussed earlier (see pages 15-16).

The underlying attractive economics of annuity business will be unaffected, but there could be significant increases in regulatory capital which, in turn, could reduce return on capital. The key issue here will be identifying ways in which assets that provide a good risk adjusted return can be made ‘matching premium’ compliant (high quality, ‘plain-vanilla’, cash-flow matching). Industry profitability and growth (through consumer prices) are dependent on finding a robust pragmatic solution to this.

The matching premium may mean that the regulatory balance sheet has little or no credit risk capital, when in fact this is one of the main risks. For this reason, we believe that Solvency 2 will not provide an adequate risk benchmark for annuity business, and that a twin economic and regulatory balance sheet will continue to be needed. Regulatory capital is likely to be managed on a portfolio basis rather than risk by risk.

The matching premium rules are not yet set, and may be extended and softened. However, as they stand currently, this would influence some insurers’ investment behaviour and reduce their interest in non-qualifying investments such as lower-quality credit or issues with cash flows that are not plain vanilla.
Our current expectations for the impact of Solvency 2 on asset allocation across the major categories of insurance liabilities – we expect significant de-risking for traditional portfolios. The appropriate strategy for annuity style products will depend on whether the portfolio qualifies for the matching premium.

<table>
<thead>
<tr>
<th>Product category</th>
<th>Expected changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Traditional / with-profits</td>
<td>• Wide-scale de-risking across most asset portfolios due to conservative valuations of investment guarantees.</td>
</tr>
<tr>
<td></td>
<td>• Solvency 2 capital constraints will prevent many insurers from achieving the value optimising asset allocation due to sensitivity of SCR to market conditions and corresponding need for higher capital buffer.</td>
</tr>
<tr>
<td>Unit linked</td>
<td>• We expect no direct change to the unit-linked asset allocation as assets chosen by the policyholder.</td>
</tr>
<tr>
<td></td>
<td>• Unit-linked funds with significant market risks will contribute to the volatility of the solvency position.</td>
</tr>
<tr>
<td></td>
<td>• We believe that insurers will put in place changes to their cost structures and hedge overlays to deal with the worst of the volatility on these books.</td>
</tr>
<tr>
<td>Life shareholder and P&amp;C assets</td>
<td>• Risk adjusted returns of investment strategies are strongly dependent on whether they meet the strict requirements to qualify for the matching premium.</td>
</tr>
<tr>
<td></td>
<td>• Insurers and lines of business that cannot use matching premium (or do not use an internal model) will experience significant investment volatility and find long-term and illiquid investments in credit less attractive.</td>
</tr>
<tr>
<td></td>
<td>• Insurers will look to minimise interest-rate risk volatility and mismatches, in particular now that duration gaps have widened with falling yields.</td>
</tr>
<tr>
<td></td>
<td>• Insurers are also likely to look further into more deeply illiquid assets providing that they can manage the capital impact.</td>
</tr>
</tbody>
</table>

Those insurers and lines of business that cannot use matching premium (or do not use an internal model) will experience significant investment volatility. In our view, it is likely that insurers will seek to minimise interest-rate risk volatility and mismatches, in particular now that duration gaps have widened with falling yields. This could lead to increased buying of sovereign duration that attracts no credit capital charge under Solvency 2. However, since the interest rates embedded in client charges are often greater than sovereign, this would be value destructive. Therefore, insurers competing in price-driven markets will also look at collateralised lending (such as commercial real estate lending, covered bonds, for example) that equally provide the benefits of duration, long-term interest rate matching and low capital requirements. They are also likely to look further into more deeply illiquid assets.

Limited actions taken to date

There are several tactical reasons why insurers have held back from taking action to manage pre-emptive risk/return considerations under Solvency 2:

• it is not yet clear what the full range of potential outcomes could be and what their effects could be.

This has made it very difficult up until now to decide what could be done as a ‘no regrets’ move.

• many of the actions incentivised by the standard formulae are less attractive when looked at in the context of an insurer’s internal model, e.g., where sovereign credit is not assumed to be risk free.

• many European insurers’ investment strategies are at the moment dominated by the credit and sovereign crisis, and management teams have little opportunity to engage in a broader optimization effort.

• there are practical limits as to how much rebalancing can be done in some markets, either because the regulatory risk exposures are not yet clear or because there is not enough liquidity in long-duration assets and cost of hedging is high.

However, we believe that in many cases there is now sufficient understanding of the different scenarios for Solvency 2 implications for companies to develop relatively good outline contingency plans, and even to identify robust ‘no regrets’ moves.
**Timetable & Process – Delayed, but Still Happening**

**KEY DEBATES**
- Solvency 2 has been delayed, at one point some even questioned whether it would actually come into force.
- Although it is clear the original October 31, 2012 deadline is not possible, the ‘realistic’ implementation date is not clear.
- The delay has resulted in many different aspects of Solvency 2 being re-opened for debate.

**MORGAN STANLEY / OLIVER WYMAN VIEW**
- We believe Solvency 2 will be introduced, but most likely not until January 1, 2014 or even later.
- The next key date is likely to be the European Parliament plenary session vote on July 2, 2012.
- Solvency 2 is likely to be less uniform than originally hoped.
- We expect to see use of grandfathering and inconsistent implementation between member states.

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**Solvency 2 – the timeline so far**

We still believe that Solvency 2 will be implemented in Europe – albeit with a significant delay to the original timetable.

Exhibit 23 shows a timeline of how the Solvency 2 project has progressed since its conception in 2001 as a risk-based solvency regime.

There are three stages to the legislative process to implement Solvency 2 in European law:

- **Level 1**: a directive sets out the basic principles of Solvency 2 as a European Union-wide risk-based regulatory regime for the insurance industry and sets out the deadlines for implementation. The Solvency 2 Directive was passed by the European Parliament and the Council of the EU in 2009. However, changes need to be made at least to the timetable, to reflect changes made by the Lisbon Treaty and define the role of the newly created EIOPA, and therefore Level 1 had to be re-opened (see ‘Omnibus 2’ below).

- **Level 2**: this is the stage where the European Commission defines the specific technical requirements and rules of Solvency 2 and implements them in European law. This was intended to be passed in 2012, but may be delayed due to the many important technical issues (see below).

- **Level 3**: this is the final stage of legislation in which EIOPA and national regulators will develop technical standards and guidance supplementing Level 1 and Level 2 rules, with which regulators need to ‘comply or explain’. For example, this will cover regulatory governance, the Own Risk and Solvency Assessment (ORSA) and reporting.

The process to develop and pass Level 2 technical standards has involved a number of Quantitative Impact Studies (QIS). The latest, QIS5, was completed and published in March 2011 and seemed to show that at the time the industry overall was in fairly good shape:

- QIS5 involved 2,520 insurers and reinsurers: the largest participation of any of the previous impact studies.
- Based on 2009 balance sheet data, QIS5 concluded that the financial position of the insurance sector looked comfortable when assessed against the ‘standard formula’ as specified for QIS5, or internal company models.
- Specifically, the QIS5 exercise suggested a comfortable level of surplus capital with a solvency ratio of ~165%.
- EIOPA’s public report on QIS5 did not give company or sector specific data, but provided some breakdown of aggregated solvency ratios by country and by type of business.

Following QIS5, the European Commission is drafting the final level 2 measures, based on advice from EIOPA (CEIOPS as it was then), feedback from the industry and discussions with Member State representatives from the Council. These measures should address the outstanding debates (such as the treatment of hybrid capital and ‘value of in-force’, equivalence of non-EU regulatory regimes, for example) in order to pass Level 2 legislation in time for the original deadline set out in Level 1 legislation of October 2012.

There has been no formal public consultation on the Solvency 2 rules since QIS5 was published. However, a private
Solvency 2 – what has been achieved and what we expect for the timetable going forward. We believe that the most realistic outcome is for finalised rules to be published in 2012 and for EU-wide implementation on January 1, 2014.

Source: EIOPA, European Commission, Morgan Stanley Research, Oliver Wyman
document of Level 2 ‘Implementing Measures’ was drafted by the European Commission and circulated in October 2011 to stakeholders, the Parliament and Council in advance of their discussions on Omnibus 2. Since then, the proposals in that draft have been the basis of all further discussion of the rules and their impact.

Omnibus 2: market turmoil has delayed adoption

A combination of falling bond yields, pressure on peripheral sovereign bonds and increased volatility has pressured the economic balance sheet of the insurance sector and exposed the ‘volatility squared’ of the Solvency 2 regime, especially for life insurers. This has resulted in a delay to the technical process and the implementation timetable.

The onset of the sovereign debt crisis and industry concerns about the impact of Solvency 2 on insurance business models in a low-yield environment is driving behind-the-scenes political lobbying by different country and industry interests. This has resulted in many key issues at the heart of Solvency 2 being re-examined.

Currently, the industry and regulators are stuck at the hurdle of defining the updated timetable for Solvency 2 and trying to agree on the final technical specifications.

In January 2011, the European Commission circulated a draft directive called Omnibus 2. This directive proposes a number of amendments and changes to the original Solvency 2 directive, which became necessary:

- to postpone the implementation of Solvency 2 originally to January 1, 2013, and require EIOPA to develop draft ‘implementing technical standards’ for submission to the Commission by December 2011;

- to empower the European Commission to include flexible transition arrangements to Solvency 2, rather than a ‘hard’ start date;

- to grant extended powers, and give regulatory status to EIOPA (the new European Insurance and Occupational Pensions Authority, which has replaced CEIOPS and sits alongside its banking and securities siblings EBA and ESMA as the ‘European Supervisory Authorities – ESA’);

- to allow for adjustments to the technical specifications as have been proposed to deal with undesired effects of Solvency 2 on business models and investment behaviour – in particular by allowing an illiquidity premium in periods of market distress; and

- to make a number of formal legal adjustments, most of which have become necessary due to the Lisbon Treaty (‘Lisbonisation’).

Exhibit 24 shows a more recent timeline of the latest Solvency 2 legislative developments

After the Commission draft had been circulated, both the Council of the EU (i.e. in this case the Finance Ministers of the Member States) and the European Parliament began their deliberation.

At the same time, the European Commission developed draft Level 2 Implementing Measures. Given the feedback in particular from industry, the Commission went further than their original draft directive, and included rules for a matching premium, which as yet has not ‘officially’ been included in the Omnibus 2 draft. These draft Implementing Measures were circulated to the Council, the European Parliament and other interested parties – but not publically – in October 2011.

In September 2011, the Council published their suggested changes to the Commission draft, and the European Parliament published the list of suggested amendments. Several such amendments asked for the matching premium along the lines currently discussed.

On March 21, 2012, the relevant select committee of the European Parliament (the Committee on Economic and Monetary Affairs – ECON) has adopted a compromise position for the amendments to be included by the European Parliament. This compromise includes a matching premium and a ‘spread dampener’ (as well as a formulaic counter-cyclical premium).

In its plenary session on July 2, 2012, the European Parliament is expected to adopt its committee’s proposal, although this is not certain, as there are remaining industry concerns with the current ECON proposal.

After this, there will be three substantially different drafts of the Omnibus 2 and its important rules concerning the design and implementation of Solvency 2:

- the original Commission draft;

- the ‘Compromise Text’ proposed by the Council; and

- the Parliament’s amendments and changes.


The recent timeline of Solvency 2 legislative developments

<table>
<thead>
<tr>
<th>Month</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>January 2011</td>
<td>The European Commission adopts its Omnibus 2 draft and transmits to European Parliament and Council. Includes the concept of the 'countercyclical premium', but no matching premium or spread adjustments. Discussion with Council (i.e. Finance Ministers) results in a series of 'Compromise Text' changes to EC draft. EC revisits its proposal for an illiquidity premium and adds a matching premium in their work on Level 2.</td>
</tr>
<tr>
<td>July 2011</td>
<td>Draft report by Rapporteur (Burkhard Balz) with proposed amendments reducing the scope of the countercyclical premium (CCP) and removing the matching premium. Proposal to introduce formulaic CCP, leave it to member states to decide on the use of the CCP and limit its application to 'illiquid liabilities'. Heavy lobbying from the insurance industry of European Parliament and ECON members (Committee on Economic and Monetary Affairs)</td>
</tr>
<tr>
<td>September 2011</td>
<td>Council publishes Omnibus 2 'Compromise Text', which contains the term 'countercyclical premium' in place of 'illiquidity premium' for stressed markets. Requires the European Commission to ensure that the new regime avoids undesirable effects in its treatment of insurance business with long-term guarantees. Amendments tabled by Parliamentarians including a request for a 'matching premium'.</td>
</tr>
<tr>
<td>October 2011</td>
<td>European Commission circulates 'Level 2 Implementing Measures' to European Parliament; not based on official Omnibus 2 draft but on a new proposal for countercyclical premium and matching premium. Matching premium restricted heavily – to apply to illiquid, ring-fenced block of business with upfront premium (e.g. UK annuity). More lobbying by insurers</td>
</tr>
<tr>
<td>March 2012</td>
<td>ECON meeting to discuss and adopt Rapporteur report with additional amendments and compromise proposals. Changes the countercyclical premium to refer to general 'financial markets', defines reference to a 'portion of the spread on representative assets' and confirms only to be used for 'illiquid liabilities'. Introduces 'matching premium' (MP) as a derogation (i.e. individual member states to decide on the use of the MP). Insurers using matching premiums cannot operate outside of their home market in activities relating to the business that the matching premium applies to without authorisation. Introduces a 'dampener' for bond spread risk (as 'symmetric adjustment mechanism' as is already available for equities) based on a weighted average level of an appropriate bond price index calculated over an appropriate period. Includes a sunset clause for the countercyclical premium and matching premium; the EC must review and report after 5 years.</td>
</tr>
<tr>
<td>July 2012</td>
<td>Expected plenary session of the European Parliament to discuss Omnibus 2 to adopt ECON proposal. This is expected to conclude the process in the European Parliament. After the hearing in Parliament, there will be 3 texts: the original European Commission text, the Council compromise and European Parliament amendments. Accordingly, a phase of negotiations needs to follow until a compromise is reached. Until then, the Commission cannot circulate an 'official' Level 2 draft.</td>
</tr>
</tbody>
</table>

Source: Morgan Stanley Research, Oliver Wyman
Because of the divergence of the opinions of many decision-makers in the Commission, the Council and the Parliament, it is not at all clear as yet what will be included in the final Omnibus 2 directive.

Therefore, a phase of negotiations between the three European institutions needs to follow until a compromise is reached. Until then, the Commission cannot circulate an ‘official’ Level 2 draft.

With the adoption of Omnibus 2 delayed, implementation of Solvency 2 may well be pushed back to January 1, 2014. An even longer delay is being discussed by some in the industry and cannot be ruled out, in our view, given the still major disagreement on the rules.

Solvency 2 is in a state of significant uncertainty

In order formally to adopt a new timetable, both the European Parliament and the Council of the EU need to pass the Omnibus 2 directive. Unfortunately, the path from here remains unclear.

In short, what seemed to be a clearer timetable for Solvency 2 after the QIS5 study appears to have descended into uncertainty, with a lack of clarity over when Solvency 2 will finally become a reality for the industry, and the shape of the final rules.

There still appears to be quite a lot of disagreement between parts of the industry and regulators about some of the substantive technical issues in the Solvency 2 calculation. Most importantly, the main debates and discussions involve:

- the discount rate used to value liabilities, i.e. the concepts of the ‘matching premium’ and ‘counter-cyclical premium’;
- capital charges for different investment risks, which still penalises investment in longer-dated credit – contrary to market observations; and
- other issues that leave insurers unclear what their ultimate capital requirement will be under Solvency 2, such as the continued lack of clarity over potentially ‘non-equivalent’ regulatory regimes outside the EU, especially the US.

All these issues are highly complex, and often there is not a single ‘correct’ solution. Finding consensus is often made difficult by the desire by local regulators, insurance companies and politicians not to lose ground for their respective markets or give what could be perceived as an unfair capital advantage to any particular country or product-type through the final definition of technical standards (and, most importantly, the definition of the discount rate).

Based on our discussions with insurers, we believe the majority of the large European multi-national insurers still support the framework. However, there is increasing frustration about certain aspects of the rules (especially the degree of volatility introduced into reported capital metrics and the impact on non-European business) and the lack of clarity that makes it hard confidently to price new business at present, restructure ALM and asset allocations or to manage capital efficiently.

The European insurance market has also seen very limited M&A activity, mainly because of uncertainty over the future capital requirements of any acquired entity.

One of the main problems for analysts and investors looking at the sector is that the discussions and debates to finalise Solvency are taking place in a non-public consultation process. Therefore, it has been difficult for investors to get a unified view of what the progress has been and what may happen next.

Theoretically, an adoption of a final text for Omnibus 2 would help to set in motion a more definite path for the Solvency 2 regulatory process. However, this depends on whether all the stakeholders and politicians can come to an agreement on some of the key technical debates. Moreover, there have been ongoing additions to Omnibus 2 over time, which have made this more complex, burdensome and contentious.

What are the potential next steps?

The timetable for passing Omnibus 2 and eventually setting Level 2 technical standards is highly uncertain; however, it will involve the following next steps:

- passing Omnibus 2. Passing Omnibus 2 is a necessary first step to delaying the Solvency 2 timetable and then starting the process of finalising technical standards. The plenary vote in the European Parliament on Omnibus 2 has been delayed to July 2, 2012.

- issuing draft Level 2 ‘technical implementing measures’. The draft set of technical standards circulated in October 2011 needs to be updated to reflect the key decisions (e.g. on discount rates, etc) in Omnibus 2. Given the complexity and controversy of the matter, this will
require sufficient time. Therefore, Omnibus 2 must not be pushed back further, or this would threaten the timeline.

- **a delay to the whole process is plausible.** We believe that a pared down and simplified version of Omnibus 2 could be passed to set a new, delayed timetable for the whole Solvency 2 process, and allow more time for key technical debates to be ironed out. A delay on implementation to January 1, 2014 is plausible, but there remains a possibility that this could be extended even further to January 1, 2015 (or even 2016).

- **potential public consultation on new draft rules in 2012.** Based on the outcome of the first few steps, the European Commission may issue a public consultation on draft technical standards at some point in late 2012. Meeting this deadline would be necessary if Solvency 2 is to be enforced by January 1, 2014.

- **time for QIS6?** It is not clear whether there is the industry-wide appetite for a QIS6 exercise, or whether there is enough time available. Clearly, if there was a substantial change in the structure of Solvency 2 from that envisaged during QIS5, it would make sense for the industry to test this ahead of final implementation, but the more likely outcome is that individual elements of the rules will be tested with selected companies. Separate from this, the German industry is intending to undertake an informal QIS6 exercise based on the October 2011 draft framework.

- **likely to be ‘soft’ rather than ‘hard’ implementation.** Whatever final date is agreed for the start of Solvency 2, we believe it is unlikely that there will be an overnight ‘hard’ implementation of the rules. Rather, we expect fairly long-term transitional arrangements into the regime. It is also quite possible that these arrangements will allow a high level of local regulatory leeway in how rules are interpreted for existing business.

**Ultimately, Solvency 2 remains a political process, and the European Commission, the Finance Ministers and the European Parliament may be unwilling to accept any framework that materially alters the European insurance landscape** – particularly with regard to making it hard for smaller and / or mutual entities to survive the transition.

Consequently, we believe that many of the benefits that were originally envisaged by the larger players – in particular the harvesting of diversification benefits and industry consolidation – have been eroded materially.

While we remain confident that Solvency 2 will be adopted, it is possible that the uniformity of implementation across the EU could be less than originally intended. In particular, we believe that the final rules will allow countries to introduce unilateral grandfathering. We believe that some countries are likely to use this for certain business lines or existing practices (on a very generous basis) to protect existing businesses and to divert the rules so that they only apply to new business.
EU Sovereign Debt Crisis Creates Significant Challenges

**KEY DEBATES**

- As the current Solvency 2 framework treats all EEA sovereign debt as risk-free, to what extent does this undermine the entire framework?
- Given insurers are using a modified swap curve to discount liabilities under Solvency 2 and certain sovereign yields have increased, how can this mis-match be managed?
- What future role will sovereign investments have in insurers’ portfolios?

**MORGAN STANLEY / OLIVER WYMAN VIEW**

- We do not expect official recognition of EEA sovereign credit risk in the ‘standard formula’, but we believe the risk will be reflected in the ORSA process, and in most internal models.
- Given the significant spreads available on many EEA sovereigns over the liability discount rate, we believe that deciding on an appropriate risk tolerance for sovereign credit should be the first step of any ALM exercise.
- We expect insurers to continue to domesticate sovereign bond exposures, especially those backing life liabilities.

**Formal rules unlikely to recognise sovereign risk...**

To an extent there should be little to discuss here, as we believe neither the industry nor the European authorities have any desire to introduce formal capital requirements for European sovereign debt.

We believe that EEA sovereign debt will continue to be treated as a credit-risk free asset under Solvency 2 (insurers will still be exposed to spread risks unless a matching premium can be used), as was the case under the draft QISS specification.

Although the bond markets are clearly differentiating between the credit risk of various EEA sovereign debt issuers, we think from a political perspective this is unlikely to be recognised formally in the framework.

It is also unlikely that any move to acknowledge sovereign risk would be made unilaterally by insurance supervisors but would be a coordinated move with the BCBS (which develops the global supervisory framework for the banks).

**...but will be reflected in ORSA and internal models**

Practically, we expect sovereign risks to be assessed by national regulators and reflected through the ORSA process.

The ‘Own Risk and Solvency Assessment’ (ORSA) requires insurers to assess “all material risks that may have an impact on an undertaking’s ability to meet its obligations” – i.e. management needs to consider the impact on solvency of risks that aren’t explicitly considered within the standard formula.

In our view, sovereign risk could come within these requirements, and in effect national regulators could require mitigating action if the risk is perceived to be too high. However, this process is unlikely to be homogenous across the EU and the disclosure regime for ORSAs is not yet clear.

We would also expect that insurers will continue formally to acknowledge sovereign risk within internal capital models; we note that Allianz recently commented that it applies (undisclosed) capital charges against EU sovereign debt in its model. We believe that the Allianz approach is fairly typical of the larger, more sophisticated groups, although there are exceptions to this.

More generally, and driven by the current uncertain macro backdrop rather than Solvency 2, we have seen many European insurers scaling back their exposure to peripheral European sovereigns, reflecting a reduced risk appetite for these assets.

**Impact on asset allocation decisions**

Assessing – and setting an appropriate appetite for – sovereign credit risk has become a key element of any insurer’s asset allocation and capital optimization process.

If one were to optimise asset allocation just on the basis of the standard formula, then the most capital efficient strategy could mean an allocation of 100% of the portfolio into the highest yielding EEA sovereigns.

In the majority of EU countries, the sovereign yields are substantially in excess of the local swap rates, allowing a significant ‘spread’ over liability discount rates to be captured with no capital charges on the asset side.
Exhibit 25
French sovereign yields are materially higher than swaps across the majority of the curve

Exhibit 26
The ultimate safe haven in the EU – German yields trade inside the swaps rate

Exhibit 27
As with Spain, Italian sovereign yields offer a significant yield pick-up over the swap curve

Exhibit 28
There is only a modest difference between Dutch yields and swaps – reflecting its ‘AAA’ status

Exhibit 29
Given the stresses in the economy, Spanish yields are dramatically higher than the swaps rate

Exhibit 30
The UK’s relative safe haven status has resulted in a comparatively small difference in the two curves
We discuss in detail asset allocation considerations on pages 22-27.

**Swaps-based discount rate has created a mismatch**

In addition to the omission of sovereign credit risk from the standard formula, the anchoring of the discount rates to the swaps curve is also causing stress.

Originally, insurers argued for the use of the swaps rate rather than the sovereign as it is more liquid across all durations and typically included a small – but useful – yield pick-up and therefore a relative decrease in the regulatory value of liabilities.

However, the sovereign crisis has resulted in swaps yields materially below those of sovereigns in most markets (see Exhibits 25-30). The exceptions are the relative safe haven markets of Germany, the Netherlands and the United Kingdom.

One could argue that in some way this indirectly reflects some of the sovereign credit risk in the framework – to the extent that liabilities are higher due to the application of the swaps curve.

**Exhibit 31**

**Allianz has reduced materially the amount of cross-border EU sovereign exposure in its life business over the course of the past year**

We think it is unlikely that the swaps curve will be replaced as the baseline for Solvency 2. We argue the most likely scenario is that a higher discount rate is implemented through some ‘spread adjustment mechanism’, be this a ‘matching premium’, ‘counter-cyclical’ premium or some other approach that facilitates the inclusion of an illiquidity premium (please see pages 9-21 for a more detailed discussion).

**Insurers are ‘domesticating’ balance sheets**

Recognition of sovereign credit risk within the EU has led many insurers in recent months to seek to ‘domesticate’ local balance sheets, reversing many years of investment policy where the yield enhancement was sought by investing in ‘foreign’ zero capital cost bonds.

The logic underpinning this is that in the case of a sovereign default, the insurance companies in that country would be ring-fenced and included in the restructuring of that country. For example, ABC Insurance (Germany) would need to cover its loss on Greek bonds, but ABC Insurance (Greece) would not need to.
We also believe that from a pragmatic perspective insurers need to continue to invest in high yielding local bonds in order to remain competitive with domestic peers.

Exhibit 31 shows how Allianz has increasingly matched local liabilities with local sovereign debt in its life business over the past year.

However, given the practical necessity of making a reinvestment yield in excess of its guarantee rate, Allianz is still investing German life premium receipts into non-German EU bonds – although not of the GIPS nations.

AXA has also given some disclosure on this topic.

Data from its FY11 results presentation suggests that approximately half of its bond portfolio is domestically matched, i.e. bonds issued in a particular country (both sovereign and corporate) are used to back liabilities originated in the same country.

This domestication process is likely to be a structural feature of the EU insurance market going forward; however, this is contrary to the aims of the EU Single Market.

Taken to its ultimate conclusion, we believe this could act to counter the important concept of ‘diversification’ benefits that was originally at the heart of Solvency 2:

- by definition, the domestication process promotes the concept of retaining capital within a particular country and limiting cross-subsidisation between different subsidiaries.

- local domestic regulators may also impose controls over the payment of dividends from operating subsidiaries to holding companies to support policyholders in their own jurisdictions at the expense of other countries.

- different approaches to the implementation of rules (for example, grandfathering) in different regulatory regimes may further entrench this domestication of capital.
The concept of regulatory equivalence to Solvency 2

We think that Solvency 2 is still likely to provide inspiration for the implementation of similar regimes globally. However, the delays and controversy surrounding the project have made it less likely that it will be introduced in Asia, Japan and elsewhere in the same form. Solvency 2 introduces the concept of ‘equivalence’ to deal with companies with businesses spanning several jurisdictions.

If a regulatory regime outside of the EU is considered ‘equivalent’ to Solvency 2, then insurers with EEA parents are not required to re-calculate a Solvency 2 balance sheet and capital requirements for that regime when calculating the group capital requirement. Instead, the local regulatory resource and capital requirements can simply be added and integrated to the Solvency 2 calculation for the EU part of the business. We illustrate the framework in Exhibit 32.

Certain factors have to be taken into account in judging equivalence. These include the need for the ‘foreign’ capital regime to be risk-based, as well as it being of material significance to EU insurers, for example because many insurers have businesses there (the US is a prime example).

The decision over whether or not a foreign regime is judged equivalent rests in the hands of the European Commission, which acts based on an assessment provided by EIOPA – the EU supervisory authority body governing Solvency 2.

The Commission’s view and guidance to CEIOPS (the predecessor to EIOPA) were to include Bermuda and Switzerland in the first wave of equivalent regimes, and Japan, but only for re-insurance business.

In fact, it is possible that some of those countries that were seeking equivalence with Solvency 2 – Switzerland for example with the Swiss Solvency Test – are now set to implement an economic capital framework ahead of the EU.

The debate on equivalence is focused on the US

The supra-national element of Solvency 2 – i.e. that an insurer operating in a non-equivalent regime could be required to top up capital to EU levels – remains controversial. This not only affects European insurers with multi-national businesses, but also non-European domiciled insurers (e.g. US insurers) wishing to set up businesses in Europe.

Most of the debate understandably focuses on the United States, where our previous joint MS / OW work showed that traditional spread-based life insurance products could have substantially higher capital requirements under Solvency 2.

Furthermore, it is unlikely that the capital regime in the US will be technically equivalent in the foreseeable future, although the National Association of Insurance Commissioners (NAIC) is progressing with its ‘Solvency Modernization Initiative’ and individual state regulators are examining the issue. However, the US remains a long way from having anything like a full economic capital regime.

The US is a complex regulatory regime since there is no overriding national regulatory body for insurers, and instead regulation is carried out on a state-by-state basis. This means that even conducting the process to judge equivalence under Solvency 2 would be time consuming and complex.
Exhibit 32

Solvency 2 – Equivalence of non-EU countries has implications for three different aspects. We expect a pragmatic outcome that does not undermine the international competitiveness of the sector

<table>
<thead>
<tr>
<th>Reinsurance Equivalence</th>
<th>• If a country is equivalent for reinsurance then EU companies can count its policies as protection, without additional collateral</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-EU Subsidiaries</td>
<td>• If an EU firm has a subsidiary in an equivalent non-EU regime, it can count that subsidiary on its local basis for the group calculation</td>
</tr>
</tbody>
</table>
| Non-EU Groups           | • If a non-EU group is in an equivalent regime  
                          - it can do the group solvency calculation on a local basis  
                          - it can be the lead regulator  
                          • But all local standalone EU calculations must be done on a S2 basis |

Source: Morgan Stanley Research, Oliver Wyman

The lack of a national regulator also makes it difficult to manage and police Group Supervision of insurance companies – a key underlying Level 1 requirement of Solvency 2.

However, the US is also one of the most important non-EU regulatory regimes for the European insurance sector, given many insurers have very substantial subsidiaries there.

It is likely that exemptions will be introduced that would enable the Commission to apply the rules even for a regime that cannot be found equivalent in the sense as defined by Solvency 2. In its compromise position adopted on March 21, 2012, the ECON committee of the European Parliament proposes such a ‘temporary equivalence’.

We still anticipate a level playing field

As Exhibit 33 suggests, based on our earlier modeling of Solvency 2 under QIS5 assumptions, we estimated that applying Solvency 2 to traditional US fixed annuities in the US could more than double the level of capital required.

This would create an ‘unlevel playing field’ between US subsidiaries of European insurers and US domestic companies.

There is probably less controversy and mismatch in the rules for property & casualty insurers, who have been managing capital to risk-based capital standards for some time now in both the EU and the US, driven primarily by rating agencies and best practice. Our base case remains that the European Commission will introduce suitable transitional arrangements. We see no evidence of political appetite to put the European insurance industry at a competitive disadvantage in one of its largest international markets.

However, if equivalence is not achieved, we would expect more M&A activity as insurers seek to dispose of certain subsidiaries outside of the EU.

Changes to product portfolios likely to continue

There is still significant uncertainty, and we note that many European insurers have been shifting the US portfolio mix away from Solvency 2 ‘unfriendly’ products such as traditional guaranteed investment contracts (institutional spread-based products) and fixed annuities, in preparation for a less advantageous outcome.

Exhibit 33

Capital requirements for US fixed annuities could more than double under Solvency 2

![Chart showing capital requirements comparison between Local Statutory and Solvency 2]

Source: Morgan Stanley Research, Oliver Wyman
We also believe that insurers continue to undertake contingency planning – for example, selling US units or even in extreme cases moving the group domicile.

Recent press reports in the UK (Financial Times, February 26, 2012) have suggested that Prudential plc might be considering moving its holding company to Hong Kong. This would enable Pru to remove its US (Jackson) and Asian operations from the scope of the rules. Prudential’s CEO – Tidjane Thiam – has been very vocal on this topic.

While moving the holding company outside of the EU cannot remove EU business from the scope of Solvency 2, it does mean that the rules would no longer apply to the international business units.

Decision on equivalence could release capital

We note that several insurers in Europe already prudently assume an adverse outcome on US equivalence in their published economic capital ratios – Allianz, Aviva and AXA (for example) take this approach.

Consequently, any relaxation in the rules would result in an increase in solvency ratios.

Allianz’s approach in its economic capital model is to consider each subsidiary separately and include the higher of the local (regulatory) solvency requirement and the internal requirement.

We understand that in the case of the US, the internal requirement is higher than the RBC requirement.
Capital Structure Changing under Solvency 2

KEY DEBATES

- To what extent will insurers be able to issue Solvency 2 qualifying hybrid capital?
- Will ‘future profits’ be eligible as part of Tier 1 capital?
- How should insurers arrange corporate structures to optimise capital under Solvency 2?

MORGAN STANLEY / OLIVER WYMAN VIEW

- We continue to expect broad alignment with banks on the framework used to grade the quality of capital instruments into tiers, supported by transition arrangements.
- Tier 2 instruments designed with Solvency 2 requirements in mind are already being successfully issued into the market. We expect these instruments will form the bulk of hybrids issued by the sector in future years.
- Although we have seen some modest issuance of contingent Tier 1 capital, in our view this is some way from being a developed financial technology for insurers.
- It is still being debated, but we take it as a given that future profits will form part of Tier 1 capital, although this could exclude ‘VIF’ derived from future regular premiums.
- Given the trend towards localisation of balance sheets and supervision within the EU, we believe few insurers will seek to create a single EU balance sheet (c.f. Zurich’s Dublin hub).
- Accessing diversification benefits at the group level remains a structuring challenge for the sector as capital is less fungible across operations.

This section on Capital Structure was written by Marcus Rivaldi, a Fixed Income Research analyst with Morgan Stanley.

A significant change in capital structure

The material changes to hybrid capital rules that have been proposed for Solvency 2 will in our view render existing instruments redundant and will ultimately force their accelerated and full-scale replacement.

Draft rules published to date clearly point to a desire among regulators to improve the loss absorbency of instruments, lessons having been learned from the recent financial crisis as to how hybrid instruments perform in a stressed environment.

In Exhibit 35 we explain in greater detail the eligibility criteria for a given capital instrument to be classified as either Tier 1 or Tier 2 as set out in QIS5.

We expect broad alignment with the banks

In terms of capital definitions, we still anticipate a broad alignment of rules under Solvency 2 with those of the banking industry under Basel 3. By ushering in a consistent approach to the definition of capital instruments, we believe it is possible that the new regime will encourage a focus on the quality as well as the quantity of an insurer’s capital base. This could be reflected, for example, in the increasing use of core Tier 1 ratios for insurers, as per banks. However, we think the direct comparability of capital ratios across sectors is very limited and misleading in many aspects given the materially different solvency methodologies for banks and insurers.

We show in Exhibit 34 how we believe tiering of capital for an insurer will look.

Real investor appetite for S2-compliant Tier 2

Our base case remains that insurers will achieve financial leverage primarily through the issuance of Tier 2 qualifying hybrids. In anticipation of Solvency 2’s implementation, since 2010 the refinancing of existing hybrid debt of European insurers coming up to redemption and fresh issuance has all been via instruments structured with new Tier 2 requirements in mind.

Given the quantum of issuance to date it seems clear to us that there is appetite among fixed income investors to buy these new structures at an economic cost for issuing insurers.

Form of Solvency 2-compliant Tier 1 hybrid capital is still developing

In our view, the more complex non-equity Tier 1 capital will not form a material proportion of European insurers’ capital for some time. Investor appetite remains muted for these more equity-like instruments, reflecting both the current market backdrop and continuing uncertainty over key required structure elements such as equity conversion ‘trigger points’ (these instruments are likely to be some form of ‘contingent capital’ or ‘CoCo’).
Our sense too is that Europe’s insurers are still in the process of getting comfortable with and testing Tier 1 hybrid capital technology to see whether it is a form of capital they want to issue. To date, we have not seen any public issuance from an EU based insurer of a hybrid designed with Tier 1 qualification in mind.

However, we have seen private placements from the likes of Allianz and Talanx that have certain Tier 1 features embedded within them, and outside of the EU, Swiss Re recently issued a Swiss franc hybrid into retail markets, which appears to meet all of Solvency 2’s Tier 1 requirements.

We continue to expect transition arrangements

In order to facilitate a smooth transition of capital structures to ones compliant with Solvency 2, we expect existing hybrids to be grandfathered as capital for only a limited period (no more than 10 years), after which time we expect that Solvency 1 compliant Tier 2 instruments will be treated as senior debt by regulators. With regard to higher quality hybrids grandfathered as Tier 1, it may be possible for these to qualify longer term as Tier 2 once Tier 1 status has been lost with the end of transition arrangements.

To date, draft rules have not addressed how regulatory credit will be amortised within this period (if at all). Nonetheless, we believe that when rules are finalised, regulatory incentives will sensibly be built into the framework to encourage insurers to utilise the entire 10-year span for migration of their hybrid capital structure. Hence, for hybrids with embedded incentives to redeem, we believe that grandfathering will cease at first call dates (a similar story to Basel 3 transition arrangements).

‘VIF’ should qualify for Tier 1, in our view

A further long-standing key debate in terms of capital structure has been whether the ‘future profits’ expected to emerge from business already written (or ‘VIF’ – value in force) should be allowed as a constituent of Tier 1 capital. In our view, this is a natural consequence of a shift to ‘best estimate’ liabilities, where the prudential margin is released to equity. The *quid pro quo* is a shift to higher risk-adjusted capital requirements.

However, this remains an open aspect of the draft Solvency 2 rules and it is still possible that Tier 1 credit for future profits is limited to margins on premiums already received – i.e. excluding the profits (however defined) from future regular premiums.
### QIS5 qualification criteria for a capital instrument to be treated as Tier 1 or Tier 2 under Solvency 2

<table>
<thead>
<tr>
<th></th>
<th>Tier 1</th>
<th>Tier 2</th>
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<tbody>
<tr>
<td><strong>General</strong></td>
<td>Fully paid in.</td>
<td>Does not need to be fully paid in, but can simply be called up. If so, must exhibit criteria for Tier 1 instruments, save that relating to being immediately available to absorb loss.</td>
</tr>
<tr>
<td><strong>Duration</strong></td>
<td>Perpetual or dated.</td>
<td>Perpetual or dated.</td>
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<td></td>
<td>The instrument should have an original maturity of at least ten years.</td>
<td>The instrument should have an original maturity of at least five years.</td>
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<td></td>
<td>The first opportunity to repay or redeem is considered to be the</td>
<td>The first opportunity to repay or redeem is considered to be the</td>
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<td></td>
<td>maturity date unless there is a contractual obligation to replace</td>
<td>maturity date unless there is a contractual obligation to replace</td>
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<td></td>
<td>the item with another of the same or higher quality.</td>
<td>the item with another of the same or higher quality.</td>
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<tr>
<td><strong>Redemption</strong></td>
<td>Redemption/repayment only at the sole discretion of the issuer,</td>
<td>Redemption/repayment only at the sole discretion of the issuer,</td>
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<tr>
<td></td>
<td>subject to regulatory approval.</td>
<td>subject to regulatory approval and must be suspended if SCR is not met or not be met by virtue of the redemption/repayment.</td>
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<td></td>
<td>Redemption/repayment suspended if SCR is not met or would not be</td>
<td>Redemption/repayment may be permitted by regulator if the item is</td>
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<td></td>
<td>be met by virtue of the redemption/repayment.</td>
<td>replaced with/exchanged into &quot;like for like&quot; or &quot;like for better&quot;</td>
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<td>Redemption/repayment may be permitted by regulator if the item is</td>
<td>capital and minimum capital requirements are met.</td>
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<td>replaced with/exchanged into &quot;like for like&quot; or &quot;like for better&quot;</td>
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<td></td>
<td>capital and minimum capital requirements are met.</td>
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<tr>
<td><strong>Incentives to redeem</strong></td>
<td>No incentives to redeem permitted (i.e. a feature that in conjunction with a call would make the firm more likely to redeem the instrument), such as an interest rate step-up.</td>
<td>Moderate incentives to redeem are permitted and can include step-ups in interest rates associated with call options.</td>
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<td></td>
<td>Step-ups must not apply before 5 years from the issue date and to be considered moderate must not exceed either 100bps or 50% of the initial credit spread.</td>
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<tr>
<td><strong>Interest cancellation/deferral</strong></td>
<td>Institution must be able freely to cancel any interest/dividend payment and they must at a minimum be cancelled if the SCR is not met or would not be met by virtue of the payment.</td>
<td>Payments must be deferrable if the SCR is not met or would not be met by virtue of the payment.</td>
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<td>Regulator may allow payment to proceed provided that it does not</td>
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<td>further weaken the issuer's solvency position and minimum capital</td>
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<td>requirements are met.</td>
<td>requirements are met.</td>
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<td>Once a payment is cancelled there must be no requirement or</td>
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<td>entitlement to settle that payment at a future date.</td>
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<td></td>
<td>Alternative Coupon Satisfaction Mechanisms (ACSM) are allowed provided (i) they involve use of unissued ordinary shares that have already been approved or authorised; and (ii) they are operated without delay.</td>
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<tr>
<td><strong>Principal loss absorption</strong></td>
<td>Must possess principal loss absorption upon trigger event via (i) automatic conversion into ordinary share capital; (ii) write down/write up pari passu with retained earning; or (iii) a principal loss absorbency mechanism that achieves an equivalent outcome to (i) or (ii).</td>
<td>Not required.</td>
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<td></td>
<td>Trigger event for principal loss absorption is a significant breach of</td>
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<td>the SCR, defined as either (i) own funds being equal to or less than</td>
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<td>75% of the SCR; or (ii) a SCR breach not being resolved within a</td>
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<td>two-month period</td>
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<td><strong>Subordination</strong></td>
<td>Must be deeply subordinated, senior only to the most deeply subordinated item in a winding up (i.e. equity).</td>
<td>Must rank after the claims of all policyholders, beneficiaries and non-subordinated creditors.</td>
</tr>
<tr>
<td><strong>Other</strong></td>
<td>Must be free of any encumbrances and must not be connected with any</td>
<td>Instrument cannot cause or accelerate the insolvency of the issuer and holders must not be able to petition for the insolvency of the issuer, including post the deferral of coupons.</td>
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<td>other transaction, which when considered with the instrument could</td>
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<td>undermine its loss absorption characteristics/features.</td>
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<td>issue, including post the cancellation of coupons.</td>
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<td></td>
<td>undermine its loss absorption characteristics/features.</td>
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Source: CEIOPS, Morgan Stanley Research, Oliver Wyman
No longer pursuing ‘single’ EU balance sheets

Having the appropriate corporate structure is also an important area of focus as the industry migrates towards Solvency 2.

We believe that the intensification of the EU sovereign crisis makes it less likely that insurers will look to implement a single EU balance sheet approach (as Zurich has with the Irish structure and Swiss Re with the Luxembourg underwriting hub), at least not purely for the purpose of optimising capital structures. While the move can still be attractive depending on the business profile, we note, for instance, that Aviva has abandoned plans to create such a pan-European Irish domiciled platform, which would have included substantial life-insurance business.

In our view, the industry has become less convinced that in a stress scenario assets and insurance capital will be fully fungible between different EU countries, but will be increasingly governed on a country-by-country basis even within Europe.

As this is a considerable departure from a main EU policy objective, it is reasonable to assume that over time the European Commission will make changes that tip the balance back to a ‘common market’ perspective. One important element of this would be the strengthening of EIOPA as the supervisor for pan-European groups.

In the meantime, we are seeing increasing activity from insurers that are seeking to ameliorate any negative impact of Solvency 2. We note that Standard Life commented in its FY11 results presentation that it had recaptured an internal reinsurance arrangement at a significant cost in order to avoid an adverse impact.

A further aspect of this debate relates to equivalence (as we discuss on pages 38-40), which could lead some EU insurers to move holding companies in order to avoid as a group applying Solvency 2 to non-EU business units.

Capturing diversification benefits

The full diversification benefits originally envisaged by Solvency 2 were lost some time ago (the provision for group support was lost prior to QIS5).

However, accessing diversification benefits is still a major consideration for insurers. We believe that under the current proposals diversification benefit will be greatest for the Group Solvency Capital Requirement, since insurers will be required to hold a Solvency Capital Requirement at the local subsidiary level (see Exhibit 36).

Insurers will therefore have a theoretical diversification benefit at the ‘group’ level, and will need to find a structure to access this while continuing to meet 100% SCR coverage in each business unit.

We see three possible ways of accessing this: i) a single European balance sheet, ii) internal reinsurance, or iii) double leverage. We continue to think that regulators will accept capital support between group and subsidiaries only when it is really watertight – even in a crisis.

However, we continue to see a risk that insurers will have to inject more capital into subsidiaries in order to meet local SCR requirements. Historically, local subsidiaries have been capitalised at the higher of internal economic capital, rating agency or Solvency 1 requirements. To the extent that the Solvency 2 SCR is higher than this, groups may have to top up local capital. However, the majority of the largest groups will most likely use internal models for material subsidiaries – so in practice requirements will be lower than the standard SCR.

Throughout the financial crisis we have also seen heightened concerns about the fungibility of capital within insurance groups, particularly as some regulators restricted the flow of internal dividends to protect local interests.

QIS5 specifically dealt with the fungibility of capital, with only fungible capital in excess of the local SCR eligible to contribute towards the group requirement. To be deemed fungible, capital must be “available” and “transferrable” within nine months, according to QIS5.

We would expect that strict criteria on fungibility will remain in the final version of the Solvency 2 rules. Fungibility has become increasingly topical again in recent months, in particular given the regulatory relief we have seen granted in certain countries on a Solvency 1 basis (Italy, for example, with ‘Regulation 28’). While this might negate the need to inject capital it means extracting dividends is not practicable (we note that Aviva did not take an Italian dividend for FY11).
Accessing diversification benefits at the group level continues to present a structuring challenge for insurers.

**Exhibit 36**

**Source:** Morgan Stanley Research, Oliver Wyman
Internal Model vs. Standard Formula: A Difficult Choice

KEY DEBATES

- Will the larger insurers gain any advantage over smaller peers by using an internal model, or could their use even prove a disadvantage?
- Do supervisors have the capacity to approve internal models on a timely basis?
- Are internal models too complex? Is the standard formula too complex?

MORGAN STANLEY / OLIVER WYMAN VIEW

- We believe insurers are likely to struggle to get credit for internal models that show material capital reduction compared to the standard formula.
- The approval process is proving to be very cumbersome.
- Investors could well penalise insurers with a higher cost of capital given the opacity and complexity of the solvency-calculation framework.

Benefits of an internal model are being eroded

The prospect of being able to use an internal model was originally considered as one of the main positives in Solvency 2.

Exhibit 37

FSA pre-application process for internal model

Firm

1. Internal preparation
2. Scoping & planning meeting
3. Prepare Pre-application pack for firm
4. Organise meeting with firm to discuss requirements
5. Meet firm and discuss requirements (this could be several meetings)
6. Firm completes self assessment and submits to FSA
7. Agree work plan
8. Monthly (written report) & quarterly progress meeting (face to face)
9. A milestone in the firms plans is reached
10. Assesment
   - Internal desktop review
   - Onsite assessment by FSA
11. Firm submits formal application

FSA

Once all milestones have been completed

Source: FSA, Morgan Stanley Research, Oliver Wyman.
The approach, timing and guidelines chosen for the pre-application process differ between countries. However, across the board the pre-application process has proven to be quite challenging, with companies and supervisors gaining experience with the process for application as well as the technical details of the models.

Meeting the regulatory approval requirements for internal models is tougher than many expected, and all groups still have a lot to do until they can expect to obtain regulatory approval to use their internal model at the eventual start date of Solvency 2.

A delay in Solvency 2 ‘going live’ holds the risk of prolonging this cumbersome process. Also, in some countries, supervisors do not have sufficient resources to deal with a large number of applications for internal-model approval from the start date, and have to ration their time.

In the case of Hannover Re, current drafting of Omnibus 2 has thrown up a somewhat peculiar hurdle to internal model approval that could ultimately force a move of corporate headquarters outside of Germany. According to the company, it appears that the draft rules do not permit the German supervisor BaFin to approve separate capital models for Hannover Re and its parent company Talanx AG.

Hannover Re’s management does not believe using Talanx’s model would be in the reinsurer’s and shareholders’ best interests. As a result, the group is proposing to change its legal form to that of a European public limited company (Societas Europaea, SE), a move that would facilitate a potential shift of corporate headquarters to another European jurisdiction, and allow it to pursue separate approval for its bespoke internal capital model from that jurisdiction’s insurance supervisor. This is still subject to approval by shareholders, currently scheduled for May.

Benefits of an internal model are now less clear

While people are discovering how hard it is at least in some jurisdictions to get an approved internal model running, its benefits are no longer so clear.

Many insurance groups report that it becomes difficult to justify model choices if internal results get significantly lower than what the standard formula would produce. In contrast, in some cases (most notably sovereign risk and policyholder behaviour) supervisors may insist on assumptions in internal models that lead to higher capital charges than the standard formula.

This may mean insurers have to adjust their internal model such that they become less capital efficient and no longer reflect the company’s own economic view on capital.

Investors might baulk at the ‘black box’

Internal models are a significant challenge for regulators to supervise and audit. In order to compensate for the lack of comparability and standardisation, supervisors will require detailed benchmarking information from all companies. For investors, who will not have access to this type of information, capital for companies with an internal model will be largely a black box, and it will be difficult to compare between capital and solvency levels of different companies.

The standard formula is very complex

Finally, many rounds of development and refinement have led to a ‘standard formula’ that many describe as an ‘internal model’ in its own right, which is far from a simple formula-based method that could be implemented in a spreadsheet.

In particular, the valuation of technical reserves for complex life insurance business can be hugely demanding. It is, for instance, not yet clear whether the attempt in Germany to build a deterministic spreadsheet-based model also for traditional life-insurance business can succeed.

In this situation, the use of internal models makes most sense for underwriting risks rather than market risk in life products (except where an internal model is necessary to make use of the matching premium). Therefore, we believe the large non-life and reinsurance companies with sufficient infrastructure to build and maintain an internal model efficiently still have much to gain relative to their competitors and cedents. Also, an internal model reduces the impact from unpredictable changes to the standard formula in the run-up to the implementation of Solvency 2.
Clash of Regimes: Solvency 2 in a Broader Regulatory Context

**KEY DEBATES**

- How does Solvency 2 interact with other regulatory and accounting developments worldwide?
- What other regulatory change should be expected to flow from the recent crises?
- Are we going to see a global Solvency 2 applied consistently someday (analogous to banking’s ‘Basel’)?

**MORGAN STANLEY / OLIVER WYMAN VIEW**

- Constant delays and rising complexity mean that the EU’s Solvency 2 project is less likely to become a de facto global standard, in our view.
- We expect one of the most significant clashes to be with IFRS 4 Phase 2 – which is unlikely to converge with the approach taken by Solvency 2, in particular for liability valuation.
- We argue the market is under-estimating the risk that certain EU insurers become classed as ‘SIFIs’ – however, the financial consequences of this (if any) are not yet clear.
- We see inconsistencies between Solvency 2 and the new banking frameworks: for example, in terms of the capital consequences of owning certain assets; we expect this to drive regulatory capital arbitrage.

**Solvency 2 is not being developed in a vacuum**

European Solvency 2 does not exist in a vacuum, but in the context of several other initiatives that affect insurers’ capital management.

The idea of ‘Solvency 2’ was coined at a global level and is still an initiative of the International Association of Insurance Supervisors (IAIS) – the insurance-equivalent of the Basel Committee of Banking Supervision, which develops the Basel 2 / 3 standards. Out of this global initiative came a number of new regimes, including ‘EU Solvency 2’, the Swiss Solvency Test, and new frameworks in Australia, South Africa, and Japan, for example.

While the EU’s Solvency 2 project was initially taking a lead, the long and complex work on the rules has made it lose momentum relative to the other initiatives. Even within Europe, insurers currently face the need to meet the requirement of Solvency 1, any additional local requirements (such as ICAS, or the particular rules for variable annuities in Ireland), and prepare for Solvency 2.

At least in the early days, Solvency 2 will be applied with ‘local shades’ in each member state, where supervisors will have to opine on internal model quality, ORSA, valuation methodologies and the grandfathering of existing blocks of business within a local context. We therefore expect incidents where the application in different countries conflicts; for example, in the application of stochastic valuation methods for technical liabilities.

Going beyond European insurance regulation, some institutions also need to consider the impact of developments such as IFRS, Basel 3, Dodd-Frank etc.

**‘IFRS 4 Phase 2’ remains on a different path**

The development of global International Accounting Standards (IFRS) for insurance is long overdue, but has so far failed to deliver standards that address the questions of recognition, measurement and reporting of an insurer’s insurance-technical liabilities and assets, in a way that could be a guide for solvency purposes. Conversely, the relevant rules that are being developed for Solvency 2 are unlikely to be considered acceptable for IFRS purposes for various reasons.

However, in terms of timetable the two projects are converging; we now expect January 1, 2014 for Solvency 2 and a 2015 implementation date for IFRS 4 Phase 2.

**SIFI debate has been overlooked for insurers**

At a global level, in the course of the global financial crisis G20 regulators have been developing additional requirements for systemically important financial institutions (SIFI). These are targeted primarily at the banking sector and the role it played in the crisis, but also spill over to insurers.

Being identified as a SIFI – which is a real possibility for all major European groups with global reach – could lead to adverse consequences such as additional capital requirements even beyond the Solvency 2 group requirement.
Exhibit 38
Varying capital requirements for residential mortgages across different regulatory regimes – an example of the ‘Clash of Regimes’

Our expectation is that the IAIS will shortly launch a methodology to determine whether an insurer should be considered to be a SIFI.

We expect this to be followed by the publication of additional policies that will outline the consequences of being designated as a SIFI – these could include the potential for resolution regimes and / or additional capital buffers.

Although we believe it is too early to foresee the ultimate outcome of the debate, in our view investors have not been discounting any financial consequences from the SIFI regime.

Inconsistency with other parts of financial sector

Insurance regulation will also be seen in the context of the regulation of other financial services sectors, in particular banking, by competitors, investors and clients. Even if the ‘Integrated Bank-and-Insurance’ model of bancassurance has gone out of fashion, there are many overlaps in client propositions, products and institutional structures.

However, regulation between the sectors is and remains very different. While Solvency 2 took its cue from the development of the global Basel 2 standards, it has never aimed to be ‘equivalent’ to it, and there are many sometimes fundamental differences, such as the coverage of different risk types.
Such differences create situations where identical transactions lead to different capital charges, depending on whether the contracts are with a bank or an insurance company.

As Basel 3 and Solvency 2 change the regulatory environment in banking and insurance, respectively, the competitive balance between the two sectors in different areas will change, and we see potential for a new wave of ‘regulatory arbitrage’.

We try to illustrate this point in Exhibit 38, which shows the prospective capital charges for residential mortgages under three frameworks:

- the draft Solvency 2 rules (based on QIS5);
- the US National Association of Insurance Commissioners’ (NAIC) basis; and
- the Basel 3 basis.

One can clearly see the inconsistency of approach across the three different frameworks.

Unlike in the banking sector, there is no single line of convergence internationally for the development of modern insurance regulation.
National Supervisors Need to Increase their Co-operation

KEY DEBATE
- To what extent will Solvency 2 be applied consistently across the EU and create a 'level playing field'?

MORGAN STANLEY / OLIVER WYMAN VIEW
- We believe it is increasingly likely that there will be significant national differences on 'day 1' – particularly around areas such as grandfathering and consistency of internal models.
- In time, consistency could be improved through the work of EIPOA, 'colleges of supervisors', and the European multi-nationals – however, this will take time.

Solvency 2 was intended to drive consistency...

One of the key ambitions of Solvency 2 is to create more of a 'level playing field' across insurance markets in the EU, where like situations are treated alike by different supervisors, and where efforts to meet requirements in one country also help to meet requirements in another country. This policy objective is also a driving motive behind many of the European Commission's decisions in the current development stages of Solvency 2.

…but local differences are increasingly likely

While this objective is undisputed, and the EU-wide rules are very detailed and specific, all EU member states' supervisors and insurers have come from very different traditions and have developed very distinct ways of dealing with supervisory situations.

Therefore, convergence towards a 'level playing field' will be a slow and difficult process, and it appears increasingly that there will be divergence between different regulatory regimes in areas such as ORSA, internal models, capital add-ons, and potentially the grandfathering of a large proportion of existing business.

The increased cost of compliance for Solvency 2 can therefore be very different for different entities in different countries.

We note that the debate over Omnibus 2 and the Level 2 technical measures has been of a distinctly 'national' nature.

For example, the UK has been trying to secure a matching premium, while Germany has been more concerned with extrapolation parameters and France has been lobbying for long-term equity dampeners. It remains to be seen whether this will persist and translate into differential interpretations of Solvency 2 between various national authorities.

Colleges of supervisors will have a significant task

Colleges of supervisors are one important way to promote consistency and convergence between regulatory practices for the multi-national groups.

The colleges provide the following functions:
- provide a platform for cooperation and coordination among supervisors;
- enhance the exchange of information about the group (both in normal and crisis situations);
- facilitate group-wide supervision through assisting the Group supervisor; and
- improve solo supervision (i.e. of individual legal entities) by better information gathering and sharing.

Exhibit 39 highlights how this structure is intended to function.

EIOPA is tasked to support this convergence of supervisory practices, but EIOPA is a relatively new institution and its instruments – such as setting technical standards, participating in the supervisory colleges of the 'big' European groups, and managing peer reviews between European supervisors – are relatively limited in order to manage this convergence.

Given we expect this supervisory convergence will be slow, companies may still get a very different deal in each member state. This is particularly visible in the internal-model approvals process, and the hope of multi-market groups to reduce the cost and complexity of meeting supervisory requirements may prove elusive at least in the first years of Solvency 2.
Exhibit 39

Functioning of the 'College of Supervisors'

Relevant Information
Concerning group undertaking
Concerning solo undertaking

Group supervisor

Solo supervisor A

Giving Information
Converting College
Specialized Team

Solo supervisor A
Solo supervisor B
Solo supervisor C
Solo supervisor …

+ Group supervisor

coordination, review, assessment of information

Specialized Team

Source: Morgan Stanley Research, Oliver Wyman
Solventy 2 Could Be a Catalyst for Closed Block Deals

**KEY DEBATE**

- Will Solvency 2 contribute to increased transactions in closed life insurance portfolios, even outside the UK?

**MORGAN STANLEY / OLIVER WYMAN VIEW**

- We believe that the transition to Solvency 2 will create an active closed block market in continental Europe.
- We expect this to be driven by the tougher solvency conditions under Solvency 2 for traditional life books and less need for the cash generation of a ‘back book’ to fund new business production.

Solvency 2 may result in an increase in closed life insurance ‘back-book’ portfolios

Although there is still considerable debate about the outcome of Solvency 2 and, therefore, uncertainty over how it will affect areas such as product strategy and investment allocation, for example, we believe that in the long run certain traditional life insurance products in Europe will look unattractive for shareholders under the new regime.

Specifically, these are long-term life insurance participating savings products that carry underlying interest rate guarantees for customers and substantial asset / liability mismatch risk.

The various adjustments to discount rates under Solvency 2 (e.g. a wider ‘matching premium’) currently being discussed could offset some of the pressure on these products in the near term. In addition, a transitional phase into Solvency 2 and the potential for grandfathering of existing blocks of business could slow down the decline in these products.

However, ultimately we expect capital requirements for guaranteed participating life products to go up substantially compared to Solvency 1. Balance-sheet volatility for insurers exposed to such products will also increase under the mark-to-market regime of Solvency 2. The low yield environment – if prolonged – could exacerbate these effects.

In addition, if pressure on government finances and a desire to reduce deficits results in the removal of attractive tax benefits for individuals buying these products, insurers may also start to find them more difficult to sell. This was the case when tax regimes were ‘leveled’ between different types of medium-term savings products in the UK and the US.

This opens up a role for ‘back-book consolidators’

In time, we believe that the transition to Solvency 2 will create an active closed block market in continental Europe, where consolidators acquire these books and aggregate them to generate synergies.

By combining books in this way, consolidators could address the problem of cost overruns as policies run off and the number of policyholders declines. They could also generate back-office and administration synergies, as well as benefiting from a single asset management function. Additional benefits could include tax synergies, capital synergies and, under a Solvency 2 regime, diversification benefit.

Closed fund consolidation has been a major feature of the UK market since the dislocation caused by the with-profits product crisis in the early 2000s (this was the UK participating savings product).

As funds closed to new business – in large part driven by the implementation of new economic capital rules – selling to a consolidator became an attractive option for many players. In addition to more onerous capital requirements, as new business inflows dwindle and funds shift into a run-off phase, managing expenses becomes more challenging.

In Exhibit 40, we show some examples of major back-book transactions in the UK life market in the past decade. However, there have been some limitations to the UK closed-book consolidation experience:

- cost synergies have been difficult to extract in some cases due to the difficulties (and expenses involved) in merging legacy IT systems used to administer policies.
- a large part of the gain / loss from such transactions is still market-dependent, since the profit generation from life products (especially participating life products) is still geared to investment performance. Therefore, volatile markets present a challenge.

Catalysts for change

There are two key catalysts, in our view.

First, we think tough solvency conditions under Solvency 2 for traditional life books, particularly in countries such as the Netherlands and Germany, could lead to a group of ‘forced
Exhibit 40
Precedent closed block transactions in the UK

Price/Embedded Value

Source: Company data, Morgan Stanley Research, Oliver Wyman
Exhibit 41
SNS REAAL recently outlined why it feels well positioned for participating in closed block transactions

<table>
<thead>
<tr>
<th>Key Factors</th>
<th>Why important?</th>
<th>Position of SNS REAAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low complexity IT landscape</td>
<td>• Lower cost of operations (e.g. regulatory changes)</td>
<td>• Only two core IT platforms (universal life and traditional life)</td>
</tr>
<tr>
<td></td>
<td>• Strategic flexibility</td>
<td></td>
</tr>
<tr>
<td>Sizeable closed book</td>
<td>• Minimum scale required</td>
<td>• #1 life insurer in terms of cost / provision ratio, with €25bn of technical provisions</td>
</tr>
<tr>
<td>Operational &amp; integration skills</td>
<td>• Ensuring efficiency in IT and processes</td>
<td>• Proven integration skills</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Successful lean program resulting in low cost levels</td>
</tr>
</tbody>
</table>

Source: Company data, Morgan Stanley Research, Oliver Wyman

Exhibit 42
SNS REAAL views managing a closed book as fundamentally different than for an open book

<table>
<thead>
<tr>
<th>Primary Processes</th>
<th>Open book / new business</th>
<th>Closed book</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product development</td>
<td>Focus on innovation to increase market share &amp; value creation</td>
<td>Focus on rationing product line &amp; new legislation</td>
</tr>
<tr>
<td>Marketing &amp; sales</td>
<td>Strong branding towards end client and intermediary channel</td>
<td>Limited branding or no branding</td>
</tr>
<tr>
<td>Policy acceptance</td>
<td>Focus on end-client satisfaction and speed of service</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Claims &amp; services</td>
<td>Servicing should generate new sales, requiring sales attitude from staff</td>
<td>Servicing purely focused on service tasks, efficiency the key success metric</td>
</tr>
<tr>
<td>Strategy &amp; management</td>
<td>Manage for growth, innovation and strong branding</td>
<td>Manage cost and retention: focus on simplifying processes and IT</td>
</tr>
<tr>
<td>Financial &amp; ALM</td>
<td>Invest in growth and focus on long term value (VNB)</td>
<td>Manage capital and maximize efficiency (with declining assets)</td>
</tr>
<tr>
<td>HR capability building</td>
<td>Focus on product development, service and sales</td>
<td>Focus on process and IT optimisation</td>
</tr>
<tr>
<td>IT systems</td>
<td>Flexible systems that can handle product innovation Front-Office integration</td>
<td>Reducing complexity and increasing ability to scale down</td>
</tr>
</tbody>
</table>

Source: Company data, Morgan Stanley Research, Oliver Wyman
sellers', which may help to ignite the back-book consolidation market.

In particular, the pricing may be favourable for potential acquirers, as the number of sellers would enable consolidators to pick up assets at an attractive discount to embedded value or cash-flow potential.

Conversely, if Solvency 2 rules are amended to ease some of the near-term capital pressures on participating life contracts, there may be a more limited supply of insurers willing to sell their back-books.

Second, the current business models of life insurers that benefit from integration of the back-book with the new business will be less potent under Solvency 2 and therefore enable separation.

Under the current regimes, life insurers often use their back-book as a source of cash production. This, in turn, is used to help fund the capital strain of writing new business.

However, under Solvency 2, new business in the form of unit-linked and protection business will have potentially no capital strain on sale, as reported in our previous paper. This means the cash generation from the back-book is not necessary to fund the new business.

Potential for back-book transactions in the Netherlands and Germany

We see similar conditions to the UK market existing in several European countries as life insurers shift their focus to protection and less traditional savings products as a result of Solvency 2 – in particular, the Netherlands and Germany.

While very different, both markets are competitive, which we have expected to ease through consolidation for some time. However, consolidation has been elusive, and acquisitions often had a limited impact on cost structures.

In the Netherlands, the situation has now become dramatically more pressing in the life sector because of the new business decline, and the strategic change of major market participants. We anticipate this may lead to closed-block transactions, and with a first kernel, this might increase over time.

We note that SNS REAAL is pursuing a closed block consolidation strategy in the Netherlands – arguing it is “a natural party to be involved in a possible closed block transaction”. Exhibit 41 highlights why the company believes it is well positioned, while Exhibit 42 shows why it believes the management process is fundamentally different for a closed block rather than for an open book of business.

In Germany, the prominent feature of the market structure is its fragmentation, with many small independent insurers. This fragmentation is accentuated, as many, even small brands, are active in distributing their own life, non-life and health insurance, and for legal reasons need separate companies for each activity. Attempts in the past to execute closed-block transactions have failed because of legal complications, difficulties in realising cost advantages, and because shareholders may not be able to extract significant value from closure.

However, we believe the potential is still there in Germany – especially in a post-Solvency 2 world, where significant pressure is exerted on insurers writing long-term traditional participating life business.
Appendix I: The Structure of the Solvency 2 Balance Sheet

Exhibit 43
Solvency 2 vs. Solvency 1

Solvency 2

- Standard Capital Requirement
  - Based on impact on NAV of a series of risk stress test scenarios, allowing for correlation between risks.

- Minimum Capital Requirement
  - Between 25% and 45% of SCR

- Assets at Market Value

- Best Estimate Liabilities (or Technical Provisions)

- Risk Margin

- Calculated using stochastic simulations and best estimate assumptions – allowing for options & guarantees, policyholder behaviour, discretionary benefits and management actions

Solvency 1

- Solvency 1 minimum solvency margin

- Under Solvency 1, there is inconsistency in the measurement of assets – not all jurisdictions consider market value, therefore asset valuations may change

- Under Solvency 1, there are simplistic, crude factor based minimum solvency margin requirements for life, non-life and health, not based on risk. In many cases capital requirements will go up under Solvency 2 with more company-specific, risk tailored capital requirements

- Liabilities tend to be inconsistently calculated – with different approaches in different jurisdictions. The key principle of calculation is prudence – liabilities tend (in most cases) to be greater than best estimate. In many cases both life and non-life liabilities may reduce under Solvency 2, but will probably be calculated using more sophisticated techniques than currently

Source: Morgan Stanley Research, Oliver Wyman
Appendix II: Glossary of Terms

ALM – Asset Liability Management.

BCBS – the Basel Committee on Banking Supervision develops the global supervisory framework for banks.

CEA – Comité Européen des Assurances. The European insurance and reinsurance federation now called Insurance Europe. Its member bodies comprise of national insurance associations.

CEIOPS – Committee of European Insurance and Occupational Pensions Supervisors. It was replaced by EIOPA in 2010.

CFO Forum – a high-level discussion group formed in 2002 by the Chief Financial Officers of major European insurance companies, with the aim of influencing financial reporting and industry regulation. The group was responsible for the promotion of European Embedded Value and Market Consistent Embedded Value.

CRO Forum – a professional risk management group focused on developing and promoting industry best practices in risk management.

EBA – the European Banking Authority.


ESA – the European Supervisory Authorities is made up by EIOPA, EBA and ESMA.

ESMA – an independent EU authority that contributes to safeguarding the stability of the European Union’s financial system by working with the EBA and EIOPA.

IAIS – the International Association of Insurance Supervisors, an international organisation consisting of the world’s insurance regulators and supervisors.

ICA – Individual Capital Assessment regime.

MEPs – Members of European Parliament.

NAIC – National Association of Insurance Commissioners – the US standard-setting and regulatory support organisation for insurers.

ORSA – Own Risk and Solvency Assessment. An internal risk assessment process, which aims to capture non-quantifiable risk where capital is not necessarily the best measure.

PEIF – the Pan-European Insurance Forum is a group of CEOs of major insurance companies in Europe, consisting of AEGON, Allianz, Aviva, AXA, Generali, ING, MAPFRE, Munich Re, RSA, Swiss Re, Uniqia and Zurich Financial Services. Members believe in a competitive and fully integrated European insurance market.

QIS – Quantitative Impact Study. Conducted by CEIOPs to analyse the impact of new capital requirements on European insurers.

QIS5, QIS6 – the fifth Quantitative Impact Study is the latest study and was undertaken between August and November 2010. A sixth study is unlikely if the Solvency 2 deadline of 2014 is to be met.

SIFI – Systemically Important Financial Institutions are those deemed to be systematically important to the economy. Insurers have so far not been classed as SIFIs.

VIF – Value of In-Force – the present value of the profits that will emerge from a block of life insurance policies over time.
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(as of February 29, 2012)

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Overweight (O). The stock's total return is expected to exceed the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Equal-weight (E). The stock's total return is expected to be in line with the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Not-Rated (NR). Currently the analyst does not have adequate conviction about the stock's total return relative to the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Underweight (U). The stock's total return is expected to be below the average total return of the analyst's industry (or industry team's) coverage universe, on a risk-adjusted basis, over the next 12-18 months.

Unless otherwise specified, the time frame for price targets included in Morgan Stanley Research is 12 to 18 months.

Analyst Industry Views

Attractive (A): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be attractive vs. the relevant broad market benchmark, as indicated below.

In-Line (I): The analyst expects the performance of his or her industry coverage universe over the next 12-18 months to be in line with the relevant broad market benchmark, as indicated below.
Cautious (C): The analyst views the performance of his or her industry coverage universe over the next 12-18 months with caution vs. the relevant broad market benchmark, as indicated below.

Benchmarks for each region are as follows: North America - S&P 500; Latin America - relevant MSCI country index or MSCI Latin America Index; Europe - MSCI Europe; Japan - TOPIX; Asia - relevant MSCI country index.

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