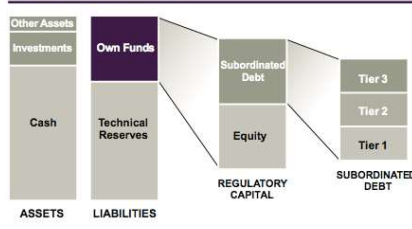


“Solvency II will spur many companies to look at how to improve the cost and capital efficiency of their operational structures”

PwC

Insurance Balance Sheet



With the advent of Solvency II it is imperative that executive management considers more carefully their company’s access to sources of capital. **Insurance Regulatory Capital** offers capital solutions through acting as a conduit between insurers and investors. We aim to help mid cap European insurers enhance solvency cover through issuing subordinated debt (sub-debt) instruments.

Sub-debt is specifically constructed to be a hybrid instrument between debt and equity. As such, an issuer receives all the benefits of debt (tax deductible, fixed rate, long term but finite) without the drawbacks of equity (dilution of control, expensive, high administration, non flexible). In addition, under new Solvency II guidelines sub-debt instruments are designed to alleviate financial pressure in times of stress. This new note structure offers a more attractive proposition for issuers.

As discussed below, maintaining an appropriate buffer in excess of the minimum solvency requirement will be more important under Solvency II. This paper also covers the benefits of issuing sub-debt as part of a fully diversified capital structure and as an attractive alternative to existing forms of capital.

Capital is rarely efficiently available when it is needed most. For example, the collapse in both equity and fixed income investor confidence throughout the credit crunch had a dramatic impact on the cost and availability of capital. Many insurers and reinsurers were forced to raise capital at penal rates and enter into punitive reinsurance transactions. The chart below highlights one such instance for Swiss Re. The CHF 3bn capital instrument issued at the depth of the crisis has since been retired at a final cost of capital estimated at over 20% per annum.

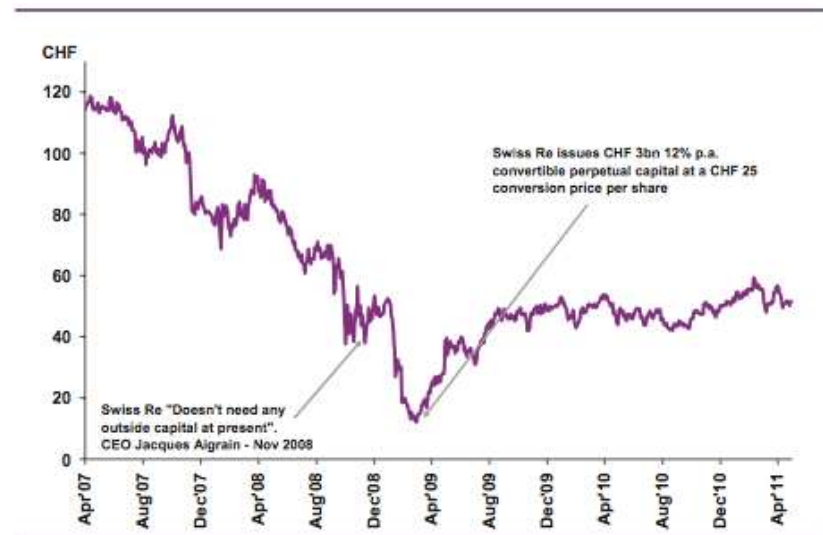
All forms of financial leverage are most efficiently and affordably structured in advance of an active requirement. Pro-actively securing a long term capital buffer provides solvency insurance.

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Swiss Re Share Price Performance

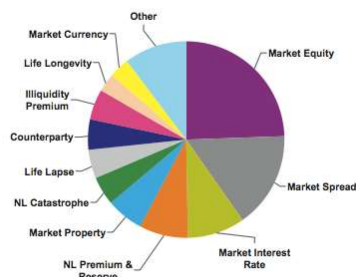


Source: Bloomberg

“As CEO of two high growth mid-sized insurers, sourcing reliable cost effective long term capital was a principle component in achieving strategic objectives”

Oliver Tattan, CEO,
Insurance Regulatory Capital

Model Weighting of SCR Main Risks



Source: EIOPA

“Solvency II capital ratios will be fundamentally more volatile than those reported under Solvency I”

Morgan Stanley/Oliver Wyman

Maintaining a Capital Buffer

Under Solvency II, a regulator will assess the level of capital in operating insurance companies against a required level of capital. This level of required capital (eligible own funds) will be calculated through a standard formula or (if approved by a regulator) an internal model developed by the company itself. There are two capital requirement levels as defined below by EIOPA.

- 1) The Solvency Capital Requirement (SCR): is defined as the potential amount of own funds that would be consumed by unexpected large events whose probability of occurrence within a one year time frame is 0.5%.
- 2) The Minimum Capital Requirement (MCR): is defined as the potential amount of own funds that would be consumed by unexpected events whose probability of occurrence within a one year time frame is 15%. The MCR is expected to be calculated within a range of 25-45% of the SCR.

Whether an insurance company uses the standard formula, or receives regulatory permission to apply internal models, it will have to maintain eligible capital to at least 100% of its SCR to prevent regulatory interference and ensure operating flexibility. A breach of the MCR triggers the ultimate supervisory intervention of the withdrawal of authorisation.

As depicted below, the solvency ratio under the new regulation is expected to be much lower than under Solvency I. The calculation of both eligible capital and solvency required for Solvency II fundamentally differs from the basic calculation for Solvency I. As both liabilities and assets are to be fair valued (market value where possible) the capital eligible for solvency purposes will be more comparable to accounting capital under International Financial Reporting Standards (IFRS). The EIOPA Quantitative Impact Study (QIS5) covering 2,520 insurance companies reported that the new methodology will lead to an average 28% increase in eligible capital. However, it also leads to an average 140% increase in the solvency requirement which results in an overall 43% reduction in capital surplus. As such, the average solvency ratio under Solvency II of 165% falls well below the average existing Solvency I ratio of 310%.

Impact of Solvency II on Solvency Ratio (€bn)

	Solvency I	Solvency II	
		SCR	MCR
Solvency Ratio %	310%	165%	466%
Solvency Requirement	227	547	185
Eligible Capital	703	902	861
Surplus	476	355	676

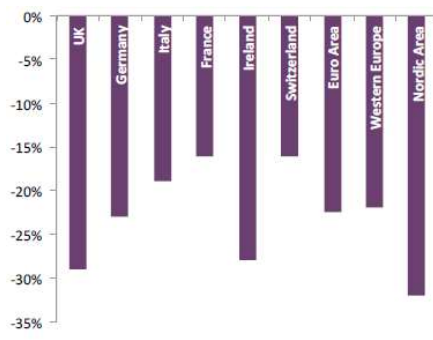
QIS5 highlighted an average 43% reduction in capital surplus compared to Solvency I.
Figures presented are QIS5 participant aggregates.

Source: EIOPA

“Increased capital requirements could drive reinsurance demand and industry consolidation”

Barclays Capital

2008 % Annual Fall in Equity for listed European Insurers



Source: Company Accounts
Insurance Regulatory Capital

“Article 88 of the Solvency II Directive, makes it clear that subordinated debt can be included in basic own funds rather than ancillary own funds”

Milliman

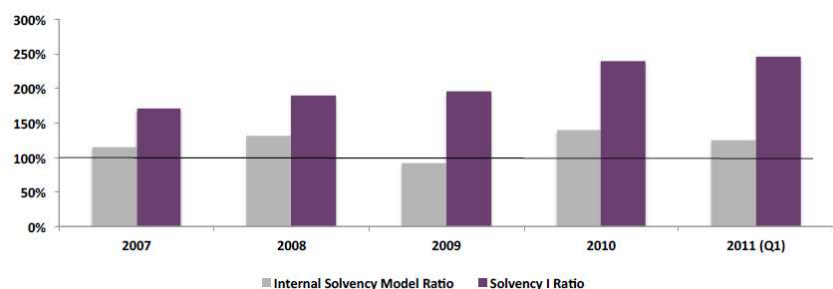
The introduction of mark to market valuations under this new methodology is expected to lead to significantly more volatility in annually reported eligible capital than under the previous regulations. The recent credit crunch demonstrates how volatile capital, and ultimately solvency levels, could prove to be under Solvency II. The chart in the margin depicts that shareholder equity for publically listed Western European insurers fell 21% on average between 2007 and 2008 (ranging between -56% and +58%). This fall in shareholder equity occurred despite the average profile of insurance investment assets being heavily weighted to higher quality fixed income debt and a low exposure to subprime instruments.

As stated previously, insurers will be permitted to calculate solvency requirements through a standardised formula or from regulatory approved internal models. Many of the larger insurance companies already use such models as best practice to price capital more efficiently. The performance of such models further demonstrates the expected volatility and fall in solvency cover under Solvency II and the necessity for a larger capital buffer. The chart below compares the performance of Zurich’s internal economic capital model to its Solvency I ratio. The divergence between the two models in 2009 is particularly noteworthy as Zurich’s internal model cover fell by over 30% to 95% even as the Solvency I ratio grew to 195%.

As well as having a margin to protect against a breach of regulatory guidelines, a firm capital buffer offers many other advantages to insurance companies, such as:

- 1) The ability to readily avail of opportunistic acquisitions.
- 2) Greater flexibility in managing and negotiating reinsurance terms.
- 3) The ability to access debt markets at more attractive terms. □
- 4) An additional risk buffer for policyholders.

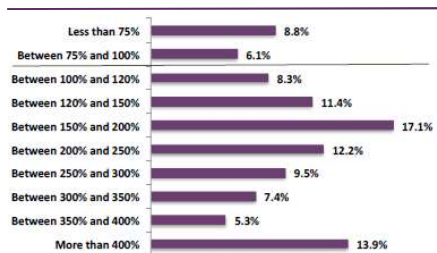
Zurich Financial Services Internal Model v Solvency I



“This (Solvency II) is potentially a great opportunity for the industry to outline its capital needs and what return it makes on that capital, but it is not clear at this stage that this will be grasped”

J.P. Morgan

Distribution of SCR Coverage



Source: EIOPA

The QIS5 study also reported that most European insurance companies maintain a strong solvency buffer and will enter Solvency II with a good level of SCR coverage. Approximately 50% of European insurers' current capital exceeds 200% of SCR, 35% would be between 100-200%. However, 15% or 378 of the sample companies have capital below the SCR.

Subordinated Debt Instruments

Along with issuing equity and engaging in reinsurance contracts, sub-debt represents a third alternative to meaningfully raising the ratio of eligible capital to SCR. The relative ease of issuance and unique performance enhancing benefits highlight sub-debt as an attractive consideration for all insurance companies, irrespective of the level of solvency cover.

Solvency II directives for eligible sub-debt instruments are fundamentally different from the existing market issued sub-debt notes. A key guiding principle from EIOPA is that no eligible form of capital can have features which “cause or accelerate insolvency”. In effect, the terms and conditions of eligible notes have been restructured to ensure that the issuer comes under limited financial pressure to either pay a coupon or redeem principal, if doing so would lead to a breach of its SCR. The adoption by the European Parliament of the Omnibus II Directive in March 2014 and the issuance of Level 2 measures by EIOPA have provided further guidance on the eligibility of sub-debt instruments under Solvency II.

Although the sub-debt instruments are still segregated into tiers as under Solvency I, the characteristics have been adjusted to address the perceived weaknesses in the existing instruments.

- Tier 1 capital is considered core capital and includes ordinary equity. Insurers will be directed to cover at least 50% of its SCR in this form of capital. Tier 1 sub-debt notes will be the most similar to ordinary equity and issuers will be eligible to contribute up to 20% of their SCR in this instrument.
- Tier 2 will have more debt like features and issuers will be eligible to cover up to 35% (or up to 50% if Tier 3 is unutilised) of its SCR in this instrument.
- Tier 3 will be the most like standard debt and issuers will be eligible to cover up to 15% of their SCR in this instrument.

Comparison of Subordinated Debt Characteristics under Solvency I and Solvency II

	Solvency I Weakness	Solvency II Guideline
Tier 1	Coupons are permitted to step up (increase)	Coupons are not permitted to step up
	Instruments are senior to equity and only absorb loss in wind up	Instruments will absorb losses on a going concern basis
	Issuers do not need permission to pay coupons or redeem principal	Issuers need regulatory permission to pay coupons or redeem principal
Tier 2	Coupons can defer and accumulate for a maximum of 5 years	Coupons can defer and accumulate with no upper time limit
	Non-payment of principal maturity date is an event of default	There is no event of default trigger*
	Issuers do not need permission to pay coupons or redeem principal	Issuers need regulatory permission to pay coupons or redeem principal
Tier 3**	Non-payment of coupons is an event of default	There is no event of default trigger*
	Non-payment of principal maturity date is an event of default	There is no event of default trigger*
	Issuers do not need permission to pay coupons or redeem principal	Issuers need regulatory permission to pay coupons or redeem principal

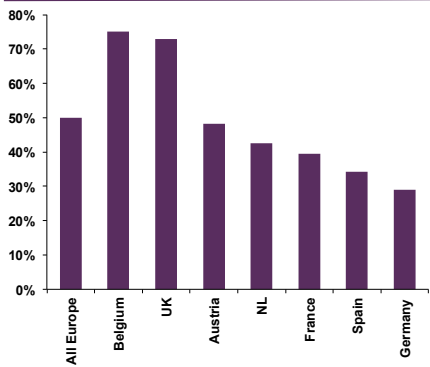
*in the instance that payments are stopped at the request of the regulator

**previously termed 'Lower Tier 2'

“Solvency II will lead to a much improved regulatory and operating environment. A common regulatory platform will lead to greater ease in writing premium across European borders presenting significant organic and inorganic opportunities for growth”

Maria Teresa Kelly Oroz, CCO, **Insurance Regulatory Capital**

Ratio of 5 yr Average Capital to GWP



Source: Midsize Insurance Company Accounts
Insurance Regulatory Capital

“The new regime is based on fair values of assets & liabilities, and will inevitably bring volatility to traditional measures of financial strength”

KPMG

The Case for Insurance Subordinated Debt

Solvency II Subordinated Debt Characteristics

	Eligibility Range as % of own funds	Fixed Coupons	Step Up Coupon	Min Issue Years	Cumulative*
Tier 1	0-20%	No	No	Undated**	No
Tier 2	0-35%	Yes	Yes after 10 yrs	10	Yes
Tier 3	0-15%	Yes	Yes	3	Yes
Max Sub Debt	60%				

*If coupons are not permitted by regulators to be paid they will accumulate to the next period

** Undated or same maturity as the under taking

Issued Tier 1 in excess of 20% will count towards Tier2. Tier 2 in excess of 35% can count as part of Tier 3.

Source: EIOPA guidance

Equity

The only form of capital that can exist entirely in its own right is ordinary equity. Although raising equity is always an option it has certain drawbacks, some of which are listed below.

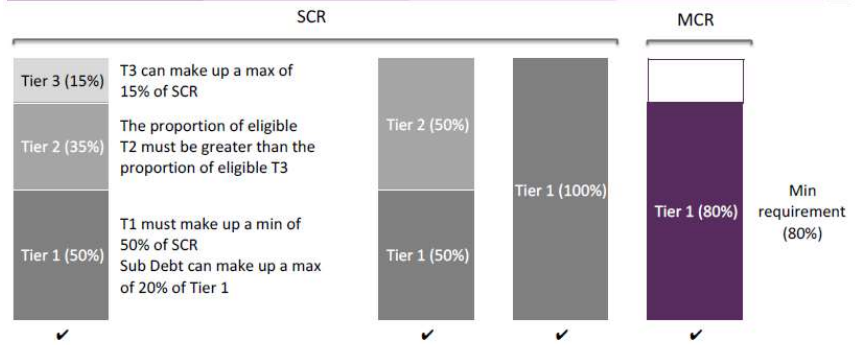
- A very heavy administrative process involving both the company and existing shareholders. Privately owned insurers entering into a bespoke and one off equity issue can find the process onerous.
- A valuation of the business must be negotiated and agreed with new equity investors.
- A very time consuming consultative process with existing and prospective shareholders.
- Existing shareholders face dilution without a pro-rata take up.
- Sourcing new equity investors for unlisted insurers can be difficult, particularly without a route to exit.

The Optimal Capital Mix

Both sub-debt and reinsurance provide alternative forms of raising the SCR coverage by increasing the eligible own funds or reducing the capital requirement.

The optimal capital structure should take advantage of an ideal mix of equity, sub-debt and reinsurance and will vary depending on the requirements of individual companies. At **Insurance Regulatory Capital** we specialise in providing the optimal mix of reinsurance and sub-debt.

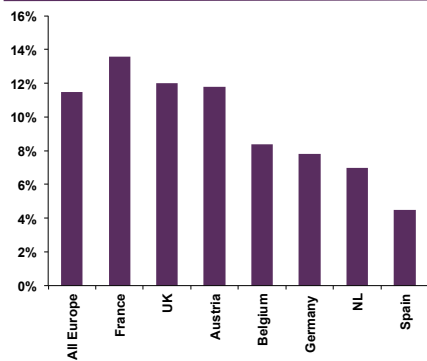
Eligible Capital Structure



“Solvency II is likely to result in a significant increase in regulatory capital for most companies in the market”

Aon Benfield

Ratio of 5 Yr Average Reinsurance Ceded to GWP



Source: Midsize Insurance Company Accounts
Insurance Regulatory Capital

The Case for Insurance Subordinated Debt

From a structural perspective the table below compares some of the characteristics of sub-debt, equity and reinsurance.

Characteristics of Subordinated Debt, Equity and Reinsurance

	Sub-Debt	Equity	Reinsurance
Term	Flexible	No Maturity	Annually Renewed
Payments	Fixed	Flexible	Variable
Counterparty Risk	No	No	Yes
Voting Rights	No	Yes	No
Tax Deductible	Yes	No	Yes
Deferrable Payments	Yes	Yes	No

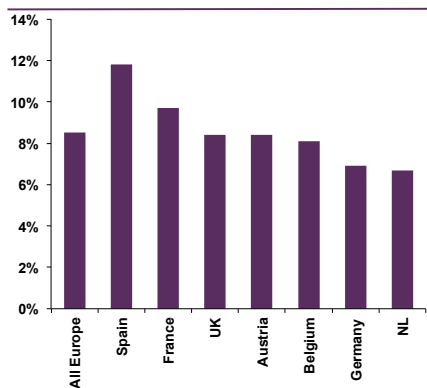
Even for a company satisfied with its current level of capital, the performance enhancing attributes of sub-debt are often overlooked by issuers who are predominantly focused on managing their solvency ratio. The tax deductible status of coupons is a key benefit of the instruments. In one example depicted overleaf, an issuer has replaced 25% of equity with a subordinated issue. The eligible capital and SCR have remained the same, but the issuer has been able to retire both existing equity and enhance the return on the remaining equity by 4.7%. □

This potential to enhance performance, even as equity is returned and greater capital diversity is achieved, should make sub-debt an essential part of the capital management toolkit.

"We expect that companies struggling to meet the new capital requirements may look to merge with, or be acquired by, companies with higher levels of capital"

KPMG

5 Yr Average Return on Equity



Source: Midsize Insurance Company Accounts
Insurance Regulatory Capital

"Solvency II progresses, but significant challenges in store for insurers"

AM Best

The Case for Insurance Subordinated Debt

Benefits of Issuing Subordinated Debt under Solvency II

Above we have briefly discussed some of the more fundamental aspects of sub-debt instruments. **Insurance Regulatory Capital** has established a special purpose vehicle aimed at assisting mid cap insurers wishing to issue Tier 2 sub-debt as part of their regulatory capital requirements. We would invite issuers to get in contact to discuss any of the benefits listed below in greater detail.

- Increases own funds eligible for SCR and thus SCR coverage.
- No default trigger. The coupon and principal are deferred if eligible capital is below 100% of SCR. Uniquely, the instrument alleviates financial stress when a company is at its most vulnerable.
- No dilution of control. The instruments confer no rights to a note holder with the exception of coupon and principal repayment upon regulatory consent.
- Interest payments are tax deductible in most jurisdictions.
- Can positively enhance performance ratios.
- Incentives to redeem are only permitted after 10 years for Tier 2 instruments.
- Capital is maintained as cash on the balance sheet and can be reinvested.
- Products are transparent and loan notes have a simple structure.
- Limited restrictions or covenants in loan notes.
- Enables access to new investor classes previously inaccessible to mid-sized insurers.
- Very flexible in stress situations.
- Ensures greater options for future capital structures. □
- Can provide protection against M&A by enabling a strong balance sheet. □
- Facilitates business growth in adjacent markets or with similar insurance products.
- No rating agency input required, normally readily available financial and qualitative information will be adequate.
- No counterparty risk, capital is not contingent.

Performance Enhancing Effect of Subordinated Debt (€m)

Subordinated Debt : Total Equity (%)	0%	25%	50%
Profit Before Interest	150	150	150
Interest*	0	-13	-25
Profit Before Tax	150	138	125
Tax Rate (30%)	-45	-41	-38
Net Income	105	96	88
Equity	500	375	250
Subordinated Debt*	0	125	250
Solvency Capital Requirement (SCR)	250	250	250
SCR Cover	200%	200%	200%
Simple Return on Equity	21.0%	25.7%	35.0%

* Based on a blended debt fixed rate of 10% across Tiers 1-3.

Source: Insurance Regulatory Capital

“As an active investor and asset manager the benefits of investing with experienced and aligned industry professionals cannot be over emphasised”

Aogan Foley, Independent Director,
Insurance Regulatory Capital

The Case for Insurance Subordinated Debt

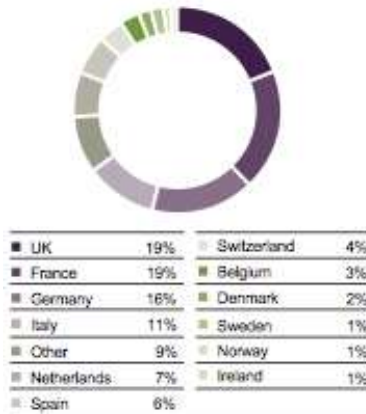
Investor Considerations □

Solvency II has been established to overcome the risk measurement shortfalls in the current regulatory model and apply a uniform standard across all European insurers. The ability to combine the fair value of liabilities and assets into one ratio allows for a much greater level of reporting transparency and comparative benchmarking than exists for most other corporate sectors. **Insurance Regulatory Capital** consider that the demand for mid yielding, low risk, fixed income assets from investors will grow. **Insurance Regulatory Capital** acts as a conduit between the issuers and investors in order to provide sub-debt capital solutions.

At **Insurance Regulatory Capital** we have designed a comprehensive medium term program to facilitate insurers investigating and considering the benefits of issuing sub-debt. All categories of insurer are eligible, including life, non-life (motor, home, liability) and health insurance and any ownership structure: i.e. listed, state owned, privately owned and mutuals. Once an insurer enters the program we work with them to:

- Assess their potential appetite for sub-debt on a 0 to 4 year horizon, considering their long term ideal balance sheet structure and business motivators such as growth ambitions, performance and market consolidation activity.
- Determine the ideal regulatory capital mix.
- Identify any potential barriers to a successful issue.
- Work through the timing of issues and the process to issuing sub-debt.

Additionally potential issuers benefit from our sector and sub-debt research and participate in regular communications.

European Premium by Country


Source: CEA Statistics

Appendix: Outstanding Subordinated Debt Market

Sub-debt is by no means a new concept or a new market instrument. In fact, European insurance companies (particularly the large public listed insurers) have been supplementing capital with sub-debt instruments since the 1980s. What is new however, is the directive for capital eligibility under Solvency II as discussed in the main body of this paper. Practically speaking, the majority of the estimated €80bn outstanding market issuance today does not conform to the directives for Solvency II. The expectation is that issuers will still receive capital eligibility ("grandfathering") for transitional purposes, but will be encouraged to retire and replace capital at the earliest feasible opportunity.

That is not to say that eligible Solvency II sub-debt notes cannot be issued in advance of the Solvency II live date (Jan. 2016). The most recent market issues have used flexible term language to allow for eligibility under both a Solvency I and Solvency II environment. A key provision in the notes ensures that the issuer will not be disadvantaged by changes in the regulatory environment.

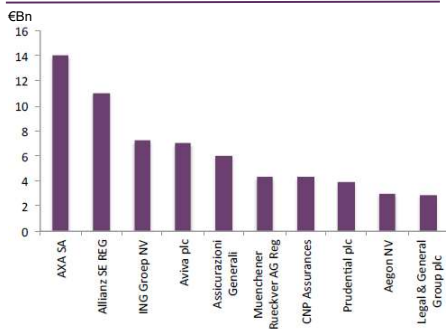
Approximately 50 European issuers have outstanding sub-debt traded instruments in the market. In terms of size, the smallest company with an outstanding issue generated revenues of €240m in its latest fiscal year. **Insurance Regulatory Capital** consider the application of the more sophisticated Solvency II evaluation as conferring a heretofore absent risk equivalent status to European insurance companies. This risk equivalence has been calibrated by EIOPA to approximately equate an SCR level of 100% to an investment grade rating of BBB. As such, the absence of a public rating should no longer be viewed as a serious impediment to efficiently issuing sub-debt instruments. **Insurance Regulatory Capital** would engage with issuers of all sizes regarding the potential of issuing sub-debt.

Outstanding Subordinated Debt Instruments

Tier 1 Issuer	Amt (€ mn)	Coupon	Call Date	YTC %
Ageas	336	5.13%	Jun-16	3.6
Aviva	500	5.70%	Sep-15	1.7
AXA	1000	5.78%	Jul-16	2.4
AXA	750	6.21%	Oct-17	2.5
Generali	1275	5.32%	Jun-16	2.4
Generali	1250	5.48%	Feb-17	2.8
Groupama	449	6.30%	Oct-17	5.2
HannRe	500	5.00%	Jun-15	1.8
Munich Re	1349	5.77%	Jun-17	2.1
Standard Life	360	5.31%	Jan-15	2.5
Swiss Re	1000	5.25%	May-16	2.1
Swiss Life	590	5.85%	Apr-17	3
Unipol	750	5.75%	Jun-24	4.3
Tier 2 issuer				
Allianz	1400	4.38%	Feb-17	1.9
Allianz	1500	4.75%	Oct-23	2.2
AXA	1000	3.88%	Oct-25	2.3
Delta Lloyd	750	4.38%	Jun-24	3
Groupama	51	4.38%	Jul-15	2.2
Groupama	1100	6.38%	May-24	4.3
Old Mutual	374	5.00%	Nov-15	3.2
Swiss Life	343	5.00%	Nov-15	2.8

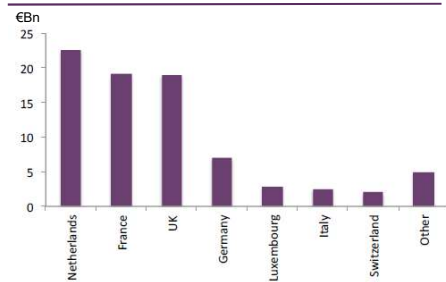
Source: Citigroup Newsletter June 2014

Top 10 Outstanding European Sub Debt Issuers



Source: Bloomberg

Outstanding Insurance Sub Debt by Country



Source: Bloomberg

Pricing

The table on the previous page represents a sample of the Tier 1 and Tier 2 eligible subordinated instruments (under Solvency I) that are currently outstanding. Yield to first call date is a reasonably good proxy for the annual rate demanded by investors for subordinated instruments. Naturally, the trading price and subsequent yield to call is heavily affected by other fundamental factors such as:

- The current credit quality of issuer (public rating).
- The coupon at issue.
- The liquidity of the note.
- The term to call and final maturity. □

The actual pricing of Tier 2 debt acquired must take account of the fact that the issues will be illiquid in comparison to the large listed issues of major insurers. Naturally, the actual pricing will very much depend upon the individual circumstances of the issuer and will be heavily influenced by the following aspects: □

- Prevailing interest rates and long term expectations (yield curve).
- Credit quality of issuer, peer group, sector and country. □
- The amount and blend of subordinated instruments (Tiers 1-3). □
- The rationale for issuance. □
- Size of issuance relative to total own funds.
- Term of issuance. □

For more information on pricing and sub-debt markets please contact **Insurance Regulatory Capital**.

References

[Ceios' Advice for Level 2 Implementing Measures on Solvency II](#)
[EIOPA Report on the Fifth Quantitative Impact Stud](#)

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