



# **BANCO CENTRAL DO BRASIL**

RESOLUTION 4,277 OF OCTOBER 31, 2013

Establishes minimum standards and prudential adjustments for the valuation framework applicable to financial instruments accounted for at market value..

The Central Bank of Brazil, pursuant to art. 9 of Law 4,595 of December 31, 1964, hereby announces that the National Monetary Council, in a session held on May 24, 2012, based on arts. 4, item VIII, of such Law, art. 2, item VI, arts. 8 and 9 of Law 4,728 of July 14, 1965, art. 20, paragraph 1, of Law 4,864 of November 29, 1965, art. 23, item a, of Law 6,099 of September 12, 1974, paragraph 1, item II, of Law 10,194 of February 14, 2001, and art. 6 of Decree Law 759 of August 12, 1969,

## **R E S O L V E D:**

### **CHAPTER I PURPOSE AND SCOPE OF APPLICATION**

Art. 1. This Resolution provides for minimum requisites to be observed in the process of valuation of financial instruments and in the adoption of prudential adjustments by multiple banks, commercial banks, investment banks, exchange banks, savings banks, the Brazilian Development Bank (BNDES) and by institutions in a conglomerate that comprises at least one multiple, commercial, investment, exchange or savings bank.

### **CHAPTER II RESPONSIBILITIES AND CONTROLS**

Art. 2. The systems and controls established by the institutions mentioned in art. 1 for the valuation of financial instruments as set forth in this Resolution must follow criteria of prudence and reliability.

Paragraph 1. The systems and controls mentioned in the heading must include policies and procedures clearly documented and updated, prescribing at least:

I – the definition of responsibilities of each area involved in the valuation process;

II – the continuous review of the sources of information on the market;

III – guidance on the use of unobservable inputs, reflecting the assumptions used by the institution in the valuation process;

IV – independent valuation and verification procedures;

V – procedures for incorporating prudential adjustments, pursuant to art. 4 of this Resolution.



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Paragraph 2. The procedures set forth in section IV of paragraph 1 refer to the regular verification of accuracy of prices, indexes, rates and other data, either observable in the market or resulting from assumptions established by the institution, and to the identification and correction of errors or biases in valuation methodologies, also having to:

I – be performed, at least monthly, by a unit independent from the ones responsible for the trading desks; and

II – employ a degree of accuracy proportionate to the valuation purpose.

Art. 3. The systems mentioned in art. 2 must be integrated with other risk management processes within the institution.

Sole paragraph. The structure responsible for the valuation process must report to a member of senior management independently from the areas responsible for the trading desks.

### **CHAPTER III VALUATION METHODOLOGIES**

Art. 4. The valuation processes mentioned in this Resolution must employ valuation methodologies for marking to market or for marking to model.

Paragraph 1. A marking to market methodology implies valuation, at least on a daily basis, of financial instruments that have a quotation for prices, indices and rates immediately available for orderly transactions and independent sourcing.

Paragraph 2. A marking to model methodology implies valuation at least on a daily basis, involving the use of mathematical methods that employ market references and data that are non-observable in the market when estimates are produced.

Art. 5. The valuation process must employ, whenever possible, a marking to market methodology, using quotations based in criteria of prudence, relevance and reliability.

Art. 6. Valuation through marking to model may be adopted when the relevance or the availability of market references is insufficient for an exclusive use of marking to market methodologies, provided that the following conditions are met:

I – valuation methodologies employed are widely accepted in the market, whenever available;

II – employment of a marking to model methodology must be consistent and verifiable;

III – compliance with criteria established in art. 5 in all market references and other data used in marking to model;



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IV – adequacy of market references and other data used in marking to model must be regularly revised;

V – awareness by senior management and by the board, in case such an instance is in place, of the financial instruments subject to a marking to model methodology and the materiality of uncertainties generated by such an approach for the purposes of risk management and performance;

VI – awareness, by those responsible for risk management within the institution, of limitations of models employed and of their effects in valuation results;

VII – submission of models employed to periodic revisions to evaluate the adequacy of their assumptions and results in comparison to values available in the market; and

VIII – adoption of a degree of conservatism higher than the one required for marking to market methodologies.

Art. 7. When developed by the institution itself the valuation methodology must:

I – be approved by units independent from the areas responsible for operating desks, when these ones are also responsible for the development of valuation models; and

II – be submitted to an assessment of the validity of assumptions, of mathematical methods and information technology systems employed, performed by a unit independent from the areas responsible for developing and approving the models.

### **CHAPTER IV PRUDENTIAL ADJUSTMENTS**

Art. 8. The institutions mentioned in art. 1 must set out and maintain procedures for assessing the necessity of adjustments in the value of the financial instruments as prescribed in this Resolution, regardless of the valuation methodology adopted and provided that criteria of prudence, relevance and reliability are met.

§ 1º The assessment set forth in heading must include, at least, the following elements:

I – close-out costs;

II – unearned credit spreads;

III – investing and funding costs;

IV – early termination costs

V – future administrative costs;

VI – operational risks; e



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VII – model risks, where applicable;

§ 2º The adjustments resulting from the assessment prescribed in this article must be deducted from Common Equity Tier 1 when not recognized in the valuation of financial instruments for accounting purposes, under consistent and verifiable criteria.

§ 3º Additionally, for the purpose of performing adjustments in Common Equity Tier 1, the institutions mentioned in art. 1 must consider the following elements, at least:

I – lapse of time required to settle positions held or to hedge, fully or in part, the risks involved;

II – average volatility in bid and offer spreads;

III – availability of independent market quotation;

IV – average and volatility of trading volumes, including during periods of stress;

V – market concentrations;

VI – aging of positions;

VII – relevance of positions involved in mark to model methodology in the valuation process; and

VIII – model risks not included in the assessment mentioned in section VII of Paragraph 1.

### **GENERAL PROVISIONS**

Article 9. The valuation methodologies provided for in art. 4, even if externally developed, and the assessment of prudential adjustments mentioned in art. 8 are the sole responsibility of the institution.

Article 10. The Central Bank of Brazil shall establish supplementary criteria and adopt the necessary measures for the implementation of this Resolution.

Article 11. This Resolution enters into force on July 1, 2014.

Alexandre Antonio Tombini  
Governor of the Central Bank of Brazil