

January 2020

## **BAI Position Paper on the 2020 review of Solvency II the need to promote a resilient financial system that best serves the real economy**

### **Introduction and Summary**

The Bundesverband Alternative Investments (**BAI**) welcomes the initiative of the European Commission and the European Insurance and Occupational Pensions Authority (EIOPA) to review Solvency II, and to promote a resilient financial system that best serves the real economy. Our responses to EIOPA's Consultation Paper on the opinion on the 2020 review of Solvency II (the 'Consultation Paper') specifically cover long-term and strategic equity investments (Chapter 2.9), spread risk (Chapter 5.2), and risk mitigation techniques (Chapter 5.8).

The recent report<sup>1</sup> of the **Next CMU High-Level Group promotes the reinforcement of the Solvency Capital Requirement (SCR) of 22% for long-term equity (LTE) investments**, as set in the Commission Delegated Regulation (EU) 2019/981<sup>2</sup>. One of the main reasons for this is that most non-financial corporations have little access to equity markets despite the proven benefit of this type of funding. This is particularly true for unlisted equity.

In addition, most of the research relevant for illiquid asset classes suggests that **long-term investments are generally subjected to lower volatility**. Our research (see attached research paper "Review of EIOPA's CP EIPA-BoS-19/465 Regarding LTE", prepared by SOF consultancy) shows that 10-year VaR is not larger than 12.4% for different liquid and illiquid indices as opposed to the maximum of 41.6% for 1-year VaR. Therefore, our view is that the currently applied charge of 22% is already a conservative risk charge for illiquid asset classes.

Overall, we believe that the (LTE) risk module can be further improved by following 5 principles:

1. reducing complexity;
2. removing technical inconsistencies;
3. considering data scarcity;
4. boosting inclusion; and
5. enhancing proportionality.

In particular, Article 171a (1) of the Delegated Regulation 2019/981 on (LTE) investments should be amended as follows (see the attached SOF research paper and Section 9 of the Annex for the proposed amendments):

- **Any type of ringfencing should be removed from the list of conditions**, as it matches poorly with many existing setups of insurance undertakings in the EU and could enhance financial instability during adverse situations. In that context, we suggest removing the quasi-ringfencing requirements set out in Art. 171a (b) – (d) of the Delegated Regulation 2019/981. Instead, we support the introduction of a provision that requires a more explicit demonstration of how the requirement of prudent risk management is fulfilled (e.g. through a separate LTE documentation including the assessment of model risks, as well as the assumptions and models used: see Section 9 in the Annex).

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<sup>1</sup> The report is available at: [https://nextcmu.eu/wp-content/uploads/2019/10/The-Next-CMU-HL\\_DO.pdf](https://nextcmu.eu/wp-content/uploads/2019/10/The-Next-CMU-HL_DO.pdf).

<sup>2</sup> The legislation can be found at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0981&from=EN>

- In order to appropriately reflect empirical results for alternative investments, the **alternative/illiquid LTE could be introduced as a separate module**. Correlation coefficients between alternative/illiquid LTE and the existing equity modules could be then derived from an empirical analysis based on a representative data set for alternative investments. A correlation of 75% to all other equity categories (type 1/type 2) could be considered to be a conservative approach given that different empirical studies estimated correlations of 10%-80% and this is consistent to the current correlation between type 1 and type 2 equity risks. In case this suggestion cannot be implemented, the current approach, where LTE is included in the correlation formula for type 1 and type 2 equities, seems to be a rather conservative framework.
- We support EIOPA's suggestion to consider diversification requirements in the LTE module based on the clear benefits of diversification. However, as diversification is a complex phenomenon that can also trigger counter-productive effects, **we agree with EIOPA's proposal not to formulate any quantitative limit**. Diversification should be assessed by each individual asset manager in the specific context of their portfolio. We suggest to explicitly emphasize that the **diversification can also be based on the fund level**. We thus support a change in the wording of the new criterion (see Section 9).
- As regards other provisions of the (LTE) risk module, the geographical scope should be global, the provision 171a (g) of the Delegated Regulation 2019/981 on "forced sale" should be removed or at least eased, and the pros and cons of the sanction regime should be carefully weighed, in particular under stressed conditions.

We also have specific comments and recommendations for the sections 5.2 and 5.8:

- In order to reinforce technical consistency and alleviate the incentivizing effects to invest in sovereign bonds (for which the SCR is zero), **a similar risk module to long-term equity can apply to long-term investments in corporate bonds and loans**;
- Finally, a more consistent treatment of risk mitigation techniques should be ensured, especially **in respect of dynamic hedging strategies**.

Our detailed responses to the EIOPA's Consultation Paper are provided in the annex from the next page and they are based on the attached **SOF research paper "Review of EIOPA's CP BoS-19/465 Regarding LTE"**.

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The Bundesverband Alternative Investments e.V. (BAI) is the advocacy association for the alternative investments industry in Germany. The BAI links German institutional investors and recognized providers of alternative investment products worldwide. Our goal is to enhance the environment for German professional investors when diversifying their financial assets into alternative investments, especially as many of those investors are responsible for safeguarding long-term retirement pensions. Another objective of the association is to increase public awareness and understanding of alternative asset classes and strategies. The BAI maintains an active dialogue with political institutions as well as supervisory bodies. Furthermore, the BAI cooperates with various national and international organizations and industry associations by advocating for legal reforms to design an attractive and competitive regulatory environment for the alternative investments industry in Germany. At present, BAI counts more than 210 members from all areas of the professional Alternative Investments industry. You can find information about BAI and its Members on our website [www.bvai.de](http://www.bvai.de).

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### 1. The economic justification of boosting investment in long-term equity

In most countries of the EU, banking credit is by far the main source of external funding for most non-financial firms. This especially applies to small and medium-sized enterprises (SMEs).<sup>3</sup> In a context of stricter capital rules, protracted low interest rates and subdued economic growth prospects, credit terms and conditions of euro area banks have tightened in 2019 for both SMEs and large companies (ECB, 2019).<sup>4</sup>

In parallel, many relevant studies and publications have highlighted that most SMEs have no or little access to capital market financing.<sup>5</sup> An empirical literature in economics has also demonstrated the existence of large untapped potential of firms fit for market-based finance.<sup>6</sup> Finally, studies show that equity funding can have a positive impact on the development of many SMEs using this funding channel.<sup>7</sup> **Therefore, poor access of most SMEs to equity markets is an impediment to the European economic growth.**

### 2. The key role of the insurance sector in boosting investment in long-term equity

In that context, there is a strong need to further promote investment into long-term equity (both listed and unlisted equities). Alongside pension funds, the insurance sector is traditionally one of the

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<sup>3</sup> Detailed figures by country can be found in the 2019 ECB SAFE Survey on SME access to finance (the main results can be downloaded at: <https://ec.europa.eu/docsroom/documents/38442>).

<sup>4</sup> See the findings of the ECB Bank lending survey for 2019, at [https://www.ecb.europa.eu/stats/ecb\\_surveys/bank\\_lending\\_survey/html/index.en.html](https://www.ecb.europa.eu/stats/ecb_surveys/bank_lending_survey/html/index.en.html).

<sup>5</sup> See footnote 2.

<sup>6</sup> See Bongini, P., A. Ferrando, E. Rossi and M. Rossolini (2017), "Suitable or non-suitable? An investigation of Eurozone SME access to market-based finance", CEPR Discussion Papers 12006 (<https://ideas.repec.org/p/cpr/ceprdp/12006.html>).

<sup>7</sup> Presentation of A. Ferrando, European Central Bank, on "CMU and SMEs Financing: What do firms tell us?" (Preliminary version of an empirical study using SAFE data), 2nd Annual Conference, CoPFIR, Brussels, 3 December 2019.

main investors into the long-term equity asset class. However, while Solvency II has strengthened the risk framework of insurers, it has also disincentivized investments in equity.<sup>8</sup>

According to the Next CMU High-Level Group, policymakers reviewing Solvency II should pay specific attention "to the Solvency 2 procyclicality unintended effect that pushes insurers to sell risky assets at crisis time, making equity the adjustment factor, and to other disincentives to invest in the real economy".<sup>9</sup> As such, the Next CMU High-Level Group highlights that "neutralizing insurers disincentives to invest in equity should be part of a balanced revision of Solvency 2 capital requirements not leading to an increase or decrease of the overall capital charge nor translating into more procyclicality... **This includes considering a 22% equity holding category defined in accordance with long-term liabilities or other long-term investment strategies (5-years) measured at portfolio level.**" BAI is fully supportive of the approach recommended by the Next CMU High-Level Group and would like to reemphasize the particular need to stimulate long-term investments in unlisted equity.

### **3. Concerns about the empirical results for long-time horizon and related interpretation (pages 231-236 of the EIOPA Consultation Paper)**

On pages 231-236 of its Consultation Paper, EIOPA developed a methodology to assess whether long-term investment in equity tends to be less risky than short-term investment. For this purpose, EIOPA used several MSCI indices for listed equities and computed historical VaR for the holding periods of up to 10 years under certain assumptions. Results obtained through the use of this methodology shows that "when considering a 10-year investment duration, there is no clear decreasing trend in the risk with regard to extending the time horizon" (see on page 233). EIOPA concludes that "based on these results, it is not possible to corroborate the assertion that investment for a longer duration justifies a lower 22% capital charge".

We welcome the effort made by EIOPA to refine the methodology created by the CEIOPS, notably by controlling specific factors such as the dividends. However, we have serious reservations regarding this new methodology and the interpretation of the obtained results. In particular, we reviewed EIOPA's empirical analysis from the methodological perspective, and identified the following questions and issues:

-It is unclear if the elimination of risk-free interest rates is consistent with the general standard formula approach where equity investments are only subject to the equity risk and not the interest rate risk. Our understanding is that under the current approach, there is an **implicit assumption that the equity risk reflects both the volatility of risk-free interest rates and the equity premia** (in excess of the risk-free interest rates), as opposed to debt investments where the underlying "debt risk" is divided into the spread risk and the interest rate risk.

-The selected liquid MSCI indices might not adequately reflect the illiquid specifics of alternative investment classes such as private equity or infrastructure and private markets in general, and in particular if those are structured in a well-diversified fund portfolio. It is not entirely clear why a more representative benchmark for illiquid data was not chosen although the research identified various data providers for alternative investments data such as CEPRES, PreQin, Cambridge Associates, EdHec Infra, Pevara and others.

-Calculation of VaR for an asset class is not a straightforward exercise as very different results can be achieved based on different assumptions, inputs and models. This can be evidenced from the very wide range (9% - 92%) of relevant outputs generated by EIOPA. In our view, the representativeness of outcomes might be considered highly questionable given such wide ranges. It should be noted that there is no right method as every method is only an attempt to describe

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<sup>8</sup> The report of the Next CMU High-Level Group (2019) can be found at: [https://nextcmu.eu/wp-content/uploads/2019/10/The-Next-CMU-HL\\_DO.pdf](https://nextcmu.eu/wp-content/uploads/2019/10/The-Next-CMU-HL_DO.pdf).

<sup>9</sup> On page 24 of the Report mentioned in Annex 8.

reality and predict the future. **Therefore, it might be helpful to perform several calculations under different assumptions, with different data and using different methods.**

-Overall, the results achieved by EIOPA through this methodology are not in line with most of the research relevant for illiquid asset classes. **Most of this research indeed suggests that the long-term investments are generally subjected to lower volatility and risk.** For example, in 2007, Lettau et al. published an article in the prestigious "Journal of Finance" to explain "Why is long-horizon less risky? A duration-based explanation of the value premium".<sup>10</sup> By using data from 1890 to 2002, the authors showed that "Value stocks, as short-horizon equity, vary more with fluctuations in cash flows, the fluctuations that investors fear the most. Growth stocks, as long-horizon equity, vary more with fluctuations in discount rates, which are independent of cash flows and which investors do not fear".

We reviewed other research papers and performed simplified analytical VaR calculations based on the data identified. We performed a calculation of 1-year and 10-year delta-normal VaR based on different sets of data and on the different methodology of estimating the annualized expected return and standard deviation values.<sup>11</sup> We also calculated Cornish-Fisher VaR where research papers provided skewness and kurtosis. In our approach, we either used the calculated VaR where such values were given and scaled them up or down to the relevant time horizon, or we used the parameters for the calculation of VaR. While heterogeneous inputs were used (USD vs EUR, infrastructure vs private equity vs listed equity) and we did not perform an in-depth analysis and validation of the data and methods used, the calculations might still provide a first general overview of the findings.

The results vary widely but are all in the interval [-66.89%; 12.41%]<sup>12</sup> for the holding period of 10 years and [3.55%; 41.60%] for the holding period of 1 year. **The values seem to be far below the values estimated by EIOPA. Besides, there is a clear indication that the VaR decreases if the holding period increases.** Our view is that the currently applied charge of 22% is already a conservative risk charge for illiquid asset classes.

#### **4. Key principles on which the LTE risk module should be built**

The long-term equity (LTE) risk module created in 2019 in the Solvency II Delegated Regulation 2019/981<sup>13</sup> is a step towards the right direction. However, as highlighted in the Consultation Paper, the legal framework for stimulating long-term investments in equity needs to be improved. We would like to emphasize **five core principles for that purpose.**

##### **A. Reduce complexity:**

The multiplication of distinct regimes has raised the complexity in the capital calculation, especially as some are increasingly overlapping each other. In order to reduce complexity, **we support the advice of EIOPA that no more new approvals to use the duration based equity risk sub module (DBER) should be granted** (Option 2 on page 238). As DBER and LTE risk modules target the same type of asset, such phasing out would allow a similar treatment

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<sup>10</sup> M. Lettau and J. Watcher (2007), "Why Is Long-Horizon Equity Less Risky? A Duration-Based Explanation of the Value Premium", *The Journal of Finance*, Vol. 62, No. 1 (Feb., 2007), pp. 55-92 (<https://onlinelibrary.wiley.com/doi/full/10.1111/j.1540-6261.2007.01201.x>).

<sup>11</sup> The research papers are:

EdHec (2017). "Private Infrastructure Broad Market Equity Indices".

EVCA (2012). "Calibration of risk and correlation in private equity".

IFA (2019). "Investment risk for long term investors: risk measurement approaches".

MSCI (2019). "MSCI World Index USD".

<sup>12</sup> Positive VaR values indicate a risk / a decline in market values while negative VaR values stand for an opportunity / a decrease in market values.

<sup>13</sup> The Solvency II Delegated Regulation 2019/981 can be found at: <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32019R0981&from=EN>.

of similar risks i.e. those related to long term equity exposures. As such, it reduces the unnecessary complexity of the prudential framework.

**B. Remove technical inconsistencies**

In order to improve the effectiveness of the different regimes, technical inconsistencies within and across regimes should be removed. For instance, as analyzed below, we support the development of a regime for long-term investments in corporate bonds and loans which is similar to the one for long-term investments in equity, with coherent adjustments.

**C. Consider data scarcity**

Typically, long-term equity implies fewer financial transactions and low liquidity. As such little data is generated on these particular assets. This data scarcity should be considered by regulators and supervisors when choosing parameters. A counter-example concerned the EIOPA's Second set of advice to the European Commission on specific items in the Solvency II Delegated Regulation (2018)<sup>14</sup>, and was highlighted by CEPRES (2018) in its analyses on unlisted equity, which showed that the data selected by EIOPA on the proposed variables was in most cases unavailable.<sup>15</sup>

**D. Boost inclusion**

The LTE risk module should be based on the principle of inclusion. The eligibility criteria should be designed in such a way that a significant share of market players are able to use it. Some detailed comments and recommendations are provided below on the existing eligibility criteria and the advice for change contained in the Consultation Paper. **A satisfactory level of inclusion should require the use of realistic and practical assumptions by authorities.** A counter-example concerned the beta model used by EIOPA in its Second set of advice to the European Commission (2018)<sup>16</sup>. By using a large private equity database, CEPRES (2018)<sup>17</sup> showed that the chosen model spread implied that almost no private equity portfolio could qualify for the privileged treatment.

**E. Enhance proportionality**

Given the diversity of market players in insurance, the principle of proportionality should apply in such a way that **the enforcement/design of the rules takes into consideration the nature, size and business model of the supervised entities.** For example, smaller insurers with a lower degree of sophistication could struggle more than larger insurers to cope with the compliance burden. Supervisors should integrate this dimension when applying Solvency rules.

**5. Diversification with other categories (response to Q2.11)**

The purpose of this section is to answer Q2.11 of the Consultation Paper.<sup>18</sup>

Our understanding of the statistical analysis of Section 2.9.7.2 in the Consultation Paper is that a significant negative correlation between long-term equity risk and other types of risk, in particular short-term equity risk, entails the existence of diversification effects between those assets. Conversely, a significant positive correlation implies an opposite effect to diversification. Combining two types of assets that are significantly and positively correlated would reinforce the exposure of the portfolio to similar risks and raise the overall risk of the portfolio. Lastly, in case of absence of correlation, the combination of the two assets has no impact on diversification. In line with the

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<sup>14</sup> The text of the Consultation can be found at: [https://eiopa.europa.eu/Publications/Consultations/EIOPA-18-075-EIOPA\\_Second\\_set\\_of\\_Advice\\_on\\_SII\\_DR\\_Review.pdf](https://eiopa.europa.eu/Publications/Consultations/EIOPA-18-075-EIOPA_Second_set_of_Advice_on_SII_DR_Review.pdf).

<sup>15</sup> CEPRES (2018), Methodological review of EIOPA's final advice regarding the Unlisted equity module.

<sup>16</sup> See footnote 15.

<sup>17</sup> See footnote 16.

<sup>18</sup> Q2.11 is as follows: "Considering the diversification of long-term equity risk with other risks: Do you have evidence to support any of the options set out in this section? If the answer is "Yes", please elaborate on it."

scientific community, we consider that a correlation that can be considered as significant stands above 0.55 in absolute terms.<sup>19</sup>

The findings of EIOPA reveal that, over a period from 04/2012 to 05/2019, long-term equity risk (based on the overlapping 10-year relative percentage rate for the MSCI World index) has no correlation with one-year equity risk and other short-term variables (interest rate risk, spread risk and currency risk). EIOPA emphasizes that this correlation might be biased, as only the long-term variable includes data from the 2008-09 financial crisis. In that context, EIOPA conducted similar analyses for the period from 04/2003 to 05/2009, and showed that one-year equity risk is positively and significantly correlated with long-term equity risk (at 0.54).<sup>20</sup>

We would like to highlight two main types shortcomings on the treatment of diversification with other categories and related options. The first one concerns the limitations in the empirical approach to assess correlation with other categories. The second one relates to **the treatment of the unlisted equity classes**.

#### *Main limitations in the methodology of the Section 2.9.7.2*

Firstly, given the multiplicity of driving factors behind complex variables such as equity risk, simple correlations between two variables often provide findings with little relevance. EIOPA mentions the fact that this analysis can provide “first insight”, which should not be sufficient to justify the adoption of a restrictive eligibility criterion such as a diversification one. Ideally, provided that a sufficient amount of data is available, a robust dynamic empirical model that can assess the degree of interactions between all the analyzed variables<sup>21</sup> could help controlling for many factors, thereby providing a much more accurate picture of the different diversification effects at stake.

Secondly, correlations published in the Consultation Paper are likely to be significantly biased given the high distortions usually observed during the financial crisis of 2008–09. There are two main ways to correct for this problem: either data from the financial crisis is removed, or the sample is observed on a sufficiently long period to limit the impact of the distortion. As the published correlations concern only the period between 04/2003 and 05/2009, and between 04/2012 and 05/2019 (the later includes data from the 2008-09 financial crisis for the long-term variable), this should not be sufficient to limit markedly the impact of the outliers observed in 2008-09.

The completely different results found for the two periods tend to reinforce the idea of different dynamics from one period to another. This lack of consistency from one period to another would seriously limit the interest of findings obtained for the full period 04/2003-05/2019. Therefore, in the context of an empirical model integrating different factors (in a static or dynamic way), specific parameters would be needed to try to correct for this lack of consistency over time and reinforce the robustness of the findings.

#### *Treatment of unlisted equity*

One of the main disadvantages of unlisted equity concerns its lower liquidity, which generates little data in comparison to listed equity. The MSCI World index, which is used in the Consultation Paper, does not include unlisted equity. **We therefore advise EIOPA to conduct complementary analyses that cover unlisted equity**, for example by using data from CEPRES<sup>22</sup>.

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<sup>19</sup> A correlation can be considered as significant when its value stands above 55%, as shown by Moore, D. S., W. I. Notz and M. A. Flinger (2013), “The basic practice of statistics (6th ed.)”, New York, NY: W. H. Freeman and Company. Page (138).

<sup>20</sup> Analysing correlations that are significantly below 0.55 in absolute terms offers little interest.

<sup>21</sup> Vector auto-regressive models (VAR) are typically used to assess complex financial phenomena for which much data can be collected. One advantage of these models is that different parameters can be used to greatly reinforce the robustness of their findings.

<sup>22</sup> In 2018, the CEPRES database contained data on 12,306 companies and covered 5 fields: EBITDA, Revenue, Total Debt, Net Profit and Equity.

The research that we have identified on the topic indicates that unlisted equity classes that are particularly eligible for the LTE module (infrastructure equity, private equity) may experience correlations between 10% and 80% to public equities derived from specific data sets for those asset classes.<sup>23</sup> The current treatment in type 1 and type 2 risk modules might already overestimate those correlations. For instance, if illiquid private equity funds are classified as type 1 AIF, they would have no diversification benefits with other type 1 equities. Therefore, the current treatment can be already considered to be rather conservative for illiquid/unlisted LTE. Appropriate treatment would additionally account for the diversification benefits.

### *Suggestion*

In order to appropriately reflect empirical results for alternative investments, the alternative/illiquid LTE could be introduced as a separate module. Correlation coefficients between alternative/illiquid LTE and the existing equity modules could be then derived from an empirical analysis based on a representative data set for alternative investments. A correlation of 0.75 to all other equity categories (type 1/type 2) could be considered to be a conservative approach given that different empirical studies estimated correlations of 10%-80% and this is consistent to the current correlation between type 1 and type 2 equity risks.

In case this suggestion cannot be implemented, the current approach, where LTE is included in the correlation formula for type 1 and type 2 equities, seems to be a rather conservative framework.

## **6. Consideration of liabilities (response to Q2.12):**

The purpose of this section is to answer Q2.12 of the Consultation Paper.

Key aspects of the asset-liability management (“ALM”) requirements defined on the level of insurance companies for LTE are included in the provisions a, b, c, d, e, g and h of the Article 171a of the Delegated Regulation 2019/981. The main perception of most of the industry is that the provisions a, b, c, d, e, g and h are unnecessarily restrictive. The key principles analyzed above should be better followed. A large number of publications conclude that the LTE ALM requirements are<sup>24</sup>:

- Operationally burdensome;
- Only applicable in certain EU jurisdictions where the “quasi-ringfencing” requirement can be fulfilled due to their typical national balance sheet structures
- Not the optimal way to balance the risk-based prudential approach and the incentive to invest in long-term equity investments.

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<sup>23</sup> The identified publications are:

- BAI's answer to the “Template on Call for Evidence Request by the European Commission to EIOPA for Technical Advice on the treatment of unlisted equity and debt without an ECAI rat-ing in the standard formula” (2017)
- Capital Dynamics (2017). “Diversify your portfolio with private equity” white paper as of 05/2017
- JP Morgan (2019). “Guide to alternatives 4Q 2019”
- UBS (2018). “The infrastructure equity cycle. Infrastructure white paper series. Part 3”.

<sup>24</sup> See for example:

- Institut des actuaires (France) and PwC (2018). “Report on a new cate-gory of equities (LTEIP) under Solvency 2 Standard Formula”;
- Insurance Europe (2018). “Response to consultation on EIOPA's second set of advice to EC on Solvency II review”;
- Tokarevich, Dornseifer (2019). “Alternative Investments unter der neuen Solvency II-Verordnung” in be.in.Value as of 25/03/2019;
- Boxberger, Steinmüller, Tokarevich (2019). “Investorenaufsichtsrecht 2019 – Private Equity unter Solvency II” in Private Equity Magazine as of 19/9/2019.
- Ehlscheid and Wolf (2019), Review of the Solvency II Standard Formula
- DWS (2019). “Long-term Equity Investments under Solvency II”. DWS Research Institute.



One key reason is that **(quasi-)ringfencing is not an usual practice in some EU countries, notably Germany. As such, in order to benefit from the LTE risk module, the readjustments of processes and portfolios would be too costly to be profitable for many insurers.** Other counter-productive effects could be triggered by the separation from the other activities of the undertaking. Typically, the existence of “trapped pools of resources” (capital and liquidity)<sup>25</sup> contributes to reinforce the fragmentation of the financial system, which **reduces the responsiveness of insurers in case of financial stress.** For example, firms have fewer possibilities to mobilize liquidity in such a model, which heightens liquidity risk and diminishes financial stability.

Furthermore, by separating assets, there is a possibility that concentration will be higher in distinct portfolios than in one overall portfolio. For certain firms, there could be an incentive to invest more than initially planned or than what is reasonable, in order to reach sufficient diversification in that specific portfolio.

Therefore, provisions for ALM need to be improved. There is a great variety of eligible ALM methods. The selection and the implementation of the optimum and company-specific ALM framework is a core process of any insurance organization. ALM is a complex and multifaceted area which goes far beyond the ringfencing requirement. Effective decision-making processes based on their ALM frameworks were demonstrated by the OECD Large Insurer Survey<sup>26</sup> where the advantages and disadvantages of moving into long-term assets were carefully considered in the asset allocation processes. The individual and company-specific ALM framework is, therefore, an essential trigger for the investment decision process.

#### *Suggestion*

**In that context, we suggest removing the quasi-ringfencing requirements set out in Art. 171a (b) – (d).** The requirements with regard to the prudent risk management and ALM are already reflected in the ALM and risk management requirements of Art. 171a (e)-(h) as well as general ALM and risk management requirements of Solvency II, allowing for the individual assessments of the eligibility to the individual ALM framework.

**Instead, an additional provision could be introduced requiring a more explicit and transparent demonstration of how the requirement is fulfilled,** e.g. via a separate LTE documentation including relevant assumptions and methods used as well as the assessment of model risks. An example of such a requirement could be introduced instead of Art. 171a (b) in the way described in the Section 9.

Finally, the eligibility criterion 171a (1) g states that the insurer “*is able to avoid forced sales of each equity investments within the sub-set for at least 10 years*”. The provision relates this forced sale to different situations: solvency and liquidity position, strategies, processes and reporting procedures with respect to asset-liability management.

**We doubt the soundness of this provision as the scenario of forced sales is little likely for LTE investments.** Different factors can explain this: long-term character of the asset itself, typical closed-ended fund structure which does not allow redemptions for the life cycle of the fund and the fact that many insurers will typically liquidate liquid assets first in case of financial stress.

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<sup>25</sup> For the risks of ringfencing for banks, see for example Ernst & Young (2019), “Ring-fencing cross-border banks: an effective supervisory response?” (available at <https://www.ey.com/Publication/vwLUAssets/ey-ring-fencing-cross-border-banks-an-effective-supervisory-response/%24File/ey-ring-fencing-cross-border-banks-an-effective-supervisory-response.pdf>).

<sup>26</sup> Some analyses of the results of the OECD Large insurer survey can be found in H. Gründl, M.(Ivy) Dong and J. Gal (2016), “The evolution of insurer portfolio investment strategies for long-term investing”, OECD Journal: Financial Market Trends, Vol. 2016 Issue 1 (available at: <http://www.oecd.org/investment/Evolution-insurer-strategies-long-term-investing.pdf>).

As such,<sup>27</sup> Table 26 of EIOPA's "Report on insurers' asset and liability management in relation to the illiquidity of their liabilities" (EIOPA-BoS-19-593) showed that average holding periods for the asset class undertaking spotted as held to maturity/long-term asset are 9-14 years. In our view, this observation provides additional evidence for the irrelevance of fire sales for long-term assets. The requirement of Art. 171a (g) to demonstrate the ability to avoid forced sales might be therefore unnecessarily burdensome given the average holding periods estimated by EIOPA.

We are also concerned that the provision "*to ensure, on an ongoing basis and under stressed conditions, that it is able to avoid forced sales of each equity investments within the sub-set for at least 10 years*" could add unnecessary burden to many insurers. **As such, authorities should ensure that this provision is practicable for the industry.** For example, 10 years might be very long, especially if related to "each equity investment". There should be amendments/facilitation for closed-ended diversified funds, etc.

## 7. Diversification within the LTE Portfolio

Using the findings of the empirical studies developed in the Section 2.9.7.2, EIOPA concluded that there is no diversification effect between short-term equity risk and long-term equity risk, as well as between long-term equity risk and other short-term variables. Notably based on these findings, EIOPA advised that the LTE risk module with a Solvency capital requirement (SCR) of 22% applies only to diversified LTE portfolio and advises to add the following text to Article 171a (1) in the Delegated Regulation 2019/981:

2.960 *"i) the sub-set of equity investments shall be properly diversified in such a way as to avoid excessive reliance on any particular issuer or group of undertakings and excessive accumulation of risk in the portfolio as a whole."*

EIOPA considers that this new eligibility criterion could reinforce the LTE risk module, as only well-diversified LTE portfolio, which entails lower risk, could benefit from a lower capital requirement. A large literature supports the benefits of diversification. The identified literature suggests that a significant diversification and risk reduction can be reached with 5 – 30 target funds based on the different data and assumptions used.<sup>28</sup>

The only disadvantage identified by EIOPA of such a new criterion is that "*possibly a smaller part of equity investments becomes eligible for the lower capital requirement, although most insurance undertakings already invest in a diversified way in equities*". Other disadvantages can be emphasized. This criterion could be redundant in some cases, as a type 1 AIF could already be sufficient in order to fulfil the diversification requirement, which is usually an obligatory requirement based on the national regulations in the country of the AIF domicile.

Over-diversification asked by supervisors can also have a negative impact on financial stability. Some insurers investing in long-term equity could be also encouraged to develop larger long-term equity portfolios than optimal, only for compliance purposes. EIOPA seems to agree with the idea<sup>29</sup> that an LTE portfolio that is not properly diversified includes a single, just a few, or, only similar equities. Insurers that do not have LTE portfolios with sufficient diversification could invest in other types of long-term equities solely because of the diversification criterion. Therefore, this criterion could somewhat damage financial stability, especially when insurers in difficulties expand their portfolio, while they should reduce it.

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<sup>27</sup> The publication of EIOPA (2019) can be found at: [https://eiopa.europa.eu/Publications/Reports/EIOPA\\_Report\\_on\\_insurers\\_asset\\_and\\_liability\\_management\\_Dec2019.pdf](https://eiopa.europa.eu/Publications/Reports/EIOPA_Report_on_insurers_asset_and_liability_management_Dec2019.pdf).

<sup>28</sup> See for example:

BVCA and PwC (2003). "A Guide for Private Equity".

Gottschalg et al. (2017). "Private equity portfolios: why size matters" in FTSE Global Markets as of 31/10/2017.

Weidig, Kemmerer, Born (2004). "The risk profile of private equity fund-of-funds". Available at SSRN: <http://ssrn.com/abstract=540524>.

<sup>29</sup> See Section 2.8.9.7 on page 248 of the Consultation.

To conclude, **we support EIOPA's suggestion to consider diversification requirements in the LTE module based on the clear diversification benefits.** However, as diversification is a complex phenomenon that can also spark counter-productive effects, **we agree with EIOPA's proposal where no exact quantitative limit is formulated** since this is to be assessed by each individual asset manager in the specific context of their portfolio. We suggest to explicitly emphasize that **the diversification can also be based on the fund level** and therefore suggest to change the wording of the criterion as shown in the Section 9.

## 8. Improvement of other provisions of the LTE risk module

We support the idea that the LTE risk module could be strengthened by improving some other provisions of the Delegated Regulation 2019/981. In relation to the eligibility criteria, EIOPA highlights in the Consultation Paper that "*within the EEA, sufficient possibilities for diversification exist*" for equities (see on page 254). This could justify the provisions 171a (1) f of the Delegated Regulation which states that "*only equities that are listed in the EEA or unlisted equities of companies that have their head offices within the EEA*" qualify for a 22% SCR. Nevertheless, we believe that it would make the LTE risk module more inclusive and more effective if **all equities could qualify, no matter their geographic origin.** The key criterion should concern the quality of the equity itself above all. Especially the US market is not just extremely large, but also very mature and therefore offers tremendous investment and diversification opportunities.

Under certain conditions the article 171.3, which forbids insurers to apply the SCR of 22% to its portfolio of long-term equity investments for a period of three years in case the eligibility criteria listed in 171a (1) are not respected, can spark counter-productive effects. For instance, in case of significant financial stress such as a large stock market crash, the insurer might be forced to restructure its portfolio, notably by selling part of its positions in long-term equities. Should a sanction of three years apply, this would mean that insurers would have to increase their capital, as the SCR of its long-term equity portfolio would suddenly rise (to 39% for type 1 equity or 49% for type 2 equity). In that context, insurers that originally had to sell only part of their LTE investments would eventually be greatly spurred to sell all these positions, which might heighten fire sales in equity markets and reinforce financial instability even more. **We encourage authorities to consider these exceptional situations when assessing what sanction regime fits best.**

## 9. Proposed amendments in the Article 171a of the Delegated Regulation 2019/981

"Article 171a

### ***Long-term equity investments***

1. *For the purpose of this Regulation, a sub-set of equity investments may be treated as long-term equity investments if the insurance or reinsurance undertaking demonstrates, to the satisfaction of the supervisory authority, that all of the following conditions are met:*

*(a) the sub-set of equity investments as well as the holding period of each equity investment within the sub-set are clearly identified;*

~~*(b) the sub-set of equity investment is included within a portfolio of assets which is assigned to cover the best estimate of a portfolio of insurance or reinsurance obligations corresponding to one or several clearly identified businesses, and the undertaking maintains that assignment over the lifetime of the obligations;*~~

~~*(c) the portfolio of insurance or reinsurance obligations, and the assigned portfolio of assets referred to in point (b) are identified, managed and organised separately from the other activities of the undertaking, and the assigned portfolio of assets cannot be used to cover losses arising from other activities of the undertaking;*~~

~~(d) the technical provisions within the portfolio of insurance or reinsurance obligations referred to in point (b) only represent a part of the total technical provisions of the insurance or reinsurance undertaking;~~

(b) the undertaking provides a separate documentation for the determination of the equities eligible for the LTE module including all assumptions, stress tests and calculations as well as the rationale of how LTE match the liabilities with regard to characteristics such as the timing, currency and the value of future cash flows under expected and stressed circumstances;

~~(e) (c) the average holding period of equity investments in the sub-set exceeds 5 years, or where the average holding period of the sub-set is lower than 5 years, the insurance or reinsurance undertaking does not sell any equity investments within the sub-set until the average holding period exceeds 5 years;~~

~~[(f)-(d) the sub-set of equity investments consists only of equities that are listed in the EEA or of unlisted equities of companies that have their head offices in countries that are members of the EEA;] (comment: should be deleted as well)~~

~~(g) (e) the solvency and liquidity position of the insurance or reinsurance undertaking, as well as its strategies, processes and reporting procedures with respect to asset liability management, are such as to ensure, on an ongoing basis and under stressed conditions, that it is able to avoid forced sales of each equity investments within the sub-set for at least 10 years;~~

~~(h) (f) the risk management, asset-liability management and investment policies of the insurance or reinsurance undertaking reflects the under-taking's intention to hold the sub-set of equity investments for a period that is compatible with the requirement of point (e) (c) and its ability to meet the requirement of point;~~

g) the sub-set of equity investments shall be properly diversified in such a way as to avoid excessive reliance on any particular issuer or group of undertakings and excessive accumulation of risk in the portfolio as a whole. Where LTE are held within collective investment undertakings or within alternative investment funds referred to in points (a) to (d) of Article 168(6) and in accordance with Article 171a (2), such investments are considered to be sufficiently diversified and don't have to comply with the requirement in the first sentence.

2. Where equities are held within collective investment undertakings or within alternative investment funds referred to in points (a) to (d) of Article 168(6), the conditions set out in paragraph 1 of this Article may be assessed at the level of the funds and not of the underlying assets held within those funds.

3. Insurance or reinsurance undertakings that treat a sub-set of equity investments as long-term equity investments in accordance with para-graph 1 shall not revert back to an approach that does not include long-term equity investments. Where an insurance or reinsurance undertaking that treats a sub-set of equity investments as long-term equity investments is no longer able to comply with the conditions set out in para-graph 1, it shall immediately inform the supervisory authority and shall cease to apply Article 169(1)(b), (2)(b), (3)(b) and (4)(b) to any of its equity investments till it comply again with the conditions set in paragraph 1. ~~for a period of 36 months.~~"

## **10. More incentives for long-term investments in corporate bonds and loans (Chapter 5.2 in the Consultation Paper)**

There is evidence of the non-linearity of spread risk across duration, with long-term and illiquid fixed income assets less impacted by short-term changes in credit spreads. In the Consultation Paper, EIOPA notably shows that "the current Solvency II calibrations are lower than the calibration

recommended by EIOPA with the difference decreasing as the duration increases". This finding can be found on page 360 of the Consultation and is based on detailed statistics.

Our interpretation of this result is that the Solvency calibration for long-term bonds and loans is more adapted than for short term ones. This differentiation could justify the existence of a differentiated treatment of long-term corporate bonds and loans in Solvency II, through a lower SCR.

**The main limitation of the current rules resides in the differentiated treatment between, on one hand, sovereign bonds, and, on the other hand, long-term corporate bonds and loans.** In its current form, Solvency II disincentivizes investment in the latter to the benefit of the former. EIOPA emphasizes the lower attractiveness of corporate bonds in comparison with sovereign bonds. on page 359 of its Consultation. The main reason is that contrary to corporate bonds and loans, sovereign bonds benefit from a zero capital charge for all EEA sovereign bonds, despite the fact that many EU sovereign bonds are much more risky than a large share of corporate bonds and loans. As highlighted by EIOPA, "*while the market valuation reflects the risks of riskier sovereigns, the volatility adjustment (VA) dampens this effect. Overall, sovereign spread risks are therefore only partially reflected.*"

Although they have converged in recent years, 10 year yield spreads of euro area governments' bonds over German sovereign bonds remained relatively fragmented in mid-December 2019 (see Table 1). A first group of economies recorded very low spreads (below 30 basis points): Austria, Netherlands, Finland, Belgium and France (no data has been identified for Luxembourg). On the other hand, countries such as Greece and Italy registered spreads above 150 basis points.

The risk of the long-term debt of governments can be compared with that of large corporations as a result of rating agencies' assessments (see Table 3 for the rating scale). Considering the euro area economies and 20 largest firms (see Table 2 below), Moody's revealed that at-end 2019, the highest rating possible (called "Prime") was given to 6 governments (Germany, Austria, Netherlands, Finland, Belgium and Luxembourg) and no corporation. The "High grade" was obtained by 1 government and 4 firms. 3 governments and 8 firms were rated at the "Upper medium grade". The corresponding figures for "Lower medium grade" were 3 and 6, respectively. Interestingly, while 1 firm had a "Non-investment grade, speculative", 2 governments obtained this poor rating and 2 others received an even lower grade, qualified as "Highly speculative".

Overall, it seems that the average quality of the rating for euro area governments and 20 largest firms is broadly similar. As such, based on the risks assessed by rating agencies, **the differentiated treatment of corporate and sovereign long-term debt is not justified.**

**Table 1.** Assessment of the risks of long-term sovereign bonds in the euro area (as of mid-December 2019)

	10 year yield spread over German sovereign bonds (in basis points)	Rating of the long-term sovereign debt		10 year yield spread over German sovereign bonds (in basis points)	10 year yield spread over German sovereign bonds (in basis points)	Rating of the long-term sovereign debt	
		Moody's	Standard & Poor's			Moody's	Standard & Poor's
Germany	0	AAA	AAA	Malta	66.9	A3	A-
Austria	21.7	AAA	AA+	Slovenia	46.7	Baa2	A+
Netherlands	21.7	AAA	AAA	Spain	67.8	Baa3	BBB+
Finland	23.1	AAA	AA+	Italy	155	Baa3	BBB-
Belgium	27.0	AAA	AA	Ireland	30.9	Ba1	A+
Luxembourg		AAA	AAA	Portugal	63.4	Ba1	BB+
France	29.8	Aa2	AA	Cyprus		B2	BB+
Estonia		A1	AA-	Greece	160.5	B3	B+
Slovakia	34.1	A2	A+	Latvia	84.1		A-

Source: World government bonds, Moody's and Standard & Poor's

**Table 2.** Rating of the long-term debt of the 20 largest companies in the euro area (based on the latest annual reports available)

	Moody's	S&P		Moody's	S&P
Allianz	Aa3	AA	Engie	A3	A-
Total SA	Aa3	A+	Volkswagen	A3	BBB+
Crédit Agricole	Aa3	A+	ING	Baa1	A-
BNP Paribas	Aa3	A+	Eni	Baa1	A-
Siemens	A1	A+	Carrefour	Baa1	BBB
Société Générale	A1	A	Enel	Baa2	BBB+
Daimler	A2	A	E.ON	Baa2	BBB
AXA	A2	A	Generali	Baa2	
BASF	A2	A	FCA Group	Ba2	BB+
Banco Santander	A2	A	Exor		BBB+

Source: Latest annual reports of the corresponding company

NB: most annual reports concern 2018 and have been published during 2019. Since then, some changes in the rating is possible for some companies.

**Table 3.** Rating scale of rating agencies

	Moody's	Standard & Poor's
Prime	Aaa	AAA
High grade	Aa1; Aa2; Aa3	AA+; AA; AA-
Upper medium grade	A1; A2; A3	A+; A; A-
Lower medium grade	Baa1; Baa2; Baa3	BBB+; BBB; BBB-
Non-investment grade, speculative	Ba1; Ba2; Ba3	BB+; BB; BB-
Highly speculative	B1; B2; B3	B+; B; B-
High risk	Caa1	CCC+
Ultra speculative	Caa2	CCC
Default	Caa3; Ca; C	CCC-; C/CI/R; SD; D

Source: Moody's and Standard & Poor's

Against that background, **we support the Option 2 developed on page 361, which recommends the creation of a specific regime for long-term investments in corporate bonds and loans in line with the one for long-term equity.** As discussed by EIOPA, we advocate the use of the same eligibility criteria as for long-term equity, with the necessary adjustments. This approach ensures a respect of the above principle "B. Remove technical inconsistencies" between the treatment of long-term corporate debt and equity. In the meantime, it can alleviate the effect resulting from the arbitrary mechanism that incentivizes insurers to invest in sovereign bonds to the detriment of corporate bonds. In addition, as emphasized by EIOPA, this option 2 can strengthen the CMU and the real economy, *"by encouraging the allocation to bonds and loans of companies in the EEA"*.

The establishment of a regime that allows the long-term investments in corporate bonds and loans to benefit from a lower SCR should follow all the principles analyzed above in Section 3 of this response. In addition, as advocated in our comment for 2.9, we reemphasize that **any sort of ringfencing for that specific portfolio would be inadequate.** Furthermore, the geographical scope should be global, the provision on "forced sales" should be significantly improved and the choice of the sanction regime should be well grounded.

Finally, in order to calibrate *"the lower spread shocks for the sub-set of investments in bonds and loans"*, EIOPA proposes to *"take inspiration from the reduced risk charges for bonds and loans included in a portfolio subject to the matching adjustment"* (see on page 362). As such, investments in bonds and loans that dispose of an "investment grade" credit assessment could benefit from a reduction of the standard stresses. While this approach might favour investment in assets of higher

quality, it has little applicability in several EU Member States, including Germany. Therefore, we advise not to establish this quantitative Matching Adjustment as a constraining rule.

## **11. Consistent treatment of risk mitigation techniques (Chapter 5.8 in the Consultation Paper)**

We agree with the objective of including “effective” risk mitigation techniques (RMTs) in the calculation of the SCR. By “effective”, it is meant a proven ability to actually reduce financial risk. For that purpose, we would expect authorities to follow again the five key principles analyzed in Section 3 of this paper: “reduce complexity”, “remove technical inconsistencies”, “consider data scarcity” when relevant, “boost inclusion” and “enhance proportionality”. In order to improve the current legislative framework, authorities should reduce its complexity by maintaining and improving a “core rules approach” rather than developing overly-prescriptive rules. This core rules approach should ensure the removal of technical inconsistencies and a boost in the inclusion of effective RMTs.

Three types of consistency should be ensured. Firstly, core rules should ensure **consistent treatment across all RMTs**, for example when criteria and methods are established to determine “*the amount of risk reduction or risk transfer that may be recognized*” for these techniques. The clarification of the definition of the financial risk-mitigation techniques and of other financial instruments that may be used to reduce SCR<sup>30</sup>, and of the way basis risk should be assessed should also help in that respect. Secondly, as emphasized by EIOPA in Chapter 5.8 in the Consultation Paper, **consistency should be preserved in the treatment between the standard formula and internal models**. Thirdly, and this might be the most challenging objective, core rules should be flexible enough to ensure **consistent treatment of RMTs over time**. The purpose would be that regulatory changes are not invariably needed every time new RMTs are created. As described in the Consultation Paper, EIOPA is expected to “*assess the extent to which amendments to the legislative framework are necessary to incorporate new methods in the SCR standard formula*”. Given that RMTs are evolving constantly and new techniques are developed on a regular basis, the choice of developing prescriptive rules for each new RMT could be highly burdensome for authorities and the industry alike, especially if the process results in a significant change of the existing legislation. Given that a few years are generally necessary to adopt new rules, this process could end up being highly unproductive.

A typical case of what could be perceived as inconsistent rules concerns the treatment of dynamic hedging strategies in the Solvency II Delegated Regulation 2015/35<sup>31</sup>. For the calculation of the SCR, the Recital 72 of the Delegated Regulation states that:

*“Insurance and reinsurance undertakings should not take into account RMT that rely on insurance or reinsurance undertakings taking future action, such as dynamic hedging strategies or future management actions, at the time that the stress occurs. Dynamic hedging strategies and future management actions should be distinguished from rolling hedge arrangements”.*

**The separation between dynamic hedging strategies and rolling hedging arrangements poses several problems.** Some widely-used rolling hedging arrangements do contain dynamic components. For example, an insurer can develop a hedging strategy which buckets into rolling quarters and then assigns a hedge range that the treasurer is comfortable with each timeframe. In addition, the Delegated Regulation does not provide any clear criteria to make the distinction between both groups of financial techniques. This might often result in misinterpretation of both supervisors and the industry.

Overall, the explicit objective to exclude dynamic hedging strategies from the scope of qualified RMTs is not well grounded in the current evolution observed in financial markets. Multiple recent reports point to an increasing use of dynamic hedging strategies, as companies tend to move away from static hedging programmes. As the volume, velocity and variety of financial data are quickly

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<sup>30</sup> On page 400 of its Consultation, EIOPA emphasised that it has been asked to clarify these elements.

<sup>31</sup> The Delegated Regulation 2015/35 can be found at <https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32015R0035&from=EN>.

rising, more and more firms are able to use data analytics to strengthen their hedging strategy. Algorithms can shape dynamic hedging strategies that allow companies to react more rapidly to current or expected stress. Thanks to automation, treasurers can quickly protect themselves from a loss in investment value, by constantly adjusting their hedging strategy and using new instruments if needed.

Over the last two decades, a vast empirical and theoretical literature has tried to assess the performance of dynamic hedging strategies. **Relevant academic articles have notably proved that dynamic hedging performs better than static approach for a large set of products and for specific objectives such as the reduction of tail risk<sup>32</sup> or reinsurance counterparty risk.<sup>33</sup>** Other academic articles have shown that dynamic hedging can reduce markedly the volatility of future cash flows if the particular risk resulting from the use of these instruments is also adequately assessed.

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<sup>32</sup> See for example G. J. Power, D. V. Vedenov, D. P. Anderson and S. Klose (2013), "Market volatility and the dynamic hedging of multi-commodity price risk", *Applied Economics*, Volume 45, Issue 27, Pages 3891-3903 (available at: <https://www.tandfonline.com/doi/abs/10.1080/00036846.2012.736942>).

<sup>33</sup> Ceci, C., K. Colaneri, R. Frey and V. Köck (2019), "Value adjustments and dynamic hedging of reinsurance counterparty risk", Working Paper (available at: <https://arxiv.org/abs/1909.04354>).