

**COMMISSION de SURVEILLANCE  
du SECTEUR FINANCIER**

In case of discrepancies between the French and the English text, the French text shall prevail

Luxembourg, 19 February 2008

To all credit institutions and CRR investment firms incorporated under Luxembourg law and to the branches of credit institutions and investment firms having their registered office in a third country

**CIRCULAR CSSF 08/338 as amended  
by Circular CSSF 16/642**

**Re: Implementation of a stress test in order to assess the interest rate risk arising from non-trading book activities**

Ladies and Gentlemen,

In accordance with Article 30(4) of CSSF Regulation N° 15-02 relating to the supervisory review and evaluation process that applies to CRR institutions<sup>1</sup> (hereinafter “RCSSF 15-02”), CRR institutions must submit their non-trading book activities to a stress test on interest rate risk. Based on the results of this test, the Commission de Surveillance du Secteur Financier (CSSF) determines in particular to which extent the interest rate risk is likely to result in a decline in the economic value of an institution by more than 20% of their own funds.

The purpose of this circular is to specify the calculation and reporting methods of the stress test on interest rate risk. These methods are set out in the EBA guidelines on the management of interest rate risk from non-trading activities of 5 October 2015 (EBA/GL/2015/08)<sup>2</sup> which are implemented by this circular.

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<sup>1</sup> The term “CRR institution” is defined in Article 1(1) of RCSSF 15-02.

<sup>2</sup> These guidelines are available on the EBA’s website: <https://www.eba.europa.eu/-/eba-updates-guidelines-on-interest-rate-risk-arising-from-non-trading-activities>.

The requirements of this circular solely cover the (regulatory) stress test referred to in Article 30(4) of RCSSF 15-02. They do not include requirements as to the (internal) management of interest rate risk by credit institutions and CRR investment firms as this management is governed by the provisions of Article 14 of RCSSF 15-02 and Chapter 7 of Part III of Circular CSSF 12/552 which also implements these EBA guidelines.

## **Chapter I. Scope**

1. The requirement to calculate and report the stress test on interest rate in accordance with the provisions of this circular applies to all credit institutions and CRR investment firms incorporated under Luxembourg law, and to the branches of non-EU credit institutions and investment firms having their registered office in a third country in accordance with Article 1(1) of RCSSF 15-02. These entities are referred to hereinafter as “institutions”.
2. The stress test shall be performed, on an individual and consolidated basis, in accordance with Article 3 of CSSR 15-02.

## **Chapter II. Concept of stress test on interest rate risk**

3. The stress test aims at quantifying the variation of the value of an institution’s wealth when interest rates change. To this end, institutions evaluate how the intrinsic value of their different wealth items – in particular claims on the assets side, debts on the liability side, as well as derivative instruments and off-balance sheet items, whatever form they take (for example claims under the form of negotiable or non-negotiable securities) and the manner in which they are valued from the accounting point of view (historical cost principle or fair value) – is influenced by an interest rate change. Thus, the stress test answers the hypothetical question of the price difference at which, compared to the current price, the different negotiable and non-negotiable wealth items of the institution could be sold in case of an interest rate change. The stress test focuses therefore on the “sensitivity of wealth” and not on the “sensitivity of earnings” which measures the impact of interest rate risk on short and medium-term profitability.
4. Formally, for the needs of this circular, the stress test consists, for institutions, in the assessment of the variation of the economic value of their wealth assuming a change in interest rates according to the scenarios provided for under point 9 below, this interest rate change being hereinafter referred to as “standard shock”. The economic value of a wealth item is defined as the exchange value which would be received (when this item has a positive economic value) or paid (when the item has a negative economic value) in case of a sale or transfer of this item, in a normal transaction between market participants under the market conditions prevailing at the valuation date of the concerned item. The economic value of an institution’s wealth is equal to the sum of the economic values of the items constituting the wealth. The variation of the economic value of an institution’s wealth corresponds to the economic value of this institution’s wealth, assuming the standard shock provided for under point 9 below, less its economic value at the reference date when the stress test is performed, as provided for under point 11 of this circular.

### Chapter III. Calculation methods

5. In the stress test calculation, institutions shall take into account all their wealth items except the items of the prudential trading book, as defined in Article 4(1)(86) of the CRR<sup>3</sup>, and the items constituting the prudential own funds, as defined in Article 72 of the CRR

The obligation for completeness provided for under this point requires institutions to clearly identify all the wealth items to be submitted to the stress testing. Institutions shall thus take into account also the items which are not included in the balance sheet, such as guarantees and commitments as well as exposures in the form of derivative instruments, including non-linear and/or embedded derivatives, unless these items do not belong to the trading book as defined in Article 4(1)(86) of the CRR. For CRR investment firms, subject to financial reporting according to Circular CSSF 05/187 (supplemented by Circular CSSF 10/433), the derivative instruments (non-embedded) are those reported, in particular, under items 1 to 3 of table III.1 “Off-balance sheet commitments”.

6. Notwithstanding the second subparagraph below, the calculations necessary for stress testing – in particular the determination of the economic values according to the characteristics of wealth items and market conditions – shall be executed in accordance with the internal methods retained by the institutions. These methods must be robust and commensurate with the nature and volume of the institutions’ wealth.

When computing the effect of the standard shock on the economic value, institutions should use one of the calculation methods set out in table 1 (Annex A of EBA/GL/2015/08) and in table 3 (Annex B of EBA/GL/2015/08) under sophistication of the measurement of the interest rate risk inherent in the banking book (IRRBB). The CSSF reserves the right to require, according to the proportionality principle, institutions to use more complex calculation methods, incorporating more granular data and changes in client behaviour under stress scenarios.

The internal methods should comply with the IRRBB 4.1 principles (“Internal governance arrangements”) and the IRRBB 4.2 principles (“IRRBB policies”) of the EBA guidelines as set out in Circular CSSF 12/552.

Where robustness or precision of the methods implemented are not certain – concerning for example the behaviour of liabilities with no fixed contractual maturity –, institutions shall act with appropriate prudence.

By virtue of the same prudence principle, institutions shall constrain the assumed behavioural repricing date for customer balances (liabilities) without specific repricing dates to a maximum average of five years (where the average assumed repricing date is computed as the average of the assumed repricing dates of different accounts subject to behavioural repricing weighted by the nominal value of all such accounts. This means that for the computation of the average maturity, both the stable and the volatile portion will be included).

7. Aggregation of wealth items denominated in foreign currencies will be based on their economic value converted into the currency of the capital according to the exchange rates applicable on the date of the stress test performance, as foreseen under point 11. The stress test on a consolidated basis shall be defined either directly, based on all wealth items

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<sup>3</sup> Regulation (EU) No 575/2013 of the European Parliament and of the Council of 26 June 2013 on prudential requirements for credit institutions and investment firms and amending Regulation (EU) No 648/2012 (the “CRR”)

included in the consolidation, or indirectly, by summing the individual stress test results of the legal entities included in the consolidation.

8. The scope of the institution's wealth, the methods, assumptions and results of the stress test calculation shall be documented and filed. The documentation, available at the institution, shall allow third party professionals to seize the nature, scope and limitations of the calculations implemented and to evaluate the results obtained. Institutions using the possibility described under point 10 shall include in their documentation the communication of the home supervisory authority on the applicable standard shock.
9. The standard shock to apply is a sudden +/- 200 basis point shift of all interest rates (parallel shift of yield curves). If, for a given currency, the standard shock implies a negative interest rate assumption, the relevant rates should be limited to 0%<sup>4</sup> and a comment should be added in the reporting table provided for in Chapter IV of this circular.  
If +/-200 basis points is lower than the actual level of change in interest rates, calculated using the 1<sup>st</sup> and 99<sup>th</sup> percentile of observed one-day interest rate changes over a five year period scaled up to a 240-day year, the higher level of shock arising from the latter calculation should be applied as the standard shock. For this calculation, institutions should apply an appropriate general "risk-free" yield curve. That curve should not include instrument-specific or entity-specific credit risk spreads or liquidity risk spreads. An example of an acceptable yield curve is the 'plain vanilla' interest rate swap curve.
10. Institutions which are subsidiaries or branches of groups whose head is located in a third country subject to a stress test requirement equivalent to the one set out under point 1, may use, for the purpose of this circular, the standard shock provided for by the home supervisory authority of the head of the group. Institutions willing to use this option, shall submit an explicit request to the CSSF.
11. The frequency of the stress test is half-yearly. The stress test shall be performed based on the situation of the institution as at 30 June, respectively as at 31 December of each year.

#### **Chapter IV. Reporting methods**

12. Institutions subject to the stress test requirement provided for under point 1 shall submit to the CSSF the results thereof at the latest on the 15<sup>th</sup> of the second month following the end of each half-year.
13. For the transmission of the stress test results to the CSSF, institutions shall mandatorily use the electronic reporting tables of the CSSF. For credit institutions, the table to use is table ESPREP-BNNNN-YYYY-MM-STT.xls, available on <https://www.cssf.lu/en/document/irrbb-stress-test-report/> and, for investment firms, table ESPREP-PNNNN-YYYY-MM-STT.xls, available on <https://www.cssf.lu/en/document/irrbb-stress-test-report-crr-investment-firms/>.<sup>5</sup>
14. Institutions shall report, in the above tables, the section "Identification" as well as the results of the stress test based on their overall individual situation, sheet "IRR version N"<sup>6</sup>. In addition, institutions submitted to the supervision of the CSSF on a consolidated

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<sup>4</sup> If the institution's management systems do not allow nil interest rates, the interest rate shall be limited to the smallest positive figure accepted by the system.

<sup>5</sup> The electronic reporting templates are only available in French. An English translation can be found in the annexes of this circular.

<sup>6</sup> For institutions having no branch, the individual global situation, including branches, obviously corresponds to the individual situation only. This situation shall be indicated in sheet "IRR version N".

basis, are required to report, in sheet “IRR version C”, the result of the stress test based on their consolidated situation.

15. The following information should be provided in tables “IRR version N” and “IRR version C”:

- Line “Increase”, column “Result (in capital currency)”. Institutions shall indicate in this field the variation of the economic value of their wealth as defined under points 4 to 7, assuming an interest rate increase according to the size defined under points 9 and 10.
- Line “Decrease”, column “Result (in capital currency)”. Institutions shall indicate in this field the variation of the economic value of their wealth as defined under points 4 to 7, assuming an interest rate decline according to the size defined under points 9 and 10.
- The field “Scenario description” should be filled out if and only if the institution uses the option provided for under point 10. In this case, the institution shall provide a brief description of the interest rate scenarios implemented in accordance with the provisions defined by the home authority of the parent company.
- The field “Comment” shall be filled out as follows. It is used for gathering information on potentially negative interest rates, major currencies, average duration of assets and liabilities and any other information deemed useful under “General”. The field “Potentially negative interest rates” shall include the currencies for which the interest rate would be negative in a 200 basis point decrease scenario when the institution, in accordance with point 9, limits certain interest rates to a nil value.
- Under “major currencies”, institutions shall include major currencies (above 5% of the assets or liabilities). Under “Average duration of assets and liabilities”, the institution shall include the duration by major currency in assets and liabilities.
- Under “General”, institutions shall include any comment essential to the interpretation of the results obtained (in particular, when the results of the stress tests are positive in both scenarios +/-200 basis points or in case of significant variations in the results).

All variations of economic value mentioned above should be reported in the currency of the capital. The decreases in economic value correspond to negative amounts.

16. For credit institutions, the duly completed reporting table must be titled ESPREP-BNNNN-YYYY-MM-STT.xls, where the sequence “NNNN” shall be replaced by the 4-digit identification number of the institution and the sequence “YYYY-MM” shall be used by replacing “YYYY” with the four digits of the year and “MM” with the two digits referring to the month of the performance of the stress test. Thus, for the bank with identification number 999 and transmitting the result of the stress test based on its situation as at 30 June 2008, the reporting table shall thus be titled ESPREP-B0999-2008-06-STT.xls. The table must then be encrypted and transmitted to the CSSF through the appropriate transmission channel.

17. For CRR investment firms, the table ESPREP-PNNNN-YYYY-MM-STT.xls, duly completed shall be encrypted and sent to the CSSF through the transmission channel provided for that purpose.

## **Chapter V. Coming into force, repealing, amending and enforcement provisions**

18. This circular comes into force with immediate effect.
19. The CSSF will inform institutions of any modification in the standard shock through a circular-letter.

Yours sincerely,

COMMISSION DE SURVEILLANCE DU SECTEUR FINANCIER

Simone DELCOURT  
Director

Jean-Nicolas SCHAUS  
Director General

Annexes: Reporting table ESPREP-BNNNN-YYYY-MM-STT.xls  
Reporting table ESPREP-PNNNN-YYYY-MM-STT.xls

## Annexe: Reporting table ESPREP-BNNNN-YYYY-MM-STT.xls

### Identification

Identification number	
Contact person (name)/department	
Contact person (phone number)	
Email address	

### Result of the stress test on interest rate risk according to Article 30(4) CSSF Regulation N° 15-02

► Result based on the **individual** situation of the institution

Interest rate result direction	size	Result (in capital currency)
Increase by	200bp	
Decrease by	200bp	

Standard shock description	
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#### Comments

General	
Potentially negative interest rates	
Major currencies	
Average duration of assets and liabilities	

### Result of the stress test on interest rate risk according to Article 30(4) of Regulation CSSF N° 15-02

► Result based on the **consolidated** situation of the institution

Interest rate result direction	size	Result (in capital currency)
Increase by	200bp	
Decrease by	200bp	

Standard shock description	
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<b>Comments</b>	
General	
Potentially negative interest rates	
Major currencies	
Average duration of assets and liabilities	



## Annexe: Reporting table ESPREP-BNNNN-YYYY-MM-STT.xls

### Identification

Identification number	
Contact person (name)/department	
Contact person (phone number)	
Email address	

### Result of the stress test on interest rate risk according to Article 30(4) CSSF Regulation N° 15-02

► Result based on the **individual** situation of the institution

Interest rate result direction	size	Result (in capital currency)
Increase by	200bp	
Decrease by	200bp	

Standard shock description	
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#### Comments

General	
Potentially negative interest rates	
Major currencies	
Average duration of assets and liabilities	

## Result of the stress test on interest rate risk according to Article 30(4) of Regulation CSSF N° 15-02

► Result based on the **consolidated** situation of the institution

Interest rate result direction                      size	Result (in capital currency)
Increase by                      200bp	
Decrease by                      200bp	

Standard shock description	
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Comments	
General	
Potentially negative interest rates	
Major currencies	
Average duration of assets and liabilities	

### Identification

Identification number	
Contact person (name)	
Contact person (phone number)	

## Result of the stress test on interest rate risk according to point 4(a) of Part XVIII of Circular CSSF 06/273

► Result based on the **individual** situation of the institution

direction                      size	Result (in capital currency)
Increase by                      200bp	
Decrease by                      200bp	

Scenario description	
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Comment	
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**Result of the stress test on interest rate risk according to point 4(a) of Part XVIII of Circular CSSF 06/273**

► Result based on the **consolidated** situation of the institution

direction		size	Result (in capital currency)
Increase by		200bp	
Decrease by		200bp	

Scenario description	
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Comment	
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## Identification

Identification number	
Contact person (name)	
Contact person (phone number)	

### Result of the stress test on interest rate risk according to point 4(a) of Part XVIII of Circular CSSF 07/290

▶ Result based on the **individual** situation of the institution

direction	size	Result (in capital currency)
Increase by	200bp	
Decrease by	200bp	

Scenario description	
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Comment	
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### Result of the stress test on interest rate risk according to point 4(a) of Part XVIII of Circular CSSF 07/290

▶ Result based on the **consolidated** situation of the institution

direction	size	Result (in capital currency)
Increase by	200bp	
Decrease by	200bp	

Scenario description	
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Comment	
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