For professional investors only

AEGON Asset Management

Symmetric adjustment of the equity capital charge under Solvency II – Analysis and forecast for 2022

April 2022

David van Bragt
Senior Investment Solutions Consultant

Gerard Moerman
Head of Fiduciary Services & Investment Solutions

Executive summary

The Solvency II capital charge has become an important aspect in portfolio construction and asset allocation for insurance companies, next to the traditional trade-off between risk and return. For most assets, the capital charge is fixed and known upfront. However, for equities a capital charge with a variable component – the symmetric adjustment – is used. We discuss the current mechanism and possible changes in the Solvency II review. We also make a projection for the remainder of 2022 and find that the symmetric adjustment remains in slightly positive territory for the rest of 2022 in case of positive equity returns. In a negative equity scenario the symmetric adjustment is expected to become negative at the end of this year, however.

Introduction

Solvency II came into effect on 1 January 2016 and is the regulatory risk framework for European insurance companies. Solvency II consists of three pillars: quantitative, qualitative (governance) and reporting. Pillar I evaluates the market and insurance risks by imposing an appropriate capital charge.[1] The required capital depends on the composition of the insurer's assets and liabilities. Typically a stress scenario corresponding to a theoretical annual probability of 0.5% (i.e., once every 200 years) is applicable. The equity risk module presents one of the highest shocks with the precise level depending on the evolution of equity markets in the past three years.

Capital charge for equity under Solvency II

The equity risk module does not use a fixed stress scenario, in contrast with the other components of the market risk module. The base shock level is 39% for Type I equities and 49% for Type II equities. Type I equities consist of equities listed on regulated markets in countries which are members of the European Economic Area (EEA) or the Organization for Economic Cooperation and Development (OECD). Type II equities consist of equities listed on stock exchanges in countries which are not members of the EEA or the OECD, equities which are not listed, commodities and other alternative investments.[2,3]

The base shock level (so 39% or 49%) is then modified by at most plus or minus 10%-points, depending on the evolution of equity markets over the past three years. This modification is the symmetric adjustment of the equity capital charge.[4] The shock to be applied for equity risk thus lies between 29% and 49% for Type I equity and between 39% and 59% for Type II equity. This amplitude is very material, particularly considering that equity is already the most penalized risk module (i.e., has the largest shock). The symmetric adjustment aims to mitigate pro-cyclical market effects by making equity more expensive (in terms of required capital) in an equity bull market and vice versa.

---

[1] Capital requirements can be determined using a standard or internal model. We use the standard model in this article.
[2] See EC (2015, Articles 168 and 169).
[3] The downward shock for strategic equity participations (related undertakings) is fixed and equal to 22%, see EC (2015, Articles 169 and 171). A fixed downward shock of 22% also applies for Type I equities that are treated as long-term equity investments, see EC (2015, Article 171a).
[4] See EC (2015), Article 172.

Symmetric adjustment of equity capital charge

The symmetric adjustment (SA) was introduced into Directive 2009/138/EC by Article 106 (amended by Directive 2014/51/EU) and detailed into Commission Delegated Regulation 2015/35/EU by Article 172.[5]

It is described by the following formula:

$$SA = \left[\frac{1}{2}\left(\frac{CI - AI}{AI} - 8\%\right)\right]_{-10\%}^{+10\%}$$

with:

- AI = average value over 3 years of the global equity index[6]
- CI = current value of the global equity index

The SA thus increases when the current index value (CI) becomes larger compared to the average index value over the past three years (AI). Using this formula, we can search for the equity return where the symmetric adjustment would exactly be 0%. It turns out that the equity market would need to grow at a constant annual rate of +5.34% (excluding dividend payments) in order to reach a value of zero for the symmetric adjustment. To maintain the upper limit of 10%, equity markets would need to rise by at least 18.76% per year. They would need to fall by at least -8.01% per year to reach the lower limit of -10% for the symmetric adjustment.

The global equity index is specified in EIOPA (2015). This index should represent the average composition of European insurers' equity portfolios. The weights are determined by EIOPA and could possibly change in the future if these weights do not reflect the average equity exposure anymore. The following table presents the current global index composition.[7]

Table 1: Composition of the global equity index

Equity (price) index	Country	Weight
AEX	Netherlands	14%
CAC 40	France	14%
DAX	Germany	14%
FTSE All-Share Index	United Kingdom	14%
FTSE MIB Index	Italy	8%
IBEX 35	Spain	8%
Nikkei 225	Japan	2%
OMX Stockholm 30 Index	Sweden	8%
S&P 500	United States	8%
SMI	Switzerland	2%
WIG30	Poland	8%

Source: EIOPA (2015).

[5] See EU (2009), EU (2014) and EC (2015).
[6] Only working days are included in the averaging procedure. 'Working day' here means every day other than Saturdays and Sundays. Public holidays are thus considered to be working days, except when they fall on the weekend.
[7] See EIOPA (2015).

EIOPA indicates that price return indices should be used, i.e. the reinvestment of dividends should not be taken into account. The weights are divided into three categories: 14%, 8% and 2%. All relevant information about the symmetric adjustment is published each month on the website of EIOPA.[8]

EIOPA has reconsidered the above mechanism in their advice for the 2020 global review of the Solvency II framework.[9] This analysis shows that the recalibrated index weights differ significantly from the prescribed weights in Table 1. However, the impact of this is deemed to be relatively small due to the typically high correlation between different equity indices in stress scenarios. EIOPA is therefore of the view that the composition of the equity index for the symmetric adjustment does not need to be updated.

Historical analysis

The following graph shows the official level of the symmetric adjustment as published by EIOPA.

Long-term evolution of the symmetric equity adjustment

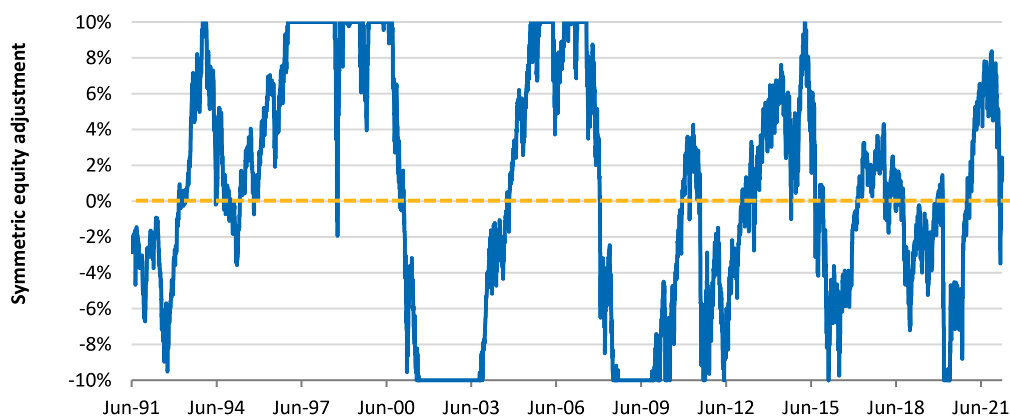

Figure 1: Long-term evolution of the symmetric adjustment. Source: EIOPA, as of 31 March 2022.

This adjustment is very volatile, as is shown in the graph. It can go from one extreme point to another in only one year, as was the case in 2000-2001 and in 2007-2008. In other words, the amount of capital that an investor needs to set aside for equity investments can vary significantly from one year to the next. In relative terms, the capital charge for equity can vary by almost 70% for equity type I (50% for equity type II) if going from the minimum to maximum capital charge.

Note that the +/-10% corridor of the symmetric adjustment is now under discussion in the current Solvency II review. In their advice for the 2020 global review of the Solvency II framework, EIOPA has advised to widen this corridor to +/-17%.[10] This proposal has been adopted as well by the European Commission in their legislative proposal.[11] It remains to be seen if the final legislation also contains this +/-17% corridor, given the ongoing discussions around this topic. But assuming that this proposal is adopted, such a wider corridor would allow for more variation of the equity capital charge and thus, potentially, improve the effectiveness of this countercyclical measure. In practice, it would mean that the capital change could fluctuate between 22% and 56% for Type I equity and between 32% and 66% for Type II equity.

Figure 2 shows the effect of widening the corridor to +/-17%, based on the same historical simulation as in Figure 1.

[8] See Section 2.10 of EIOPA (2019) and EIOPA's monthly update of the symmetric adjustment at their website: https://www.eiopa.europa.eu/tools-and-data/symmetric-adjustment-equity-capital-charge_en.
[9] See EIOPA (2020).
[10] See EIOPA (2019a) and EIOPA (2019b).
[11] See EC (2021).

Effect of different settings to the symmetric adjustment corridor

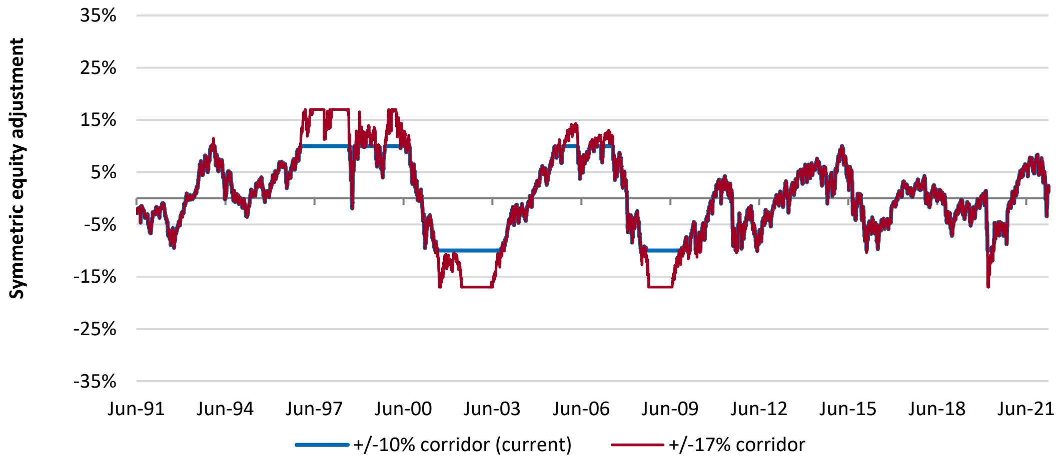

Figure 2: Evolution of the symmetric equity adjustment for different choices of the corridor. Source: EIOPA, Aegon Asset Management, as of 31 March 2022.

The current corridor of +/-10% (the blue line) is only reached during extreme bull or bear markets. The upper bandwidth of +10% is for example only reached during the dot.com equity bubble at the end of the 1990s and before the Global Financial Crisis (2008-2009). The equity downturn that followed after the dot.com bubble (in 2002-2003) also caused a breach of the lower (-10%) bandwidth. This happened again during the Global Financial Crisis (2008-2009) and briefly during the coronavirus crisis in the spring of 2020. Widening the corridor to +/-17% (the red line) will thus allow for a stronger anticyclical impulse, but only when extreme movements of the equity market occur.

Figure 3 shows the development of the current equity index (CI) and the three-year rolling average index (AI) (times a factor of 1.08) since 2011. The difference between these lines determines the sign of the symmetric adjustment. This sign has changed very frequently in the past years (76 times since the beginning of 2011), showing how quickly the symmetric adjustment can change over time.

Current and average equity indices over time

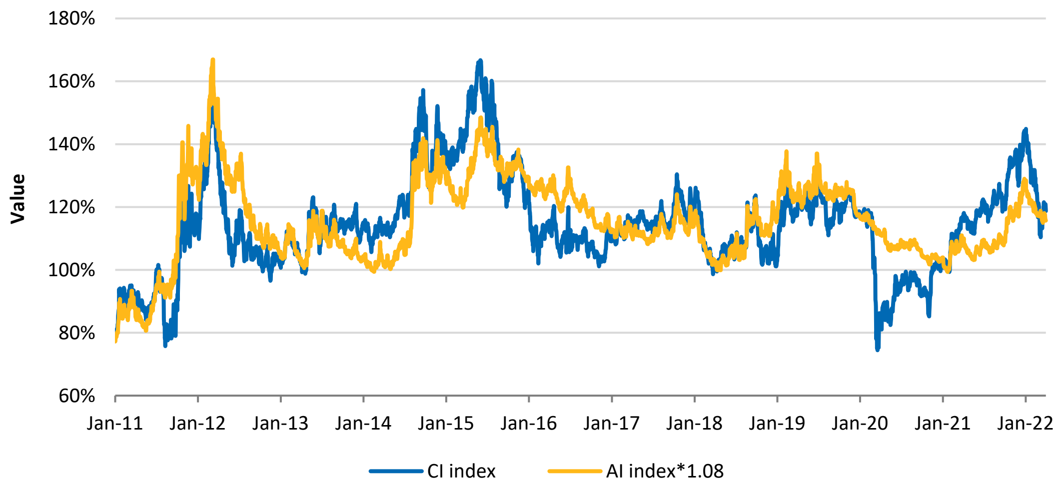

Figure 3: Historical development of current and 3-year average equity index. Source: Bloomberg; Aegon Asset Management, as of March 31, 2022.

Forecast for the remainder of 2022

Figure 4 shows a projection of the symmetric adjustment until the end of 2022. Our starting point is the situation at the end of March 2022, with a symmetric adjustment equal to 1.4%. The light blue line, with an annualized return of 4.25%, is based on the historical performance of the Euro Stoxx 50 index.[12] Given the large uncertainties in the current equity markets we also show results for several other return assumptions, ranging between -5% and +8% per year.

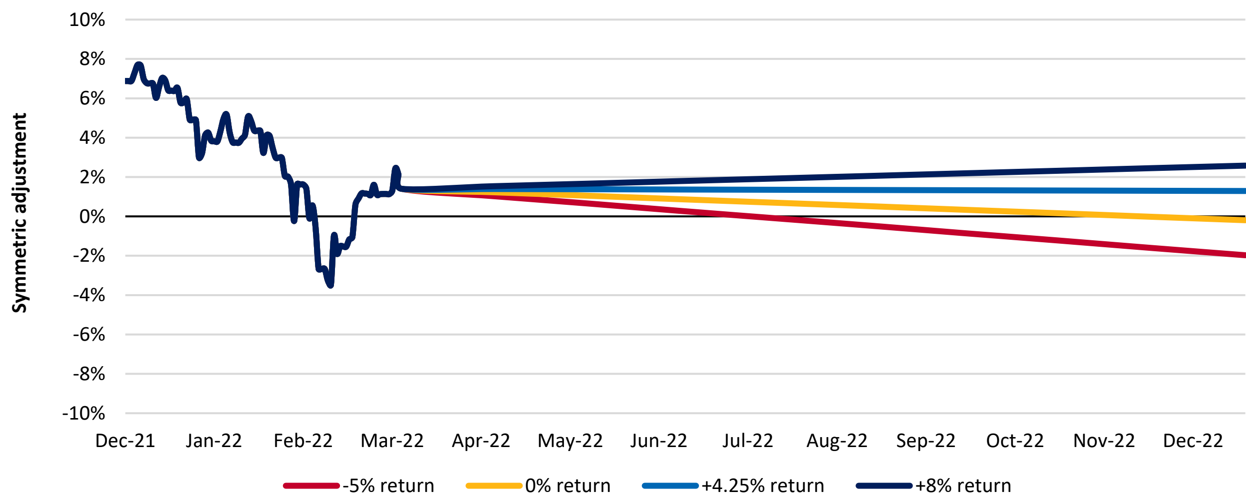

Figure 4: Projection for the remainder of 2022 of the symmetric adjustment. Source: Bloomberg; Aegon Asset Management, as of March 31, 2022.

Figure 4 shows that the symmetric adjustment remains in slightly positive territory for the rest of 2022 in case of positive equity returns. In a negative equity scenario the symmetric adjustment is, however, expected to become negative by the end of the year.

Conclusions

After strong fluctuations over the last years, the symmetric adjustment is now slightly positive (1.4% at the end of March 2022). This means that the capital charge for equities is currently above its base value under Solvency II. The symmetric adjustment can change rapidly, depending on the evolution of the underlying basket of equities. However, in our projection for the remainder of 2022 we see that the symmetric adjustment remains slightly positive, except when a negative equity scenario materializes in the rest of the year. The symmetric adjustment is also a discussion topic in the ongoing Solvency II review. The outcome of this review may be that the current corridor of +/-10% is widened to +/-17%. This would allow for larger swings of the symmetric adjustment, leading to a more volatile capital change for equities in extreme market situations.

[12] As measured since 1987; source: Bloomberg.

References

EIOPA (2015), “Final Report on Public Consultation No. 14/058 on the Implementing Technical Standards on the Equity Index for the Symmetric Adjustment of the Equity Capital Charge”, 30 June 2015. Available at https://register.eiopa.europa.eu/Publications/Reports/EIOPA-BoS-15-120_Final_report_ITS_Equity_dampener.pdf.

EIOPA (2019a), “Consultation Paper on the Opinion on the 2020 review of Solvency II”, 15 October 2019. Available at https://www.eiopa.europa.eu/sites/default/files/publications/consultations/eiopa-bos-19-465_cp_opinion_2020_review.pdf.

EIOPA (2019b), “Background Document on the Opinion on the 2020 Review of Solvency II – Impact Assessment”, 15 October 2019. Available at https://www.eiopa.europa.eu/sites/default/files/publications/consultations/eiopa-bos-19-466_background_ia.pdf.

EIOPA (2020), “Opinion on the 2020 Review of Solvency II”, 17 December 2020. Available at https://www.eiopa.europa.eu/sites/default/files/solvency_ii/eiopa-bos-20-749-opinion-2020-review-solvency-ii.pdf.

EU (2009), “Directive 2009/138/EC of the European Parliament and of the Council of 25 November 2009 on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)”, Current consolidated version as of 30 June 2021 is available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02009L0138-20210630.

EU (2014), “Directive 2014/51/EU of the European Parliament and of the Council of 16 April 2014 amending Directives 2003/71/EC and 2009/138/EC and Regulations (EC) No 1060/2009, (EU) No 1094/2010 and (EU) No 1095/2010 in respect of the powers of the European Supervisory Authority (European Insurance and Occupational Pensions Authority) and the European Supervisory Authority (European Securities and Markets Authority)”, *Official Journal of the European Union*, 22 May 2014. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0051.

EC (2015), “Commission Delegated Regulation (EU) 2015/35 of 10 October 2014 supplementing Directive 2009/138/EC of the European Parliament and of the Council on the taking-up and pursuit of the business of Insurance and Reinsurance (Solvency II)”. Current consolidated version as of 15 April 2021 is available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A02015R0035-20210415.

EC (2021), “Proposal for a Directive of the European Parliament and of the Council amending Directive 2009/138/EC as regards proportionality, quality of supervision, reporting, long-term guarantee measures, macro-prudential tools, sustainability risks, group and cross-border supervision”, 22 September 2021. Available at https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52021PC0581.

Important information

For Professional Clients only and not to be distributed to or relied upon by retail clients.

All investments contain risk and may lose value.

This document is for informational purposes only in connection with the marketing and advertising of products and services, and is not investment research, advice or a recommendation. It shall not constitute an offer to sell or the solicitation to buy any investment nor shall any offer of products or services be made to any person in any jurisdiction where unlawful or unauthorized. Any opinions, estimates, or forecasts expressed are the current views of the author(s) at the time of publication and are subject to change without notice. The research taken into account in this document may or may not have been used for or be consistent with all Aegon Asset Management investment strategies. References to securities, asset classes and financial markets are included for illustrative purposes only and should not be relied upon to assist or inform the making of any investment decisions. It has not been prepared in accordance with any legal requirements designed to promote the independence of investment research, and may have been acted upon by Aegon AM and Aegon AM staff for their own purposes.

Opinions and/or example trades/securities represent our understanding of markets both current and historical and are used to promote Aegon Asset Management's investment management capabilities: they are not investment recommendations, research or advice. Sources used are deemed reliable by Aegon Asset Management at the time of writing. Please note that this marketing is not prepared in accordance with legal requirements designed to promote the independence of investment research, and is not subject to any prohibition on dealing by Aegon Asset Management or its employees ahead of its publication.

All data is sourced to Aegon Asset Management unless otherwise stated. The document is accurate at the time of writing but is subject to change without notice. Data attributed to a third party (“3rd Party Data”) is proprietary to that third party and/or other suppliers (the “Data Owner”) and is used by Aegon Investment Management B.V. under licence. 3rd Party Data: (i) may not be copied or distributed; and (ii) is not warranted to be accurate, complete or timely. None of the Data Owner, Aegon Investment Management B.V. or any other person connected to, or from whom Aegon Investment Management B.V. sources, 3rd Party Data is liable for any losses or liabilities arising from use of 3rd Party Data.

Aegon Asset Management UK plc is authorized and regulated by the Financial Conduct Authority. Aegon Investment Management B.V. is registered with the Netherlands Authority for the Financial Markets as a licensed fund management company. On the basis of its fund management license Aegon Investment Management B.V. is also authorized to provide individual portfolio management and advisory services as its UK and EU distribution.

AdTrax: 4670069.1. Expiry Date: 14 April 2023.