



EIOPA-Bos-15/121

30 June 2015

**Final report on public consultation No.  
14/059 on the implementing  
technical standards with regard to the  
adjusted factors to  
calculate the capital requirement for  
currency risk for currencies pegged to the  
euro**

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# 1. Executive summary

## Introduction

In accordance with Article 15 of Regulation (EU) No 1094/2010 (EIOPA Regulation), EIOPA may develop implementing technical standards (ITS) by means of implementing acts under Article 291 TFEU, in the areas specifically set out in the legislative acts referred to in Article 1(2) of the EIOPA Regulation.

Before submitting the draft ITS to the European Commission, EIOPA shall conduct open public consultations and analyse the potential costs and benefits. In addition, EIOPA shall request the opinion of the Insurance and Reinsurance Stakeholder Group (IRSG) referred to in Article 37 of the EIOPA Regulation.

In accordance with paragraph 2(c) of Article 109a of 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), EIOPA shall develop implementing technical standards with regard to the adjusted factors to calculate the capital requirement for currency risk for currencies pegged to the euro.

As a result of the above, on 2 December 2014, EIOPA launched a public consultation on the draft implementing technical standards with regard to the adjusted factors to calculate the capital requirement for currency risk for currencies pegged to the euro.

The Consultation Paper is also published on EIOPA's website<sup>1</sup>.

## Content

This Final Report includes the feedback statement to the consultation paper (EIOPA-CP-14/059) and the full package of the public consultation, including:

Annex I: Implementing Technical Standard

Annex II: Impact Assessment

Annex III: Resolution of comments

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<sup>1</sup> [Consultation Paper](#)

## **Next steps**

According to Article 15 of the EIOPA Regulation, the draft ITS in Annex I will be submitted to the European Commission for endorsement by 30 June 2015.

According to Article 15 of the EIOPA Regulation, the European Commission shall forward the draft ITS to the European Parliament and the Council.

Within 3 months of receipt of the draft ITS, the European Commission shall decide whether to endorse it in part or with amendments, where the Union's interests so require. The European Commission may extend that period by 1 month.

If the European Commission intends not to endorse a draft ITS or intends to endorse it in part or with amendments, it shall send it back to EIOPA explaining why it does not intend to endorse it, or, explaining the reasons for its amendments, as the case may be.

Within a period of 6 weeks, EIOPA may amend the draft ITS on the basis of the European Commission's proposed amendments and resubmit it in the form of a formal opinion to the European Commission. In this case EIOPA must send a copy of its formal opinion to the European Parliament and to the Council.

If on the expiry of the 6 weeks period, EIOPA has not submitted an amended draft ITS, or if it has submitted a draft ITS that is not amended in a way consistent with the European Commission's proposed amendments, the European Commission may adopt the implementing technical standard with the amendments it considers relevant or it may reject it.

Where the European Commission intends not to endorse a draft ITS or intends to endorse it in part or with amendments, it shall follow the process as set out in Article 15 of the EIOPA Regulation.

## 2. Feedback statement

### Introduction

EIOPA would like to thank the IRSG and all the participants to the public consultation for their comments on the draft ITS. The responses received have provided important guidance to EIOPA in preparing a final version of the draft ITS for submission to the European Commission. All of the comments made were given careful consideration by EIOPA. A summary of the main comments received and EIOPA's response to them can be found below and a full list of all the comments provided and EIOPA's responses to them can be found in Annex III.

### General comments

#### 2.1. Review and update process of the ITS

- a. Some stakeholders asked for a clarification of the review process for this ITS. Stakeholders pointed out that both the set of currencies pegged to the euro and the fluctuation ranges of the pegging might change in future, for instance if a country establishes a new pegging arrangement or if a pegging arrangement is not sustainable anymore. Furthermore, some stakeholders wondered when the adjusted shock factors are updated.
- b. In case the set of pegged currencies change or where there are indications that the capital requirements are no longer adequate, EIOPA will inform the European Commission. Apart from that, EIOPA suggests including the adjusted shock factors of currencies pegged to the euro in the review of the SCR standard formula in 2018 envisaged in recital 150 of Commission Delegated Regulation (EU) 2015/35<sup>2</sup>.

#### 2.2. Transparency of the calibration

- a. Some stakeholders asked for more information about the methodology for the calibration and the source and type of data used.
- b. The time series used are daily mid-price exchange rate time series provided by Bloomberg.

Where  $R_A$  is the observed exchange rate of currency A against the euro and  $R_B$  the observed exchange rate of currency B against the euro, the maximum variation factor for the ratio  $R_A/R_B$  is  $R_{AB} = (\beta + \alpha)/(1 - \beta)$ . In this equation  $\alpha$  denotes the shock to apply to the exchange rate between currency A and the euro, and  $\beta$  the shock to apply to the exchange rate between currency B and the euro.

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<sup>2</sup> 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) (OJ L 12, 17.01.2015, p. 1).

The final shock to be applied for each pair of currencies pegged to the euro is:  $R_{A\&B} = \max(R_{AB}, R_{BA}) = \max\left(\frac{\beta+\alpha}{1-\beta}, \frac{\beta+\alpha}{1-\alpha}\right)$ .

## **General nature of participants to the public consultation**

EIOPA received comments from the IRSG and three responses from other stakeholders to the public consultation. All the comments received have been published on EIOPA's website.

Respondents can be classified into two main categories: European trade, insurance, or actuarial associations; and national insurance or actuarial associations.

## **IRSG opinion**

The IRSG comments on the ITS at hand can be consulted on the EIOPA website<sup>3</sup>.

The IRSG pointed out that market and/or political developments might render even a peg which has existed for a long time unsustainable, with consequent risk of sharp one-off currency movements. The risks which such movements may pose to undertakings (depending on their Asset-liability management policies) would deserve to be considered by both national and EU competent authorities.

Moreover, the IRSG suggested that the source of data and the type of exchange rate used to calculate the adjusted factors for currency risk should be provided in a technical annex. On this, EIOPA confirms that the time series used for the calibration are daily mid-price exchange rate time series provided by Bloomberg.

## **Comments on the Impact Assessment**

One comment was received from the stakeholders on the Impact Assessment, in particular disagreeing with the benefits identified for a particular policy option ("de jure approach" to compute the reduced shock factors for currencies pegged to the euro). This approach was initially considered in order to take into account the possibility that a country might legally decide to make their currency reach the upper or lower bounds of the pegging arrangements. In any case, the preferred policy option ("de facto approach") was not objected by the stakeholders.

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<sup>3</sup> [IRSG opinion](#)

### **3. Annexes**

# Annex I: Implementing Technical Standard



Brussels, **XXX**  
[...](2015) **XXX** draft

**COMMISSION IMPLEMENTING REGULATION (EU) No .../..**

**of **XXX****

**on [...]**



**COMMISSION IMPLEMENTING REGULATION (EU) .../... laying down implementing technical standards with regard to the adjusted factors to calculate the capital requirement for currency risk for currencies pegged to the euro in accordance with Directive 2009/138/EC of the European Parliament and of the Council**

of [ ]

THE EUROPEAN COMMISSION,

Having regard to the Treaty on the Functioning of the European Union,

Having regard to Directive 2009/138/EC of 25 of November of 2009 of the European Parliament and of the Council on the taking up and pursuit of the business of Insurance and Reinsurance (Solvency II)<sup>4</sup>, and in particular Article 109a(2)(c) thereof,

Whereas:

- (1) The adjustments laid down in this Regulation take into account the detailed criteria set out in Article 188(5) of Commission Delegated Regulation (EU) 2015/35<sup>5</sup>.
- (2) In order to ensure a consistent treatment of currencies pegged to the euro in the calculation of the capital requirement for currency risk, adjusted factors should be provided for the currency risk relating to the exchange rates between the euro and currencies pegged to the euro as well as in relation to the exchange rates between two currencies pegged to the euro.
- (3) This Regulation is based on the draft implementing technical standards submitted by the European Insurance and Occupational Pensions Authority to the Commission.
- (4) The European Insurance and Occupational Pensions Authority has conducted open public consultations on the draft implementing technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the opinion of the Insurance and Reinsurance Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1094/2010 of the European Parliament and of the Council<sup>6</sup>.

HAS ADOPTED THIS REGULATION:

*Article 1*

*Adjusted factors for currency risk where the local or foreign currency is the euro*

Where the local or foreign currency is the euro, for the purposes of Article 188(3) and (4) of Delegated Regulation (EU) 2015/35, the 25 % factor is replaced with:

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<sup>4</sup> OJ L 335, 17.12.2009, p.1

<sup>5</sup> 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) (OJ L 12, 17.01.2015, p. 1).

<sup>6</sup> Regulation (EU) No 1094/2010 of the European Parliament and of the Council of 24 November 2010 establishing a European Supervisory Authority (European Insurance and Occupational Pensions Authority), amending Decision No 716/2009/EC and repealing Commission Decision 2009/79/EC (OJ L 331, 15.12.2010, p. 48).

- (a) 0.39 % where the other currency is the Danish krone (DKK);
- (b) 1.81 % where the other currency is the lev (BGN);
- (c) 2.18 % where the other currency is the CFA franc (BCEAO) (XOF);
- (d) 1.96 % where the other currency is the CFA franc (BEAC) (XAF);
- (e) 2.00 % where the other currency is the Comorian franc (KMF).

#### *Article 2*

*Adjusted factors for currency risk where the local and the foreign currency are pegged to the euro*

For the purposes of Article 188(3) and (4) of Delegated Regulation (EU) 2015/35, the 25 % factor is replaced with:

- (a) 2.24 % where the two currencies are the DKK and the BGN;
- (b) 2.62 % where the two currencies are the DKK and the XOF;
- (c) 2.40 % where the two currencies are the DKK and the XAF;
- (d) 2.44 % where the two currencies are the DKK and the KMF;
- (e) 4.06 % where the two currencies are the BGN and the XOF;
- (f) 3.85 % where the two currencies are the BGN and the XAF;
- (g) 3.89 % where the two currencies are the BGN and the KMF;
- (h) 4.23 % where the two currencies are the XOF and the XAF;
- (i) 4.27 % where the two currencies are the XOF and the KMF;
- (j) 4.04 % where the two currencies are the XAF and the KMF.

#### *Article 3*

##### *Entry into force*

This Regulation shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

This Regulation shall be binding in its entirety and directly applicable in all Member States.

Done at Brussels,

*[For the Commission  
The President]*

*[On behalf of the President]  
[Position]*

## **Annex II: Impact Assessment**

### **Section 1: Procedural issues and consultation of interested parties**

According to Article 15 of Regulation (EU) No 1094/2010 (EIOPA Regulation), EIOPA conducts analysis of costs and benefits when drafting implementing technical standards. The analysis of costs and benefits is undertaken according to an Impact Assessment methodology.

The draft ITS and its Impact Assessment were subject to public consultation between 3 December 2014 and 2 March 2015. The comments received from the stakeholders were duly taken into account and served as a valuable input in order to improve the draft technical standards.

The comments received and EIOPA's responses to them are summarised in the section Feedback Statement of the Final Report.

### **Section 2: Problem definition**

According to Directive 2009/138/EC (Solvency II Directive), EIOPA is tasked to draft an implementing technical standard regarding the adjustments to be made for currencies pegged to the euro in the currency risk sub-module. Article 188(5) of the Commission Delegated Regulation 2015/35 provides criteria which pegging arrangements have to meet in order to qualify for such an adjustment.

This Implementing Technical Standard provides the adjusted factors to calculate the capital requirement for currency risk in accordance with Article 188(2) of the Commission Delegated Regulation 2015/35 where:

- a. the local or the foreign currency is the euro; or
- b. the local and the foreign currency are both currencies pegged to euro.

### **Baseline**

When analysing the impact of proposed policies, the Impact Assessment methodology foresees that a baseline scenario is applied as the basis for comparing policy options. This helps to identify the incremental impact of each policy option considered. The aim of the baseline scenario is to explain how the current situation would evolve without additional regulatory intervention.

The baseline is based on the current situation of EU insurance and reinsurance markets, taking account of the progress towards the implementation of the Solvency II framework achieved at this stage by insurance and reinsurance undertakings and supervisory authorities.

In particular the baseline will include:

- The content of Directive 2009/138/EC as amended by Directive 2014/51/EU;
- The Commission Delegated Regulation 2015/35.

It has to be noted that according to point (c) of the second paragraph of Article 109a of the Directive, EIOPA is legally obliged to draft an implementing technical standard with the adjustments to be made for currencies pegged to the euro in the currency risk sub-module.

### **Section 3: Objective pursued**

Objective 1: To set specific currency shocks to be applied for currencies pegged to the euro, which adequately reflect the risk.

Objective 2: To facilitate the calculation of the SCR for those undertakings using the standard formula, as regards to the currency risk sub-module.

Objective 3: To achieve uniform conditions of the application of Articles 105 (5) related to that calculation.

These objectives correspond to the specific Solvency II objectives "Advance supervisory convergence" and "Better allocation of capital" as well as to the Solvency II general objectives "Enhances policy holder protection" and "Deeper integration of EU insurance market".

### **Section 4: Policy options**

#### **Policy issue 1: Mathematical approach to compute the reduced shock factors for currencies pegged to the euro**

##### **✓ Option 1.1: "De jure" approach**

In the "de jure" approach, a maximum deviation, which corresponds to the maximum distance between the observed rate and both extremes of the official fluctuation band, is calculated for every day included in the historical observation period. The "de jure" factor is the average value of these deviations on the time period used for calibration relative to the official central rate:

$$factor_{DeJure} = \frac{1}{R_o} \cdot \frac{1}{n} \cdot \sum_{i=1}^n \max(|R_{q,i} - \bar{R}|; |R_{q,i} - \underline{R}|)$$

Where:

- $R_o$  : official central rate of the foreign currency against the local currency
- $R_{q,i}$ : exchange rate of the local currency against the foreign currency for quoted day  $i$
- $\bar{R}$  is the maximum of the official fluctuation band
- $\underline{R}$  is the minimum of the official fluctuation band
- $n$  the number of quoted days taken into consideration.

- **Option 1.2: "De facto" approach**

In the "de facto" approach, the percentage change in the exchange rate is calculated for each 12-month period included in the historical observation period. The reduced shock factor is then the empirical 99.5% quantile of this set.

- **Option 1.3: Maximum of "de jure" and "de facto" approaches**

The reduced factor is set to the maximum of the values that are generated by the "de jure" and the "de facto" approach.

## **Section 5: Analysis of impacts**

### **Policy issue 1: Mathematical approach to compute the reduced shock factors for currencies pegged to the euro**

#### **Option 1.1: "de jure" approach**

- Benefits:
  - The risk charge is set at least at 50% of the width of the fluctuation band irrespective of the observed historical volatility;
  - The more often the historical exchange rates were close to the borders of the fluctuation band, the higher the resulting shock factor.
- Costs:
  - There is no direct mathematical link between the risk charge produced by the "de jure" approach and the 99.5% Value at Risk.

#### **Option 1.2: "de facto" approach**

- Benefits:
  - Under the assumption that the volatility in the past provides an indication for future fluctuations, the approach generates a risk charge that is close to the 99.5% Value at Risk.
- Costs:
  - The width of the fluctuation band (i.e. the legally possible range of fluctuations) is not taken into account. This could result in an insufficient risk charge if the volatility in the past was relatively low.

#### **Option 1.3: Maximum of "de jure" and "de facto" approaches**

- Benefits:
  - The approach takes into account both the historical fluctuations and the width of the fluctuation band;
  - The approach combines two different methods to quantify risk and could therefore be more robust.
- Costs:
  - It is not obvious why the maximum of the two approaches should deliver a risk charge that represents the 99.5% Value at Risk.

- The approach “inherits” the drawbacks of both approaches.

## Section 6: Comparing the options

### Policy issue 1: Mathematical approach to compute the reduced shock factors for currencies pegged to the euro

The potential costs and benefits from the perspective of undertakings, supervisors and policy holders are linked to the appropriateness of the adjusted currency risk charge derived with the different discussed options. If the risk charges were insufficient, the resulting risks would not be properly reflected in the calculation of the Solvency Capital Requirement. This could result in an insufficient level of own funds and misplaced incentives to build up exposures in foreign currencies. If the currency risk charges were set too high, this could increase premiums to a level not warranted by the underlying risks and prevent insurers from diversifying their exposures across currencies.

The major weakness of policy option 1 is that there is no direct mathematical link between the risk charge calculated on its basis and the 99.5% Value at Risk. Policy Option 3 “inherits” this drawback.

The preferred policy option is therefore **Option 2** (de facto approach).

## Section 7: Monitoring and evaluation

The following indicator may be relevant in assessing whether the ITS has been effective and efficient in respect of the objective specified above:

<p>To set specific currency shocks to be applied for currencies pegged to the euro, which adequately reflect the risk.</p>	<p>Possible indicator of progress towards meeting the objective may be:</p> <ul style="list-style-type: none"> <li>• Maximum change of exchange rates of pegged currencies over a period of 365 days, both in relation to the euro and in relation to each other pegged currency.</li> </ul>
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## Annex III: Resolution of comments

<b>Summary of Comments on Consultation Paper EIOPA-CP-14/059</b> <b>CP-14-059-ITS on adjustment of pegged currencies</b>				
<p>EIOPA would like to thank Insurance and Reinsurance Stakeholder Group (IRSG), Actuarial Association of Europe (AAE), GDV, and Insurance Europe.</p> <p>The numbering of the paragraphs refers to Consultation Paper No. EIOPA-CP-14/059.</p>				
No.	Name	Reference	Comment	Resolution
1.	IRSG	General Comment	<p>The IRSG appreciates the need for an Implementing Technical Standard (ITS) in this respect and is broadly satisfied with the content.</p> <p>A separate issue is that market and/or political developments may render even a peg which has existed for a long time unsustainable, with consequent risk of sharp one-off currency movements. The risks which such movements may pose to undertakings (depending on their ALM policies) deserve to be considered by both national and EU competent authorities.</p> <p>In keeping with the principle of transparency on the part of EIOPA, the IRSG would prefer that the source of data and the type of exchange rate (Bid/Ask, valuation time) used to calculate the adjusted factors for currency risk should be provided in a Technical annex.</p>	<p>This risk is within the scope of pillar 2 of Solvency II.</p> <p>The technical details of the calibration are set out in the consultation report.</p>
2.	GDV	General Comment	<p>GDV welcomes the opportunity to comment on the draft proposal for implementing technical standards with regard to the adjusted factors to calculate the capital requirement for currency risk for currencies pegged to the euro.</p> <p>Review/update process</p> <p>There should be a review/update process for these ITS because both the fluctuation ranges as well as the set of currencies pegged to the euro</p>	<p>The calibration should be included in the next review of the SCR standard formula in</p>

			may change in future.	2018.
3.	Insurance Europe	General Comments	<p>1. Insurance Europe welcomes the Implementing Technical Standards (ITSs) with regard to the adjusted factors to calculate the capital requirement for currency risk for currencies pegged to the Euro, and the opportunity to comment on them.</p> <p>The issue related to this paper which is of major concern for us is the following:</p> <p>The absence of a review process of the adjusted factor calibrations.</p> <p>We find it odd that these calibrations, which vary due to market conditions, are enshrined in a legally binding document. Given that there is no Review Clause in the EIOPA Regulation for ITSs, we seek clarification as to the process regarding the frequency of the future updates of the adjusted factors.</p>	The calibration should be included in the next review of the SCR standard formula in 2018.
4.	Insurance Europe	Article 1	<p>The source of data and the type of exchange rate (Bid/Ask, valuation time) data used to derive the adjusted factors for currency risk is unclear. For the purposes of transparency, we request that EIOPA discloses this information and provides a justification for its use.</p> <p>In addition, we find it odd that these calibrations, which vary due to market conditions, are enshrined in a legally binding document. Given that there is no Review Clause in the EIOPA Regulation for ITSs, we seek clarification as to the process regarding the frequency of the future updates of the adjusted factors.</p>	<p>The technical details of the calibration are set out in the consultation report.</p> <p>The calibration should be included in the next review of the SCR standard formula.</p>
5.	Insurance Europe	Article 2	<p>The methodology used to derive the reduced shock factors between two currencies pegged to the Euro should be clarified. In particular, it is unclear whether it is based on a transitive approach, whereby the resulting factor is the product of the two shock factors for each currency (the factors will not be transitive for countries pegged to the Euro if the economies are not broadly of the same scale).</p> <p>Please also refer to equally applicable comments for Article 1.</p>	The technical details of the calibration are set out in the consultation report.
6.	Insurance Europe	Appendix	<p>Section III: Approach used to calibrate the shock factors:</p> <p>The use of a limited period of data between 2005-2014 is not</p>	For reasons of consistency between countries, it has been decided to use the same



			substantiated, in spite of the availability of data further into the past.	length of time series to calibrate the different reduced shock factors. Data which represent the current pegging arrangements for all countries were only available from 2005 (for example, the conditions of the pegging arrangement in Bulgaria have changed in 2005).
7.	Actuarial Association of Europe (AAE)	Appendix	The calibration approach has been based on overlapping daily relative changes over the previous 12 months have been used. While this is in line with other calibrations used for market risks in the S2 standard formula, the approach used ignores any autocorrelation between the overlapping samples. We suggest to provide insight in the severity of the autocorrelation and the impact this may have on the calibrated currency shocks for the currencies pegged to the Euro.	The calibration is not based on the assumption that the overlapping daily relative changes are stochastically independent. These changes are analysed to identify the maximum observed change.
8.	Insurance Europe	Annex I	<p>Section 4:</p> <p>How can the “de jure” approach be considered as an alternative model to the de facto model, when this methodology is approximate, with no indication that it leads to the 99.5% percentile shock?</p> <p>Section 5:</p> <p>The sentence in subsection Option 1.1: “The risk charge is set at least at 50% of the width of the fluctuation band irrespective of the observed historical volatility.” This is hardly a benefit for a model that wants to fit a 99.5% percentile. It could be considered as a benefit for a model that wants to get “at least 99.5% percentile” but that is not the case. Being overly prudent is not a benefit of the model.</p>	<p>Noted.</p> <p>The “de jure” approach exposed in the Impact Assessment was initially considered in order to take into account the possibility that a country might legally decide to make their currency reach the upper or lower bounds of the pegging arrangements.</p>