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COMMISSION DELEGATED REGULATION (EU) 2016/101

of 26 October 2015

supplementing Regulation (EU) No 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for prudent valuation under Article 105(14)

(Text with EEA relevance)

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CHAPTER I

GENERAL PROVISIONS

Article 1

Methodology for calculating Additional Valuation Adjustments (AVAs)

Institutions shall calculate the total additional valuation adjustments ('AVAs') necessary to adjust the fair values to the prudent value and shall calculate those AVAs quarterly according to the method provided in Chapter 3, unless they meet the conditions for applying the method provided in Chapter 2.

Article 2

Definitions

For the purpose of this Regulation the following definitions shall apply:

(a) 'valuation position' means a financial instrument or commodity or portfolio of financial instruments or commodities held in both trading and non-trading books, which are measured at fair value;

(b) 'valuation input' means a market observable or non-observable parameter or matrix of parameters that influences the fair value of a valuation position;

(c) 'valuation exposure' means the amount of a valuation position which is sensitive to the movement in a valuation input.

Article 3

Sources of market data

1. Where institutions calculate AVAs based on market data, they shall consider the same range of market data as the data used in the independent price verification ('IPV') process referred to in Article 105(8) of Regulation (EU) No 575/2013, as relevant, subject to the adjustments described in this Article.

2. Institutions shall consider a full range of available and reliable market data sources to determine a prudent value including each of the following, where relevant:

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(a) exchange prices in a liquid market;

(b) trades in the exact same or very similar instrument, either from the institution's own records or, where available, trades from across the market;

(c) tradable quotes from brokers and other market participants;

(d) consensus service data;

(e) indicative broker quotes;

(f) counterparty collateral valuations.

3. For cases where an expert-based approach is applied for the purpose of Articles 9, 10 and 11, alternative methods and sources of information shall be considered. including each of the following, where relevant:

(a) the use of proxy data based on similar instruments for which sufficient data is available;

(b) the application of prudent shifts to valuation inputs;

(c) the identification of natural bounds to the value of an instrument.

CHAPTER II

SIMPLIFIED APPROACH FOR THE DETERMINATION OF AVAs

Article 4

Conditions for use of the simplified approach

1. Institutions may apply the simplified approach described in this Chapter only if the sum of the absolute value of fair-valued assets and liabilities, as stated in the institution's financial statements under the applicable accounting framework, is less than EUR 15 billion.

2. Exactly matching, offsetting fair-valued assets and liabilities shall be excluded from the calculation of paragraph 1. For fair-valued assets and liabilities for which a change in accounting valuation has a partial or zero impact on Common Equity Tier 1 (‘CET1’) capital, their values shall only be included in proportion to the impact of the relevant valuation change on CET1 capital.

3. The threshold referred to in paragraph 1 shall apply on an individual and consolidated basis. Where the threshold is breached on a consolidated basis, the core approach shall be applied to all entities included in the consolidation.

4. Where institutions applying the simplified approach fail to meet the condition of paragraph 1 for two consecutive quarters, they shall immediately notify the relevant competent authority and shall agree on a plan to implement the approach referred to in Chapter 3 within the following two quarters.

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Article 5

Determination of AVAs under the simplified approach

Institutions shall calculate AVAs under the simplified approach as 0,1 % of the sum of the absolute value of fair-valued assets and liabilities which are included within the threshold calculation laid down in Article 4.

Article 6

Determination of total AVAs calculated under the simplified approach

For institutions applying the simplified approach, the total AVAs for the purpose of Article 1 shall be the AVA resulting from the calculation of Article 5.

CHAPTER III

CORE APPROACH FOR THE DETERMINATION OF AVAs

Article 7

Overview of the core approach

1. Institutions shall calculate AVAs under the core approach, by applying the following two-step approach:

(a) they shall calculate AVAs for each of the categories described in paragraphs 10 and 11 of Article 105 of Regulation (EU) No 575/2013 (‘category level AVAs’) according to paragraph 2 of this Article;

(b) they shall sum the amounts resulting from point (a) for each of the category level AVAs to provide the total AVAs for the purposes of Article 1.

2. For the purposes of point (a) of paragraph 1, institutions shall calculate category level AVAs in one of the following ways:

(a) according to Articles 9 to 17;

(b) where the application of Articles 9 to 17 is not possible for certain positions, according to a ‘fall-back approach’, whereby they shall identify the related financial instruments and calculate an AVA as the sum of the following:

(i) 100 % of the net unrealised profit on the related financial instruments;

(ii) 10 % of the notional value of the related financial instruments in the case of derivatives;

(iii) 25 % of the absolute value of the difference between the fair value and the unrealised profit, as determined in point (i), of the related financial instruments in the case of non-derivatives.

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For the purposes of point (b)(i) of the first paragraph, ‘unrealised profit’ shall mean the change, where positive, in fair value since trade inception, determined on a first-in-first-out basis.

Article 8

General provisions for the calculations of AVAs under the core approach

1. For fair-valued assets and liabilities for which a change in accounting valuation has a partial or zero impact on CET1 capital, AVAs shall only be calculated based on the proportion of the accounting valuation change that impacts CET1 capital.

2. In relation to the category level AVAs described in Articles 14 to 17, institutions shall aim to achieve a level of certainty in the prudent value that is equivalent to that set out in Articles 9 to 13.

3. AVAs shall be considered to be the excess of valuation adjustments required to achieve the identified prudent value, over any adjustment applied in the institution's fair value that can be identified as addressing the same source of valuation uncertainty as the AVA. Where an adjustment applied in the institution's fair value cannot be identified as addressing a specific AVA category at the level at which the relevant AVAs are calculated, that adjustment shall not be included in the calculation of AVAs.

4. AVAs shall always be positive, including at valuation exposure level, category level, both pre and post aggregation.

Article 9

Calculation of market price uncertainty AVA

1. Market price uncertainty AVAs shall be calculated at valuation exposure level (‘individual market price uncertainty AVAs’).

2. The market price uncertainty AVA shall only be assessed to have zero value where both of the following conditions are met:

(a) the institution has firm evidence of a tradable price for a valuation exposure or a price can be determined from reliable data based on a liquid two-way market as described in the second subparagraph of Article 338(1) of Regulation (EU) No 575/2013;

(b) the sources of market data set out in Article 3(2) do not indicate any material valuation uncertainty.

3. Where a valuation exposure cannot be shown to have a zero AVA, when assessing the market price uncertainty AVA institutions shall use the data sources defined in Article 3. In this case the calculation of the market price uncertainty AVA shall be performed as described in paragraphs 4 and 5.

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4. Institutions shall calculate AVAs on valuation exposures related to each valuation input used in the relevant valuation model.

(a) The granularity at which those AVAs shall be assessed shall be one of the following:

(i) where decomposed, all the valuation inputs required to calculate an exit price for the valuation position;

(ii) the price of the instrument.

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(b) Each of the valuation inputs referred to in point (a)(i) shall be treated separately. Where a valuation input consists of a matrix of parameters, AVAs shall be calculated based on the valuation exposures related to each parameter within that matrix. Where a valuation input does not refer to tradable instruments, institutions shall map the valuation input and the related valuation exposure to a set of market tradable instruments. Institutions may reduce the number of parameters of the valuation input for the purpose of calculating AVAs using any appropriate methodology provided the reduced parameters satisfy all of the following requirements:

(i) the total value of the reduced valuation exposure is the same as the total value of the original valuation exposure;

(ii) the reduced set of parameters can be mapped to a set of market tradable instruments;

(iii) the ratio of variance measure 2 defined below over variance measure 1 defined below, based on historical data from the most recent 100 trading days, is less than 0,1.

For the purposes of this paragraph, ‘variance measure 1’ shall mean profit and loss variance of the valuation exposure based on the unreduced valuation input and ‘variance measure 2’ shall mean profit and loss variance of the valuation exposure based on the unreduced valuation input minus the valuation exposure based on the reduced valuation input.

(c) Where a reduced number of parameters is used for the purpose of calculating AVAs, the determination that the criteria set out in point (b) are met shall be subject to independent control function review of the netting methodology and internal validation on at least an annual basis.

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5. Market price uncertainty AVAs shall be determined as follows:

(a) where sufficient data exists to construct a range of plausible values for a valuation input:

(i) for a valuation input where the range of plausible values is based on exit prices, institutions shall estimate a point within the range where they are 90 % confident they could exit the valuation exposure at that price or better;

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(ii) for a valuation input where the range of plausible values is created from mid prices, institutions shall estimate a point within the range where they are 90 % confident that the mid value they could achieve in exiting the valuation exposure would be at that price or better;

(b) where insufficient data exists to construct a plausible range of values for a valuation input, institutions shall use an expert-based approach using qualitative and quantitative information available to achieve a level of certainty in the prudent value of the valuation input that is equivalent to that targeted under point (a). Institutions shall notify competent authorities of the valuation exposures for which this approach is applied, and the methodology used to determine the AVA;

(c) institutions shall calculate the market price uncertainty AVA based on one of the following approaches:

(i) they shall apply the difference between the valuation input values estimated according to either point (a) or point (b), and the valuation input values used for calculating fair value to the valuation exposure of each valuation position;

(ii) they shall combine the valuation input values estimated according to either point (a) or point (b) and they shall revalue valuation positions based on those values. Institutions shall then take the difference between the revalued positions and fair-valued positions.

6. Institutions shall calculate the total category level AVA for market price uncertainty by applying to individual market price uncertainty AVAs the formulae for either Method 1 or Method 2 laid down in the Annex.

Article 10

Calculation of close-out costs AVA

1. Close-out costs AVAs shall be calculated at valuation exposure level (‘individual close-out costs AVAs’).

2. When an institution has calculated a market price uncertainty AVA for a valuation exposure based on an exit price, the close-out cost AVA may be assessed to have zero value.

3. Where an institution applies the derogation referred to in paragraph 5 of Article 105 of Regulation (EU) No 575/2013, the close-out costs AVA may be assessed to have zero value, on the condition that the institution provides evidence that it is 90 % confident that sufficient liquidity exists to support the exit of the related valuation exposures at mid-price.

4. Where a valuation exposure cannot be shown to have a zero close-out costs AVA, institutions shall use the data sources defined in Article 3. In this case the calculation of the close-out costs AVA shall be performed as described in paragraphs 5 and 6 of this Article.

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5. Institutions shall calculate close-out costs AVAs on valuation exposures related to each valuation input used in the relevant valuation model.

(a) The granularity at which those close-out costs AVAs shall be assessed shall be one of the following:

(i) where decomposed, all valuation inputs required to calculate an exit price for the valuation position;

(ii) the price of the instrument.

(b) Each of the valuation inputs each of the valuation inputs referred to in point (a)(i) shall be treated separately. Where a valuation input consists of a matrix of parameters, institutions shall assess the close-out cost AVA based on the valuation exposures related to each parameter within that matrix. Where a valuation input does not refer to tradable instruments, institutions shall explicitly map the valuation input and the related valuation exposure to a set of market tradable instruments. Institutions may reduce the number of parameters of the valuation input for the purpose of calculating AVAs using any appropriate methodology provided the reduced parameters satisfy all of the following requirements:

(i) the total value of the reduced valuation exposure is the same as the total value of the original valuation exposure;

(ii) the reduced set of parameters can be mapped to a set of market tradable instruments;

(iii) the ratio of variance measure 2 over variance measure 1, based on historical data from the most recent 100 trading days, is less than 0,1.

For the purposes of this paragraph, variance measure 1 shall mean profit and loss variance of the valuation exposure based on the unreduced valuation input and variance measure 2 shall mean profit and loss variance of the valuation exposure based on the unreduced valuation input minus the valuation exposure based on the reduced valuation input.

(c) Where a reduced number of parameters is used for the purpose of calculating AVAs, the determination that the criteria set out in point (b) are met shall be subject to independent control function review and internal validation on at least an annual basis.

6. Close-out costs AVAs shall be determined as follows:

(a) where sufficient data exists to construct a range of plausible bid-offer spreads for a valuation input, institutions shall estimate a point within the range where they are 90 % confident that the spread they could achieve in exiting the valuation exposure would be at that price or better;

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(b) where insufficient data exists to construct a plausible range of bid-offer spreads, institutions shall use an expert-based approach using qualitative and quantitative information available to achieve a level of certainty in the prudent value that is equivalent to that targeted where a range of plausible values is available. Institutions shall notify competent authorities of the valuation exposures for which this approach is applied, and the methodology used to determine the AVA;

(c) institutions shall calculate the close-out costs AVA by applying 50 % of the estimated bid-offer spread calculated in accordance with either point (a) or point (b) to the valuation exposures related to the valuation inputs defined in paragraph 5.

7. Institutions shall calculate the total category level AVA for close-out costs by applying to the individual close-out costs AVAs the formulae for either Method 1 or Method 2 laid down in the Annex.

Article 11

Calculation of model risk AVA

1. Institutions shall estimate a model risk AVA for each valuation model ('individual model risk AVA') by considering valuation model risk which arises due to the potential existence of a range of different models or model calibrations, which are used by market participants, and the lack of a firm exit price for the specific product being valued. Institutions shall not consider valuation model risk which arises due to calibrations from market derived parameters, which shall be captured according to Article 9.

2. The model risk AVA shall be calculated using one of the approaches defined in paragraphs 3 and 4.

3. Where possible, institutions shall calculate the model risk AVA by determining a range of plausible valuations produced from alternative appropriate modelling and calibration approaches. In this case, institutions shall estimate a point within the resulting range of valuations where they are 90 % confident they could exit the valuation exposure at that price or better.

4. Where institutions are unable to use the approach defined in paragraph 3, they shall apply an expert-based approach to estimate the model risk AVA.

5. The expert-based approach shall consider all of the following:

(a) complexity of products relevant to the model;

(b) diversity of possible mathematical approaches and model parameters, where those model parameters are not related to market variables;

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(c) the degree to which the market for relevant products is ‘one way’;

(d) the existence of unhedgeable risks in relevant products;

(e) the adequacy of the model in capturing the behaviour of the pay-off of the products in the portfolio.

Institutions shall notify competent authorities of the models for which this approach is applied, and the methodology used to determine the AVA.

6. Where institutions use the method described in paragraph 4, the prudence of the method shall be confirmed annually by comparing the following:

(a) the AVAs calculated using the method described in paragraph 4, if it were applied to a material sample of the valuation models for which the institution applies the method in paragraph 3; and

(b) the AVAs produced by the method in paragraph 3 for the same sample of valuation models.

7. Institutions shall calculate the total category level AVA for model risk by applying to individual model risk AVAs the formulae for either Method 1 or Method 2 laid down in the Annex.

Article 12

Calculation of unearned credit spreads AVA

1. Institutions shall calculate the unearned credit spreads AVA to reflect the valuation uncertainty in the adjustment necessary according to the applicable accounting framework to include the current value of expected losses due to counterparty default on derivative positions.

2. Institutions shall include the element of the AVA relating to market price uncertainty within the market price uncertainty AVA category. The element of the AVA relating to close-out cost uncertainty shall be included within the close-out costs AVA category. The element of the AVA relating to model risk shall be included within the model risk AVA category.

Article 13

Calculation of investing and funding costs AVA

1. Institutions shall calculate the investing and funding costs AVA to reflect the valuation uncertainty in the funding costs used when assessing the exit price according to the applicable accounting framework.

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2. Institutions shall include the element of the AVA relating to market price uncertainty within the market price uncertainty AVA category. The element of the AVA relating to close-out cost uncertainty shall be included within the close-out costs AVA category. The element of the AVA relating to model risk shall be included within the model risk AVA category.

Article 14

Calculation of concentrated positions AVA

1. Institutions shall estimate a concentrated position AVA for concentrated valuation positions (‘individual concentrated positions AVA’) by applying the following three-step approach:

(a) they shall identify concentrated valuation positions;

(b) for each identified concentrated valuation position, where a market price applicable for the size of the valuation position is unavailable, they shall estimate a prudent exit period;

(c) where the prudent exit period exceeds 10 days, they shall estimate an AVA taking into account the volatility of the valuation input, the volatility of the bid offer spread and the impact of the hypothetical exit strategy on market prices.

2. For the purposes of point (a) of paragraph 1, the identification of concentrated valuation positions shall consider all of the following:

(a) the size of all valuation positions relative to the liquidity of the related market;

(b) the institution's ability to trade in that market;

(c) the average daily market volume and typical daily trading volume of the institution.

Institutions shall establish and document the methodology applied to determine concentrated valuation positions for which a concentrated positions AVA shall be calculated.

3. Institutions shall calculate the total category level AVA for concentrated positions AVA as the sum of individual concentrated positions AVAs.

Article 15

Calculation of future administrative costs AVA

1. Where an institution calculates market price uncertainty and close-out cost AVAs for a valuation exposure, which imply fully exiting the exposure, the institution may assess a zero AVA for future administrative costs.

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2. Where a valuation exposure cannot be shown to have a zero AVA according to paragraph 1, institutions shall calculate the future administrative cost AVA (‘individual future administrative costs AVA’) considering the administrative costs and future hedging costs over the expected life of the valuation exposures for which a direct exit price is not applied for the close-out costs AVA, discounted using a rate which approximates the risk free rate.

3. For the purposes of paragraph 2, future administrative costs shall include all incremental staffing and fixed costs that are likely to be incurred in managing the portfolio but a reduction in these costs may be assumed as the size of the portfolio reduces.

4. Institutions shall calculate the total category level AVA for future administrative costs AVA as the sum of individual future administrative costs AVAs.

Article 16

Calculation of early termination AVA

Institutions shall estimate an early termination AVA considering the potential losses arising from non-contractual early terminations of client trades. The early termination AVA shall be calculated taking into account the percentage of client trades that have historically terminated early and the losses that arise in those cases.

Article 17

Calculation of operational risk AVA

1. Institutions shall estimate an operational risk AVA by assessing the potential losses that may be incurred as a result of operational risk related to valuation processes. This estimate shall include an assessment of valuation positions judged to be at-risk during the balance sheet substantiation process, including those due to legal disputes.

2. Where an institution applies the Advanced Measurement Approach for Operational Risk as specified in Part Three, Title III, Chapter 4 of Regulation (EU) No 575/2013, it may report a zero operational risk AVA on condition that it provides evidence that the operational risk relating to valuation processes, as determined in accordance with paragraph 1, is fully accounted for by the Advanced Measurement Approach calculation.

3. In other cases than those referred to in paragraph 2, the institution shall calculate an operational risk AVA of 10 % of the sum of the aggregated category level AVAs for market price uncertainty and close-out costs.

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CHAPTER IV

DOCUMENTATION, SYSTEMS AND CONTROLS

Article 18

Documentation requirements

1. Institutions shall document appropriately the prudent valuation methodology. This documentation shall include internal policies providing guidance on all of the following points:

(a) the range of methodologies for quantifying AVAs for each valuation position;

(b) the hierarchy of methodologies for each asset class, product, or valuation position;

(c) the hierarchy of market data sources used in the AVA methodology;

(d) the required characteristics of market data to justify a zero AVA for each asset class, product, or valuation position;

(e) the methodology applied where an expert based approach is used to determine an AVA;

(f) the methodology for determining whether a valuation position requires a concentrated position AVA;

(g) the assumed exit horizon for the purpose of calculating AVAs for concentrated positions, where relevant;

(h) the fair-valued assets and liabilities for which a change in accounting valuation has a partial or zero impact on CET1 capital according to Article 4(2) and Article 8(1).

2. Institutions shall also maintain records to allow the calculation of AVAs at valuation exposure level to be analysed, and information from the AVA calculation process shall be provided to senior management to allow an understanding of the level of valuation uncertainty on the institution's portfolio of fair-valued positions.

3. The documentation specified in paragraph 1 shall be reviewed at least annually and approved by senior management.

Article 19

Systems and controls requirements

1. AVAs shall be authorised initially, and monitored subsequently, by an independent control unit.

2. Institutions shall have effective controls related to the governance of all fair-valued positions, and adequate resources to implement those controls and ensure robust valuation processes even during a stressed period. These shall include all of the following:

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(a) at least an annual review of valuation model performance;

(b) management sign-off on all significant changes to valuation policies;

(c) a clear statement of the institution's risk appetite for exposure to positions subject to valuation uncertainty which is monitored at an aggregate institution-wide level;

(d) independence in the valuation process between risk taking and control units;

(e) a comprehensive internal audit process related to valuation processes and controls.

3. Institutions shall ensure there are effective and consistently applied controls related to the valuation process for fair-valued positions. These controls shall be subject to regular internal audit review. The controls shall include all of the following:

(a) a precisely defined institution-wide product inventory, ensuring that every valuation position is uniquely mapped to a product definition;

(b) valuation methodologies, for each product in the inventory covering choice and calibration of model, fair value adjustments, AVAs, independent price verification methodologies applicable to the product, and the measurement of valuation uncertainty;

(c) validation process ensuring that, for each product, both the risk-taking and relevant control departments approve the product-level methodologies described in point (b) and certify that they reflect the actual practice for every valuation position mapped to the product;

(d) defined thresholds based on observed market data for determining when valuation models are no longer sufficiently robust;

(e) a formal IPV process based on prices independent from the relevant trading desk;

(f) a new product approval processes referencing the product inventory and involving all internal stakeholders relevant to risk measurement, risk control, financial reporting and the assignment and verification of valuations of financial instruments;

(g) a new deal review process to ensure that pricing data from new trades are used to assess whether valuations of similar valuation exposures remain appropriately prudent.

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CHAPTER V

FINAL PROVISIONS

Article 20

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.

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ANNEX

Formulae to be used for the purpose of aggregating AVAs under Article 9(6), Article 10(7) and Article 11(7)

Formula for Method 1

$$APVA = (FV - PV) - \alpha \cdot (FV - PV) = (1 - \alpha) \cdot (FV - PV)$$

$$AVA = \Sigma\ APVA$$

Formula for Method 2

$$APVA = \max\{0, (FV - PV) - \alpha \cdot (EV - PV)\} = \max\{0, FV - \alpha \cdot EV - (1 - \alpha) \cdot PV\}$$

$$AVA = \Sigma\ APVA$$

Where:

FV = The valuation exposure-level fair value after any accounting adjustment applied in the institution's fair value that can be identified as addressing the same source of valuation uncertainty as the relevant AVA,

PV = The valuation exposure-level prudent value determined in accordance with this Regulation,

EV = The expected value at a valuation exposure level taken from a range of possible values,

α = The aggregation factor,

APVA = The valuation exposure-level AVA after adjusting for aggregation,

AVA = The total category-level AVA after adjusting for aggregation.

Institutions shall set the aggregation factor 'α' at 66 % until 31 December 2020, after which they shall set the aggregation factor at 50 %.'