

Are reinsurance companies overcapitalized?

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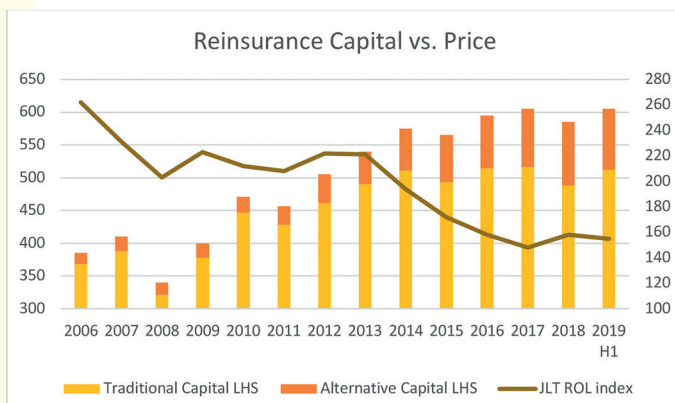
The cost of insurance and reinsurance tends to follow the classic supply and demand dynamic – if there is too much supply relative to demand, prices will decline and vice versa. In reinsurance, we tend to measure supply in terms of capital, i.e. the money available to (re)insurers to support the risks that they accept from their policyholders. Demand is defined as the amount of premium a (re)insurer is receiving from their policyholders in exchange for taking on a part or all of one or several risks. Over the years the cost of reinsurance has declined to almost unsustainable levels due to an increase in capital relative to demand ⁽¹⁾.

We believe that falling prices in the reinsurance industry due to the supply and demand argument are somewhat misguided. The cause for the increasing levels of (re)insurer capital over the past few years are mainly driven by the increasing demands of the rating agencies. High financial strength ratings as assigned by the rating agencies have become a necessity to (re)insurers in order to successfully compete in the market and significant amounts of capital, often far in excess of regulatory demands, tend to be required to achieve a high financial strength rating.

Since the financial crisis starting in 2007/2008, we have observed that capital has started to outstrip demand. The excess supply relative to the demand has been used since then as the key argument for declining reinsurance prices (see next figure).

While this is welcome news for policyholders, reinsurers have started to suffer the consequences. Insurance and reinsurance companies have two main income streams – investment income from the assets that are available to invest and profitable results from their underwriting activities. Given the prolonged low interest rate environment, income from the asset side of the balance sheet has been severely restricted for a number of years. This has shifted the focus onto the underwriting side and a declining price for the product offered eats away the rest of the margin. Already in 2018, rating agency Standard & Poor's has stated that the market is only barely covering their cost of capital ⁽³⁾.

So what is driving this excess of costly capital? These fluctuations may be cyclical, resulting from an endogenous supply-demand dynamic, as Bénéplanc shows in this issue. Would this mean that the reinsurance industry is overcapitalized relative to the premiums it accepts? We believe that this is not painting the full picture. What if the industry was not overcapitalized at all but holding just enough capital to fulfill the demands of the current environment to satisfy key stakeholder demands in order to competitively operate in the first place? Would that also



Source: Aon Securities (reinsurance capital in bn USD).
JLT Re (Adjusted Global Property-Catastrophe Reinsurance Rate-on-Line Index) ⁽²⁾.

(1) CARPENTER G. (2019), "The Changing Nature of Risk", September.
(2) Reinsurance prices are generally expressed as Rate on Line (ROL). ROL is a ratio and represents how much an insurers has to pay to obtain reinsurance coverage: <https://www.artemis.bm/global-property-cat-rate-on-line-index/>

(3) Standard & Poor's: Global Reinsurance Highlights: <https://www.spratings.com/documents/20184/1581657/Global+Reinsurance+Highlights+2018/98dc8810-eead-8ff0-3f07-9889caaab0b0>

change our view of how appropriate current reinsurance costs are?

Who gets to decide how much capital a reinsurance operation needs? The first that springs to mind is the insurance regulators. Throughout the developed and most of the developing world, insurance and reinsurance regulators have been setting the rules as to what constitutes sufficient capital. The level of sophistication of these rules vary widely across jurisdictions, but their intention is the same: offer the policyholder an acceptable minimum level of security and assurance that in the event of a claim the (re)insurer can make good its promise to pay.

If we were to use Europe's Solvency II regulation as an example – how come that the majority of (re)insurance companies have solvency capital ratios far in excess of the minimum 100%, indicating that they are in effect overcapitalized to a certain extent? When looking at the top 50 largest insurance companies, their Solvency II capital ratios exceeded 200%. Some of the largest reinsurers even approached 250% as per their half year 2019 estimates (see examples below). Yet, the companies will tell you that they have optimized their capital to a point where they are holding just enough to fulfill their needs and operate within their target bracket.

Name	SCR as at 1H19
Allianz Group	213%
AXA S.A.	190%
Prudential plc	222%

Top 3 largest European Insurance Companies (measured by total assets as at year end 2018).

Name	SCR as at 1H19
Munich Re	245%
Hannover Re	249%
SCOR	212%

Top 3 largest European Reinsurance Companies (measured by reinsurance gross written premium as at year end 2018).

While the regulator does set a common framework to ensure that capital is at acceptable levels, the rating agencies demand more than that. Now why is that? One major reason: The minimum financial strength rating of 'A-'.⁽⁴⁾

Being distinct from its own *credit rating*, the *financial strength rating* of a (re)insurer describes its ability to pay policyholder claims on a scale of 'AAA' to 'D', 'AAA' being the highest⁽⁴⁾.

(4) Standard and Poor's ratings scales: https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352

In order to be accepted on an insurer's and most brokers' securities lists and be considered a valid substitute for capital by insurance regulators, one of the pre-requisites is that the reinsurer needs to have an 'A-' rating from one or more of the major four rating agencies active in (re)insurance: A.M. Best, Fitch Ratings, Standard & Poor's and Moody's, with A.M. Best and Standard & Poor's being the most prominent⁽⁵⁾. While it is unclear why brokers imposed this general rule, it has become an industry standard that seems undisputable today. Generally, this rule is explained as a desire to ensure that counterparties are not just 'good enough' but almost 'perfectly secure'.

This makes the 'A-' financial strength rating equivalent to the 'BBB-' investment grade threshold in corporate finance. Anything below can mean that a reinsurance company is unable to find customers at acceptable prices or can be severely restricted in terms of distribution. Most reinsurance contracts also include 'trigger clauses' linked to credit ratings. This means that an insurer has the right to cancel the reinsurance contract in case the reinsurers credit rating falls below 'A-'.

Also, since the introduction of Solvency II, insurers that reinsure with higher rated counterparties obtain superior capital relief, making the higher rated reinsurers even more attractive (and the lower rated ones less attractive). The more desirable, strong and secure a reinsurance counterparty is, the better its market position and pricing power.

While capital is by no means the only factor that drives a rating, it still tends to be one of the most important components. Hence, in order to achieve the 'A-' minimum rating, the amount of capital has to be at least commensurate with the 'A-' level of capital, all other areas of rating agency scrutiny being satisfactory. In addition, the largest reinsurers are not satisfied with the 'A-' rating. In order to be able to compete effectively in their chosen markets and to further differentiate themselves among the competition, they aim for the next level: the 'AA-' rating. In addition, this can also give the advantage of obtaining a better price for their services. Again, the attraction being a high security and a lower capital requirement for insurers' counterparty credit risk from a Solvency II perspective.

As at 30th October 2019, the top 5 reinsurance companies (measured by amount of GWP) had the following financial strength ratings from Standard & Poor's: Swiss Re 'AA', Munich Re 'AA-', Hannover Re 'AA-', SCOR 'AA-', Berkshire Hathaway 'AA+'.

Now we should no longer be surprised that their regulatory solvency ratios are so much in excess of the regulatory minimum as holding capital to satisfy the demands of such a high rating is very high.

(5) Any rating agency registered with the European Securities and Markets Authority (ESMA) is allowable for regulatory purposes: <https://www.esma.europa.eu/supervision/credit-rating-agencies/risk>
Under Solvency II, the lower the financial strength rating, the higher the capital charge on credit risk against that counterparty.

To illustrate the differences in capital demands between Solvency II and the ratings agencies we have attempted to compare how much capital is required per unit of risk under the different standards.

The table below shows a comparison of capital factors between Solvency II standard formula requirements and Standard & Poor's capital model demands. The percentages shown express the amount of capital a (re)insurer has to put aside by unit of premium and reserve risk, *i.e.* the higher the % the more capital is required per unit of premium and reserve risk. The table makes clear that Standard & Poor's require a much higher amount of capital to satisfy the 'AA' rating level capital than the European regulators demand for Solvency II's Minimum Capital Requirement. For example, the simplified and undiversified required capital for 100 million of proportional motor premium risk under Solvency II would be between 7.5 – 9.4 million, whereas under Standard & Poor's model it would be 14 million to achieve the 'AA' level. Even for the 'BBB' level, 10 million would be expected, and this is still more than the Solvency II requirement.

Even if the whole table as it appears in the delegated regulation is larger, this example reliably shows how Solvency II's capital factors are close to Standard & Poor's 'BBB' range, which we have said to be below the actual target of most (re)insurers. Is this enough to say that the European regulators' minimum is somewhat equivalent to an 'Investment Grade' threshold for the Insurance and Reinsurance Industry but that the realities of the market require a security level far in excess in order to operate and be competitive? It might not be, since the asset side shall be taken into account as well: there again, the capital charges commanded by rating agencies' models are higher than the regulatory requirements. Overall, a quick peek through the looking-glass of rating agencies should be enough to put in question the current statement that reinsurance companies are overcapitalized, whereas in reality they might argue that they are holding not a penny more than what they need to achieve the financial strength ratings which allow them to conduct their business in-line with their strategic objectives for the future.

Line of business	Solvency II ⁽⁶⁾		Standard & Poor's Insurance Capital Model v4.0 ⁽⁷⁾	
	Technical provisions factor % Proportional/ (Non-proportional)	Premium factor % Proportional/ (Non-proportional)	Reserve capital factor for 'AA' category [for BBB category]	Premium capital factor for 'AA' category [for BBB category]
Marine, aviation, transport	All at 10.3/(18.6)	14.0/(15.9)	23/(23) [16, (16)]	32, 46, 17/(48, 69, 26) [22, 32, 12/(33, 48, 18)]
Workers' compensation/ Occupational accident/Liability	10.7/(18.6)	7.5/(15.9)	22/(22) [15, (15)]	33/(51) [23, (35)]
Motor	7.5 - 8.5/(18.6)	7.5 - 9.4/(15.9)	16/(16) [11, (11)]	14/(22) [10/(15)]

Conclusion

It is not as simple any more to only consider the absolute amounts of reinsurance market premiums and capital to determine which direction reinsurance prices should be going. The constraints these companies are operating under might have become very complex since the strengthening of regulation in the EU and Switzerland and the increased scrutiny and interaction dynamics with rating agencies and strategic objectives of the firms. In view of the above-200% level of regulatory capital which appears standard among global and local top (re)insurers, it would be interesting to understand the determinants of *actual* capital levels. We suggest the rating agencies models may play a role, but a more systematic inquiry is required to ascertain how much they contribute to the status quo.

(6) Delegated Regulation 2015/35 Article 250(1)(d) and Annex XIX.

(7) <https://www.spglobal.com/ratings/en/products-benefits/products/financial-services-credit-tools>