

EBA/2018/ITS/04

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Final Report

Draft Implementing Technical Standards amending Commission Implementing Regulation (EU) 2016/2070 with regard to the benchmarking of internal models

Contents

1. Executive summary	3
2. Background and rationale	5
3. Draft Implementing Technical Standards amending Commission Implementing Regulation (EU) 2016/2070 on benchmarking of internal models	14
4. Accompanying document	17

1. Executive summary

Article 78 of Capital Requirements Directive 2013/36/EU (CRD IV) requires competent authorities to conduct an annual assessment of the quality of internal approaches used for the calculation of own funds requirements. To assist competent authorities in this assessment, the EBA calculates and distributes benchmark values, which allows a comparison of individual institutions' risk parameters. These benchmark values are based on data submitted by institutions as laid out in EU Regulation 2016/2070, which specifies the benchmarking portfolios, templates and definitions to be used as part of the annual benchmarking exercises.

Market risk

The current set of market portfolios is based on the Basel Committee on Banking Supervision portfolios and has been used in the benchmarking exercises (hereafter BMs) for the years 2016 and 2017 (the market portfolios will also be applicable in 2018). Experiences during the 2016 and 2017 exercises have shown that the participating institutions' expectation of a smooth implementation has only partly been fulfilled. One reason for this might be that original portfolios, which do not only consist of plain vanilla instruments, were designed for internationally active institutions. Medium-sized institutions (which represent the majority of the participating institutions in the EBA BM) had significant problems in both valuing and modelling certain portfolios with their internal market risk models, which might have led to miscalculations of both the initial market values (IMV) and risk measures. Additionally, even some more experienced institutions reported that they had difficulties in valuing and modelling certain instruments. The portfolios for the 2018 benchmarking exercise were consequently streamlined by deleting some portfolios and simplifying others, which should reduce the issues experienced in past exercises.

Moreover, repeated use of the same hypothetical portfolios across a number of years might allow institutions to engage in 'window dressing', using past calculations to get closer to the potential benchmarks. Such behaviour will be minimised with the introduction of new portfolios. Therefore, the EBA proposes a new set of market risk benchmarking portfolios that take on board suggestions and feedback from institutions during interviews held as part of past market risk benchmarking exercises.

Credit risk

The benchmarking exercises carried out in 2016 and 2017 highlighted some potential for improving the definition of the benchmarking portfolios and the reporting instructions. Clear and unambiguous definitions and instructions are necessary to foster a unique and coherent interpretation and implementation of the reporting requirements across institutions and, in turn, to lead to better data quality and more accurate benchmark values. The main changes related to credit risk are the following:

- separation of on-balance-sheet and off-balance-sheet exposures;
- replacement of so-called RWA* and RWA** measures with confidence intervals;
- separation of specialised lending exposures and other credit risk exposures;
- making consistent use of the economic sector classification for portfolios covering exposures to sovereigns and institutions; and
- refinement of the split by collateral type.

Moreover, it should be noted that Article 7 will be deleted from the ITS, as none of the transitional provisions is applicable any more. This refers in particular to the computation of own funds requirements for credit risk resulting from the application of the standardised approach (SA) as referred to in column 180 of templates 102 and 103 of Annex III. Previously, institutions that started to use the internal rating based (IRB) approach before January 2010 were exempted from reporting this data field. To account for potentially high implementation costs, in particular in the light of the upcoming changes from the revised Basel III standard, it is clarified in Annex IV that this data field is mandatory for high default portfolios (HDP) (template 103) and voluntary for low default portfolios (LDP) (template 102) in the 2019 benchmarking exercise.

Implementation

Given the type of changes introduced by these draft ITS to the benchmarking portfolios as well as the reporting instructions and templates, the relevant annexes are replaced in their entirety with those set out in these draft ITS in order to create a consolidated version of the updated draft ITS package.

These revised benchmarking portfolios and reporting requirements are expected to be applicable for the submission of initial market valuation data in Q3 2018 and of other market and credit risk data in 2019 (i.e. with reference date 31 December 2018).

Next steps

The draft ITS will be submitted to the Commission for endorsement before being published in the *Official Journal of the European Union*. The technical standards will apply 20 days after publication in the Official Journal of the Commission.

2. Background and rationale

Article 78 of Directive 2013/36/EU (CRD IV) requires competent authorities to conduct an annual assessment of the quality of internal approaches used for the calculation of own funds requirements. The same article requires the EBA to produce a report to assist competent authorities in this assessment. The EBA's report is based on data submitted by institutions in accordance with Regulation (EU) 2016/2070, which specifies the benchmarking portfolios, templates, definitions and IT solutions that should be used as part of the annual benchmarking exercises by institutions using internal approaches for market and credit risk.

As part of these annual benchmarking exercises, the EBA collects feedback from institutions as regards the clarity of the benchmarking portfolios and reporting instructions as well as from competent authorities as regards the relevance of the portfolios and the accuracy of benchmark values. Feedback from institutions is mainly gathered through interviews with selected institutions and direct contact between institutions and competent authorities, while feedback from competent authorities is shared with the EBA via a dedicated expert group dealing with the benchmarking of internal models.

Some of the feedback received suggested changes to Regulation (EU) 2016/2070 which were deemed necessary to provide clearer instructions of reporting requirements, better data validation and more relevant portfolios for which benchmark values can be calculated. The changes are described separately for market risk and credit risk in the following sections.

2.1 Market risk changes

The market risk (MR) benchmarking exercise is a market risk-weighted assets ('MRWA') variability assessment performed across institutions that have been granted permission to calculate their own funds requirements using internal models for one or more of the following market risk categories:

- general risk of equity instruments;
- specific risk of equity instruments;
- general risk of debt instruments;
- specific risk of debt instruments;
- foreign exchange risk;
- commodities risk; and
- correlation trading.

Pursuant to Article 362 of Regulation (EU) No 575/2013 (CRR), the general risk component of debt instruments should refer to the level of interest rates. Similarly, the general risk component of equity instruments should refer to the change in value of broad equity-market movements.

Institutions granted approval for only general risk of equity or debt instruments (in accordance with Article 363 of the CRR) may use a broader definition of general risk (for example by including elements of credit spread risk (e.g. sector-related credit spread) in the interest rate general risk). A separate permission is required for each risk category. Many institutions do not have permission for internal models for all risk categories. The number of contributions for each hypothetical portfolio in this exercise thus varies across the sample.

Institutions granted permission to use the internal model for calculating market risk own funds requirements for only one or a selection of the aforementioned risk categories, in accordance with Article 363(1) of the CRR ('partial use'), exclude certain risks or positions from the scope of the internal model approval. In this case, the OFR for the risk categories outside the scope of the internal model is calculated according to the standardised approach.

Besides this, as set out in Article 369(1)(c) of the CRR, institutions should conduct validation exercises on hypothetical portfolios in order to test that the model is able to account for particular structural features. These portfolios should not be limited to the portfolios defined in BM; however, the EBA BM is a useful starting point for institutions to meet this legislative requirement.

The MR measures, requested from institutions' internal models/modelling units, are value at risk (VaR), stressed value at risk (sVaR), incremental risk charge (IRC) and all price risk (APR) figures for specific financial instruments and aggregated portfolios. Moreover, a preliminary assessment of initial market valuation (IMV) for each instrument detects the pricing ability of the participating institutions.

The new proposal set out in these ITS takes into account a change in the dates for the submissions in order to facilitate a more efficient process¹; more detailed information about sVaR models; and, more importantly, a substantial change in the benchmarking portfolios that allows more values for supervisory purposes.

This new set of market risk benchmarking portfolios has the following three-layer structure:

- The first layer consists of a set of financial instruments for which IMV shall be computed.
- The second layer consists of individual portfolios defined by combining different instruments, for the purpose of assessing the effect of grouping instruments as well as the effect of partial or full hedging.
- The third layer consists of the definition of the aggregated portfolios, for the purpose of assessing the diversification effects and the implied capital requirements.

¹The rationale was to give institutions more time to check the IMVs before submitting the risk measures. In addition to that, institutions are asked to report MR data earlier to allow more in-depth analysis.

2.2 Credit risk changes

Separate on- and off-balance-sheet exposures

The current approach, determined by Q&A 2017_3216, is that, in those cases where the CRR does not define a conversion factor (in particular for on-balance-sheet exposures), the CCF used to calculate the weighted average CCF (e.g. column 100 of Annex III C 103) shall be assumed to be 100%.

Therefore, the reported CCF value (column 100 of Annex III C 103) depends mainly on the share of on-/off-balance-sheet exposures, which obscures the view on the output of the internal models estimating the conversion factors (in the advanced IRB approach (AIRB)).

Example:

- Bank A — On-balance exposure: 80 units; off-balance exposure: 20 units. Conversion factor: 50%. It follows that the reported CCF value (column 100) is $(80 \times 100\% + 20 \times 50\%)/100 = 90\%$.
- Bank B — On-balance exposure: 90 units; off-balance exposure: 10 units. Conversion factor: 0%. It follows that the reported CCF value (column 100) is $(90 \times 100\% + 10 \times 0\%)/100 = 90\%$.

While Bank A appears to apply appropriate conversion factor estimation, Bank B is clearly suspicious and should be flagged. This, however, will not be the case in the benchmarking exercise, since Bank A and Bank B both report the same value in column 100.

The CP therefore contained a proposal to explicitly separate on- and off-balance-sheet exposures so that they can be analysed separately (see new column 180 'Balance sheet recognition' created for this purpose in C 102 and C 103, Annex I and Annex II). For off-balance exposures, a weighted CCF should be reported, and these values can be benchmarked since they reflect the outcomes of internal models (in the AIRB approach).

However, exposures, which are on-balance-sheet items or off-balance-sheet items and are included as securities financing transactions, derivatives and long settlement transactions or stem from contractual cross product netting, are reported not under the proposed on- or off-balance-sheet portfolios but under 'other' portfolios (as specified in column 180 in C 102 and C 103 of Annex I).

Replace RWA* and RWA** with confidence intervals (C 103.00)

Currently, the interpretation of values reported as RWA* (and RWA**) is raising some issues.

RWA* is the hypothetical risk-weighted exposure amount that results from the application of the PD* values instead of the institution's PD values, for each exposure and where $PD^* = \max(PD, p^*)$ and p^* is defined as follows:

$$p^* + \Phi^{-1}(q) \cdot \sqrt{\frac{p^* \cdot (1 - p^*)}{n}} \geq DR_{1y}$$

where:

Φ^{-1} = the inverse function of the standard normal (cumulative) distribution;

q = the confidence level set at 97.5%;

DR_{1y} = the case-weighted default rate of the year preceding the reference date, i.e. the number of obligors that were not in default and assigned the obligor grade under consideration exactly 1 year before the reference date and that defaulted during the latest year, divided by the number of obligors that were not in default and assigned the obligor grade under consideration exactly 1 year before the reference date;

n = the number of obligors that were not in default and assigned the obligor grade under consideration exactly 1 year before the reference date.

One particular problem is the floor (i.e. $PD^* = \max(PD, p^*)$) by which $PD^* = PD$ in most cases. Another problem is that p^* is an (overly) aggressive value compared with the default rate.

RWA^* is replaced with two quantities forming a confidence interval: $[RWA^-, RWA^+]$. Under this approach, RWA^- is defined by analogy with RWA^* with two differences: (i) the PD floor is removed, so that PD^* is truly determined by the observed default rate; (ii) the confidence $q = 97.5\%$ is lowered to $q = 90\%$. RWA^- then forms the lower bound of the confidence interval, since RWA^- describes the portfolio RWAs with a PD that is very aggressive with reference to the default rate. Analogously, a quantity RWA^+ is defined as the upper bound of the confidence interval, describing RWAs based on a PD that is very conservative with reference to the default rate. The formula for RWA^+ is essentially the same as the one for RWA^- (RWA^*), where, however, p^* is the largest value such that the inequality with the inequality sign changed from \geq to \leq is satisfied.

For RWA^- , this results in the following revised requirement:

Institutions shall calculate and report RWA^- for the following portfolios: corporate, corporate SME, retail SME, and retail secured by real estate at total portfolio level and country level. These portfolios are defined in Annex I, template 103, with the following portfolio IDs, respectively:

CORP_ALL_0086_**_****_**_Rx0

SMEC_ALL_0106_**_****_**_Rx0

SMER_ALL_0106_**_****_**_Rx0

MORT_ALL_0094_**_****_**_Rx0

RWA^- shall be the hypothetical risk-weighted exposure amount, after applying the SME supporting factor, that results from the application of the PD- values instead of the institution's PD values, for

each exposure. The remaining parameters needed in the computation shall not be subject to change.

PD- shall be based on a calculation performed separately for each obligor grade. The obligor grades as reported in column 005 of template C 08.02 of Annex I of Regulation (EU) No 680/2014 (cf. Q&A 2016_2782) shall be used (see Annex II of Regulation (EU) No 680/2014, template C 08.01 column 010 and template C 08.02 for instructions).

For each obligor grade, p^- shall be the smallest positive value satisfying the equation:

$$p^- + \Phi^{-1}(q) \cdot \sqrt{\frac{p^- \cdot (1 - p^-)}{n}} \geq DR_{1y}$$

where:

Φ^{-1} = the inverse function of the standard normal (cumulative) distribution;

q = the confidence level set at 90%;

DR_{1y} = the case-weighted default rate of the year preceding the reference date, i.e. the number of obligors that were not in default and assigned the obligor grade under consideration exactly 1 year before the reference date and which defaulted during the latest year, divided by the number of obligors that were not in default and assigned the obligor grade under consideration exactly 1 year before the reference date;

n = the number of obligors that were not in default and assigned the obligor grade under consideration exactly 1 year before the reference date.

For each obligor, PD- shall be equal to p^- , where p^- shall be calculated in accordance with the above formula for the obligor grade assigned to the obligor.

RWA+ is analogous to RWA-, taking into account for each obligor grade p^+ as the largest positive value satisfying the equation:

$$p^+ - \Phi^{-1}(q) \cdot \sqrt{\frac{p^+ \cdot (1 - p^+)}{n}} \leq DR_{1y}$$

The rationale for the changed metric is that it allows a direct comparison of where the actual RWA of the institution's portfolio lie in relation to the confidence interval [RWA-, RWA+] and thus immediately shows the degree of conservatism applied by the institution.

Specialised lending (C 102.00)

Currently, portfolio definitions do not require specialised lending exposures to be separated from other exposures to corporates, unless banks are using the ‘specialised lending slotting criteria’ approach to determine RWA. Analysing various types of exposure together does not appear to be a natural choice, given the totally different character of these exposures and the typically rather different PDs and LGDs. It is reasonable to expect that a large part of PD/LGD/RWA variability among banks is caused by the different proportions of ‘corporate — other’ versus ‘corporate — specialised lending’ in the portfolios and not by differences in internal models.

Specialised lending exposures shall no longer be mixed with other credit risk exposures — portfolios will be defined with a new dimension, ‘Type of exposure’, which defines whether or not specialised lending exposures are to be included. Specific portfolios covering specialised lending exposures are defined in table 102 of Annex I. No other portfolios will include specialised lending exposures.

Specialised lending (C 101.00)

The list of corporate counterparties in C 101 is designed essentially as a list of ‘corporate — other’ counterparties, so that, typically, banks should not have specialised lending exposures to these counterparties.

It is clarified that specialised lending exposures are excluded from the scope of C 101.

Institution portfolios — sector of counterparty (C 102.00)

Currently, for institution portfolios, the sector of counterparty (column 080 in Annex I C 102) is either ‘credit institutions’ or ‘other financial corporations’. In addition, ‘not applicable’ is used for overall portfolios.

New portfolio IDs for the missing counterparty sector ‘general governments’ have been introduced to allow a complete breakdown.

Sovereign portfolios — sector of counterparty (C 102.00)

Currently, for sovereign portfolios, i.e. for the exposure class ‘central governments and central banks’, the sector of counterparty (column 080 in Annex I C 102) is ‘not applicable’, while the counterparty (column 130 in Annex I of C 102) is defined as either ‘public sector entities’ or ‘counterparties other than public sector entities’.

The counterparty sectors ‘central banks’, ‘general governments’ and ‘credit institutions’ are introduced by analogy with the portfolios for institutions. This replaces the current usage of the concept ‘public sector entities’ as reconciling the FINREP sector definitions with the definition of ‘public sector entities’ does not look reasonable.

Missing portfolios by collateral type (C 102.00)

None of the portfolios of template C 102.00 of Annex I has the collateral type (g) ‘credit derivatives’ or (h) ‘guarantee’. This leads to discrepancies between the sum of all portfolios with defined collateral type and the total. Some banks suggested changing towards complete breakdowns of portfolios, which would allow validations to be put in place and more automated data sourcing.

1. With respect to the terminology, it is proposed to isolate three broad methodologies that are currently used in the own fund computations:
 - i. RW substitution, where the unfunded credit protection is taken into account by substituting the risk weight of the initial obligor by the risk weight of the protection provider and applying it to the covered portion of the exposure value, as per Article 235 of the CRR. The exposure is reported as if it were a direct exposure to the guarantor, meaning that it is reported under the asset class of the guarantor and no longer that of the obligor.
 - ii. Risk parameters (PD and/or LGD) substitution, where the risk parameter(s) of the guarantor is (are) used instead of the risk parameters of the obligor. Under this approach, there could be a change in asset class for the purpose of the reporting.
 - iii. Risk parameters (PD and/or LGD) adjustment, where the unfunded credit protection is directly taken into account in the model, for instance as a risk driver. Under this approach, there should not be any change in asset class for the purpose of the reporting.
2. **For simplicity, the current draft ITS requires the reporting of the sub-portfolios (g), (h) and (i) only if risk parameters are adjusted because of the existence of guarantees or derivatives.** In detail, the ITS requirements depends on how the credit risk mitigation (CRM) is taken into account:
 - a. For RW substitution: original exposures under SA are not reported anyway. For original exposure under the IRB approach, the covered portion (from an SA guarantor) would not be reported too, since the RW of the guarantor is computed using the SA.
 - b. For risk parameters (PD and/or LGD) substitution: the covered part is reported as an ‘unsecured exposure’ in the guarantor asset class. The uncovered part is reported as an ‘unsecured exposure’ in the obligor asset class (this treatment mirrors the COREP approach).
 - c. For risk parameters (PD and/or LGD) adjustment: these exposures are reported under the newly created guarantee and credit derivative portfolios in the obligor asset class (sub-portfolios (g), (h) and (i)).

Proposed treatment		Guarantor		
		STD	FIRB	AIRB
Initial guaranteed exposure	STD	Not reported	Not reported	
	FIRB	RW substitution — Covered part: not reported as the RW of the guarantor is computed using the SA — Uncovered part: reported as unsecured under the asset class of the of the obligor Adjustment of PD Reported under sub- <u>portfolio (g), (h) or (i)</u> of the obligor	PD substitution: — Covered part: reported <u>as unsecured</u> under the asset class of the guarantor — Uncovered part: reported as unsecured under the asset class of the of the obligor Adjustment of PD Reported under sub- <u>portfolio (g), (h) or (i)</u> of the obligor	
	AIRB	RW substitution — Covered part: not reported, as the RW of the guarantor is computed using SA — Uncovered part: reported as unsecured under the asset class of the obligor Adjustment of PD/LGD parameters Reported under sub- <u>portfolio (g), (h) or (i)</u> of the obligor	PD and LGD substitution: — Covered part: reported <u>as unsecured</u> under the asset class of the guarantor — Uncovered part: reported as unsecured under the asset class of the of the obligor Adjustment of PD/LGD parameters Reported under sub- <u>portfolio (g), (h) or (i)</u> of the obligor	

Annual update of the counterparties (C 101.00)

The EBA will update the list of the counterparties in Annex I, C 101.00, in parallel with the industry feedback for this consultation paper. This update aims to remove counterparties that no longer exist and to improve the representativeness of the counterparty sample.

3. Draft Implementing Technical Standards amending Commission Implementing Regulation (EU) 2016/2070 on benchmarking of internal models

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

of XXX

**COMMISSION IMPLEMENTING REGULATION (EU) No .../... amending
Implementing Regulation (EU) 2016/2070 laying down implementing technical
standards with regard to templates, definitions and IT-solutions to be applied in the
Union for the reporting referred to in Article 78(2) of Directive 2013/36/EU of the
European Parliament and of the Council**

(Text with EEA relevance)

THE EUROPEAN COMMISSION,

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

Having regard to Directive 2013/36/EU of the European Parliament and of the Council of 26 June 2013 on access to the activity of credit institutions and the prudential supervision of credit institutions and investment firms, amending Directive 2002/87/EC and repealing Directives 2006/48/EC and 2006/49/EC², and in particular the third subparagraph of Article 78(8) thereof,

Whereas:

- (1) Commission Implementing Regulation (EU) 2016/2070³ specifies the reporting requirements for institutions to the European Banking Authority ('EBA') and to competent authorities in order for them to carry out their assessments of internal

² OJ L176, 27.06.2013, p. 338.

³ Commission Implementing Regulation (EU) 2016/2070 of 14 September 2016 laying down implementing technical standards for templates, definitions and IT solutions to be used by institutions when reporting to the European Banking Authority and to competent authorities in accordance with Article 78(2) of Directive 2013/36/EU of the European Parliament and of the Council (OJ L 328, 2.12.2016, p. 1.).

approaches ('benchmarking exercise') in accordance with Article 78 of Directive 2013/36/EU. Given that the benchmarking exercise is of at least annual duration, in accordance with Article 78(1) of Directive 2013/36/EU, and that the focus of the competent authorities' assessments and of the EBA's reports may change over time, exposures or positions that are included in the benchmarking portfolios, and therefore also reporting requirements, need to change accordingly. Therefore, it is appropriate to amend Annexes I, II, III, IV, V, VI and VII.

- (2) This Regulation is based on the draft implementing technical standards submitted by the EBA to the Commission.
- (3) EBA has conducted open public consultations on the draft regulatory technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the opinion of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010⁴.
- (4) Implementing Regulation (EU) 2016/2070 should be amended accordingly,

HAS ADOPTED THIS REGULATION:

Article 1

Implementing Regulation (EU) 2016/2070 is amended as follows:

- (1) Annex I is replaced by the text set out in Annex I to this Regulation.
- (2) Annex II is replaced by the text set out in Annex II to this Regulation.
- (3) Annex III is replaced by the text set out in Annex III to this Regulation.
- (4) Annex IV is replaced by the text set out in Annex IV to this Regulation.
- (5) Annex V is replaced by the text set out in Annex V to this Regulation.
- (6) Annex VI is replaced by the text set out in Annex VI to this Regulation.
- (7) Annex VII is replaced by the text set out in Annex VII to this Regulation.
- (8) Article 7 is deleted.

Article 2

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,

⁴ OJ L 331, 15.12.2010, p. 12.

Annexes:

- Annex I (credit risk benchmarking)
- Annex II (credit risk benchmarking)
- Annex III (credit risk benchmarking)
- Annex IV (credit risk benchmarking)
- Annex V (market risk benchmarking)
- Annex VI (market risk benchmarking)
- Annex VII (market risk benchmarking)

4. Accompanying document

4.1 Problem identification

Article 78 of Directive 2013/36/EU (CRD IV) requires competent authorities to conduct an annual assessment of the quality of internal model approaches used for the calculation of own funds requirements, and requires the EBA to produce a report to assist them in this assessment. The report of the EBA relies on data submitted by institutions, in accordance with Regulation (EU) 2016/2070, to specify the benchmarking portfolios, templates, definitions and IT solutions eligible for use by the institutions when applying internal model approaches for market and credit risk.

So far, the EBA market risk benchmarking exercise especially has been relying on the framework of the BCBS to construct the theoretical portfolios. However, this framework has assisted the EU institutions only to a certain extent, as they mainly address the needs of international (and most active on trading activities) institutions. In addition, these portfolios consist of a mixture of instruments (plain vanilla and exotic derivatives), used by international institutions, which implies that medium-sized and small institutions may have difficulties in using complex modelling and valuations of portfolios.

A potential miscalculation arising from the lack of complete guidance could lead to non-consistent application of internal models among institutions and under- or over-valuation of the reported figures. The current section assesses the impact of filling in the existing regulatory gap and thus the impact of the ITS.

4.2 Strategic and operational objectives

The current framework for the conduct of benchmarking exercises does not address the needs of enhanced guidance, more granular representation of the portfolios, or increased transparency of modelling and valuation of portfolios. This provides some leeway for free interpretations that could lead to inconsistent application of the intended scope and/or deviations from harmonising the supervisory and reporting rules of the EU regulation. To this end, the strategic objective of the current ITS implementation is the increased transparency and harmonisation of the current rules among EU institutions. The operational objective to achieve the strategic objective is to create a supervisory and reporting environment to ensure that institutions apply consistent modelling and valuation techniques and report this information in a sufficiently granular way, which will allow the assessment of the various risk factors and the conduct of more independent calculations.

Regarding the 2019 benchmarking exercise, there are additional requirements to split on- and off-balance-sheet exposure, additional requirements regarding the treatment of guarantees and derivatives serving as collateral in PD or LGD models, and revised requirements regarding the risk-weighted assets arising from the standardised approach.

The following sections examine the options that could create such an operational environment, as well as the net impact that the implementation of such solutions implies.

4.3 Baseline scenario

For most EU institutions, the current reporting status of modelling and valuations implies an increased operational cost and possibly unidentified mis-estimations that could affect the results of the benchmarking exercises. Since the extent, magnitude and direction of over- or under-valuations is not identifiable, the impact assessment focuses on the evaluation of the net impact on institutions' operations.

4.4 Options considered

When developing the current ITS, the EBA considered the following options:

Option 1: do nothing

This option implies that credit institutions continue reporting data for the benchmarking exercise using the current guidance and portfolios. The continuation of the current practice implies that credit institutions and the EBA have increased operational cost assigned to providing clarifications and ensuring the consistent submission of data. On the one hand, credit institutions would spend more time in seeking clarifications on the methodology, while, on the other hand, the EBA would have to work bilaterally with each of the competent authorities to clarify the preferred means of modelling and valuation.

The 'do nothing' option would theoretically save the EBA resources that otherwise would be dedicated to developing and drafting additional guidance to the participating institutions. Likewise, the EBA will not bear any one-off costs arising from the development of additional guidance on the benchmark exercises. Similarly, the national competent authorities (NCAs) and the participating credit institutions would not bear any similar one-off costs.

However, to refrain from drafting the present ITS would involve non-negligible ongoing operational cost attributed to the exchange of questions and answers interchangeably. This also implies the high risk of inconsistent application relating to benchmarking exercises and/or incorrect implementation of modelling, which diverges from the EBA's intended implementation.

Option 2: revision of the guidance related to the benchmarking exercises

The main arguments that support the revision of the guidance on the benchmarking exercises are (i) to enhance the benchmarking exercises across all EU credit institutions and (ii) to reduce the ongoing operational cost assigned to the excessive communication among credit institutions, NCAs and the EBA.

The current ITS could achieve the first objective by expanding and restructuring the benchmark portfolios, as suggested by the BCBS, to cover the entire spectrum of EU credit institutions. The

expansion of the portfolios would cover credit institutions' needs, as they have notified them to the EBA. Moreover, the vast majority of the EU credit institutions would receive complete guidance on the application of internal models and valuation methods, enhancing the harmonisation across the EU. At the same time, credit institutions would benefit from a streamlined framework that would reduce the cost of ongoing benchmarking exercises across the EU.

To operationalise the estimation of the counterparty credit risk exposures under different options in the 2019 benchmarking exercise, there is a need to separate the exposures into on- and off-balance-sheet exposures. Similarly, there should be an additional breakdown of the reporting of 'missing portfolios' to identify where banks rely on guarantees or derivatives as collateral in the LGD estimation, and the reporting of exposures under the standardised approach to enable the estimation of the RWA assigned to them.

4.5 Cost-benefit analysis

The principle of proportionality applies to all aspects of the impact assessment, including methodology, depth of analysis, level of detail and necessity of quantitative analysis. Consistent with this principle, the EBA follows the principle of proportionality when conducting the cost-benefit analyses. Given that the implementation of the current ITS would not have a detrimental impact, the following analysis focuses on the qualitative characteristics. In doing so, it provides rough estimations of the net monetary impact of the conduct of benchmarking exercises.

The net impact on capital requirements implied by the implementation of the current guidelines cannot be precisely assessed because, substantially, it would depend on further actions agreed by institutions with NCAs in response to the benchmarking exercise results; however, it is expected to be, on average, negligible.

Option 1

Costs: a slight increase in the additional operational cost attributed to the bilateral oral or written communication of best practices. This increase in the ongoing cost is expected to materialise over time, as consequence of the increased complexity or requirements of the benchmarking exercises.

Magnitude of the costs: negligible

Benefits: one-off benefits (reduction of the existing operational costs) of not dedicating human resources to drafting the present ITS. Magnitude of the benefits: negligible

Net impact (benefits minus costs): close to zero

Option 2

Costs: the one-off cost of dedicating EBA staff to the drafting of the ITS. There would be a negligible cost assigned to the need for the EBA to explain the new framework to the national competent authorities and, through them, to the participating credit institutions. Magnitude of the costs: negligible

Benefits: the benefits of this option arise from the harmonisation and transparency of the benchmarking exercises and the consistent modelling and valuation of the reported data. Although these benefits are not directly observable and are spread over time, they are not negligible and thus cannot be ignored. The additional breakdown of the reporting templates will allow supervisors to have a better view of the risks that banks bear and will help them to conduct independent calculations, especially in the area of the counterparty credit risk, the benchmarking of PD or LGDs that benefit from guarantees and derivatives as collaterals, and the risk-weighted assets under the standardised approach. This would benefit the transparency of the benchmarking exercise and facilitate the testing of alternative scenarios to test the impact of risk factors.

Magnitude of the benefits: low to medium

Net impact (benefits minus costs): positive (low to medium)

The cost-benefit analysis above indicates that option 2 is the preferred option, as it produces a positive, albeit low, impact. Thus, the cost-benefit analysis above justifies the production of the present ITS and its subsequent publication for consultation. Moreover, it is consistent with the feedback and requests of the participating credit institutions, which sought clarifications on the methodology of conducting BM exercises.

One aspect that is actually the same under both options but represents a change is that information on the standardised approach is collected. This was always planned but has been waived in previous years. However, the SA RWA serves as an alternative metric to assess the consistency of individual models. The original ITS allowed institutions that started to use the IRB approach before January 2010 not to report this information in the first 2 years and this was postponed for a further year for the 2018 exercise. This reflected the fact that it was considered to be a potentially quite burdensome exercise, as not all institutions have the information readily available.

In addition to this, it is also clear that the current standardised approach is likely to be replaced at some point, at the earliest in 2022. Enforcing the requirement would therefore require that banks (that have not already implemented the SA) implement the current standardised approach for 3-4 years and then subsequently change this.

Despite these caveats, it has been considered that the benefits outweigh the costs, as the SA RWA would be used in at least three different manners:

- i. As a relative risk control metric. Although many studies criticise the variability of IRB models, it should be noted that, from a regulatory

perspective, only undue variability is not desirable; indeed, risk-based variability is actually even warranted, as it is directly connected with the risk sensitivity of the frameworks. It is not easy to evaluate the level of risk of a portfolio in an objective manner, and the RWA SA gives a broad estimation of it. It is not perfect, but at least it is simple (the framework is already set up) and complements, for instance, RWA density measures. The collection would be used to compute the ratio of RWA IRB to RWA SA, which would give a clearer understanding of the dynamics of the portfolio.

- ii. As a direct comparison with the outcomes of IRB models. This was already done as part of the report on the Basel I output floor (Article 500 of the CRR); it can also be done as part of the future application of the new output floor.
- iii. As a data point on its own. The pure variability of RWA computed under the standardised approach (RWA SA) can be compared with the variability of RWA computed under the IRB approach (RWA IRB), which would highlight that pure variability is not necessarily reduced by the standardised approach. The collection would be used to compute the variance of RWA SA.

In order to diminish the operational burden for those banks that have not calculated SA RWA for their IRB portfolios so far, the revised ITS requires the computation of the SA RWA for the HDPs (i.e. those specified in C 103 of Annex I), while the reporting of SA RWA for LDPs (i.e. those specified in C 102 Annex I) remains voluntary.

It should be mentioned that, in the context of post-Basel III finalisation, regulatory efforts are now expected to focus on the evaluation and implementation of the framework, where benchmarking exercises are to play an increased role. The measurement of RWA variability over time will be needed, especially in a context of the general discussion on the viability of internal models. In particular, it will be important to provide an overall assessment of whether or not initiatives aimed at reducing variability, such as the finalisation of Basel III, the EBA IRB road map or the ECB TRIM process, have been successful. The argument for introducing the metric, namely to have an alternative metric to measure RWA variability, therefore remains relevant and it can be argued that banks have now been given sufficient respite to implement the SA reporting.

Summary of responses to the consultation and the EBA's analysis

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
<p>General comments Respondents generally welcomed the EBA proposal. However, several industry participants highlighted the fact that the benchmarking exercises represent an additional operational burden, especially adding to the BCBS QIS and EBA stress test exercises. Regarding the credit risk portfolios, respondents pointed out concerns that the requirements and data field specifications should be kept as stable as possible, to limit the aforementioned operational burden. In this context, respondents also asked for more clarity regarding the rationale in case new portfolios are added or existing portfolios are amended. Other comments, however, criticised the excessive granularity. In addition, respondents explained that the benchmarking exercise often proves to be problematic in that it requires institutions to book trades in their system hypothetically. Various industry practices in this regard (e.g. the use of testing environments or the introduction of dummy trades into the real system to account for the hypothetical type of trade) seem to lead to various degrees of difficulty in addressing this problem. The EBA acknowledges these views and, where meaningful and in line with the objective of the exercise, will take them into account in the future development of the benchmarking exercise. Industry respondents also commented that they would welcome more detailed information regarding the results (e.g. anonymised data supplementing the report) in order to make meaningful use of the results of the exercise.</p>			
<p>Responses to proposed changes in Consultation Paper EBA/CP/2017/23 — credit risk</p>			
Split of on- and off-balance-sheet exposure	Generally, industry welcomes the proposed separation of on-balance-sheet and off-balance-sheet exposures. However, two respondents claimed that additional clarity is needed on how to report the exposures from derivatives, securities financing transactions (SFTs) and contractual cross-product netting.	The EBA subgroup discussed the issue and concluded that it would be beneficial to separate transactions subject to counterparty credit risk, such as derivatives and securities financing transactions, in a separate portfolio.	It is clarified that exposures, which are on-balance-sheet items or off-balance-sheet items and which are included as securities financing transactions, derivatives and long settlement transactions or from contractual cross-product netting will be assigned a new characteristic of the data field 'Balance sheet recognition', e.g. '(c) other' in column 180 (in C 102 and C 103).

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Exclusion of specialised lending (SL) from large corporates	Industry generally welcomes the exclusion of SL counterparties from C 101. More clarity is, however, requested regarding SL portfolios in C 102.	<p>SL portfolios are out of the C 102 LCS. The idea is to exclude the LCS from the C 102 from the ITS 2020.</p> <p>Moreover, it should be noted that Annex II clarifies for column 020 in C 102 that the 'Large corporate sample' comprises all entities listed in template 101 of Annex I for which the portfolio name (column 090 of template 101) is 'Large corporate sample'. Therefore, specialised lending is out of scope for large corporates in c 102.</p>	None
Missing portfolios	Although the industry agrees that 'having a complete collateral breakdown is helpful', such a breakdown might be meaningful for only the portfolios under the double-default approach or where unfunded credit protection is directly modelled in LGD. In this context, it should be mentioned that there seem to be different practices regarding Article 183 of the CRR, treating the requirements for assessing the effect of guarantees and credit derivatives where own estimates of LGDs are used.	The EBA considers that the treatment of guarantees and credit derivatives under FIRB and AIRB approaches is divergent in practice. In order to account for the comment that exposure that is shifted to a different portfolio because of guarantees and credit derivatives does not constitute a sub-portfolio of the originally considered portfolio any more, it is clarified that these sub-portfolios should contain exposures only where guarantees and credit derivatives are portfolios under the double-default approach or where unfunded credit protection is directly modelled in LGD.	Clarification
Reducing complexity	<p>In a number of comments, the industry suggested reducing the complexity of the portfolios. Among these comments, the following proposals were made:</p> <ul style="list-style-type: none"> Reviewing the breakdowns based on Type of Facility in C 102.00 and C 103.00. 	A number of changes are proposed by the industry for the purpose of reducing the complexity of the data submission. However, as such changes require a more detailed review of the data specification, the EBA will take these comments into account in the development of the future benchmarking.	None

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<p>Excessive granularity (e.g. align to full/medium/low-medium/low risk).</p> <ul style="list-style-type: none"> High-default portfolios: too many portfolios with a low number of obligors/exposures might bias the values reported. Sovereign portfolios in C 102 are biased because of the PPU. Exclude them or emphasise this limitation in the report. Scope of exercise: a single report at group level will provide enough information. 	<p>For C 101 and C 103, we are currently not asking the type of facility (Annex I).</p>	
Metrics	<p>A number of comments relate to the proposed metrics to assess variability, as well as to the data which is currently collected for the purpose of applying these metrics.</p> <ul style="list-style-type: none"> The industry considers that, depending on the rating philosophy in the underlying rating models, <i>'values below RWA- or above RWA+ can be justifiable.'</i> 	<p>The EBA acknowledges these comments and aims to consider them in the analysis of the benchmarking parameters to the extent that this is meaningful and possible.</p> <p>In the context of interpreting the results of the 2019 BM exercise, the EBA will take into account the guidance laid down in the GL on PD and LGD estimation. For example, paragraph 88 of those GL tackles the point or period of time that has been taken into account for the purpose of calibration and which is a main driver of the resulting dynamics (i.e. point-in-time or through the cycle) of the PD estimations and capital requirements. Paragraph 92 of those GL (requiring calibration tests at the level of</p>	None

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
		calibration segments and at the level of grades and pools) may also be relevant in this context.	
	<ul style="list-style-type: none"> All parameters at 31 December 2018 except DR1Y-5Y and LR1Y-5Y. Therefore, the PD considered does not match the requested realised risk parameters. Thus, the analysis cannot be considered a meaningful back-testing measure. Comparison of LGD versus LR1Y: different underlying variables: long default history versus 1Y observation period. 	The EBA acknowledges these drawbacks and will be aware of these caveats when analysing the results.	
SA RWA	<p>Some respondents raised concerns about this requirement, as its calculation requires, for example, the implementation of the complex CRM framework for those banks that started to use the IRB approach before 1 January 2010.</p> <p>In more detail, institutions ask for clarification of the use made of the RWA SA:</p> <ul style="list-style-type: none"> C 102 and C 103 clarify if it should be reported from 31 December 2018 or for simultaneously with the CRSA framework; Institutions resident in 'third country non EU equivalent' Article 119(5) of the CRR 	<p>As originally specified in the RTS and ITS on BM, the requirement to fill in the SA fields was postponed until the 2018 exercise in order to give banks more time to implement the requirements. The 2018 exercise is therefore the first time when banks will be required to fill in this field, which refers to the SA approach as currently laid down in the CRR. The exception is that this requirement is voluntary for LDPs (i.e. those portfolios specified in C 102 Annex I).</p> <p>Article 119 CRR refers to the SA. The requirement in C 180 should be independent of the exposure class the exposure would be assigned to under the SA. The</p>	The computation of SA RWA is required for HDPs (i.e. C 103) and voluntary for LDPs.

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	need to be reported as 'corporate' but the SVB is not specified.	RWA amount calculated by applying the standardised approach (for potentially a different exposure class) for credit risk to the exposures shall be reported.	
Other	Integrate the split by facility type: needs to be clarified.	<p>This would introduce an additional layer of complexity. The according analysis can be based on a combination of exposure class and collateral type.</p> <p>Keep the breakdown between C 102 and C 103 aligned.</p>	None
Other	C 102.00 and C 103.00, column 160 Provisions: non-performing loans or defaulted exposure? Clarify and align between C 102 and C 103.	Already fixed for the ITS 2019. This is clear from the instructions. However, the name of the field should be adjusted in the future.	Amended

Responses to proposed changes in Consultation Paper EBA/CP/2017/23 — market risk

Timeline	<p>Broad concerns were raised by all the respondents on the new proposed timeline. Two issues were consistently brought to the EBA's attention. First, the reduction of the risk measure submission period (that is, the time between the end of the metrics calculation and their reporting) seems too challenging for participants. Second, the calculation period appears to be quite challenging as well, overlapping with the BCBS QIS and EBA stress test ones.</p>	<p>The EBA acknowledges that the proposed timeline was very challenging and has therefore extended the risk measure calculation period by 2 weeks. In order to limit the pressure on risk teams stemming from the end of the year, the EBA has also pushed back the beginning of the calculation period by 2 weeks.</p>	<p>Point (w) of point (1) 'Common instructions' of Annex V is modified as follows: risk measure calculation period is 21 January 2019 to 01 February 2019 instead of 07 January 2019 to 18 January 2019 in the consultative document. The reporting date is shifted from</p>
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Comments	Summary of responses received	EBA analysis	Amendments to the proposals
			<p>31 January 2019 to 28 February 2019.</p> <p>In Annex VI:</p> <ul style="list-style-type: none"> for templates C 107.02, C 109.03, and C 110.03 all dates stated in column 010 are shifted 14 days later; for template C 108 the date at which the profit and loss (P&L) series should end at is shifted from 18 January 2019 to 01 February 2019.
Portfolios	<p>The respondents generally support the rationale for the changes, which is to simplify both instruments and portfolios. However, the industry had concerns that the number of portfolios is increasing, with regard to the operational burden it implies.</p> <p>Some respondents also highlight the fact that it would be beneficial for the sake of operational simplicity to have portfolios stable over time. Some propose having a minimum stability period; others suggest gradual changes (asset class by asset class).</p> <p>A few requests for clarification were also expressed by respondents concerning several instruments:</p>	<p>The EBA considers that the increase in the number of portfolios, now mainly consisting of vanilla products, is largely compensated for by the simplicity of those. It therefore does not deem a decrease in the number of portfolios appropriate.</p> <p>The EBA acknowledges that having stable portfolios would limit the operational burden and, more generally, the likelihood of operational issues (those being gradually addressed). However, it also considers that benchmarking the same portfolios every year leads to both a decreasing information gain and an increasing likelihood of ‘window-dressing’.</p>	<p>Some instruments have their features specified:</p> <ul style="list-style-type: none"> The calculation of IMV for futures is explicitly stated to be the market value times the number of contracts. FX instruments 38 to 46 are clarified to be based on spot rates. Instrument 47 (cross-currency swap) is clarified to be an MtM

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	<ul style="list-style-type: none"> Instrument 1: is the IMV for the index future the market value of the expected P&L? Instrument 47 (CCS): is the notional constant? Instruments 48 to 51: are the products cash or physically settled? There is an inconsistency between portfolios 38 and 39 (FX forwards) concerning the base currency. 		<ul style="list-style-type: none"> CCS with a notional adjusted quarterly. Commodity instruments 48 to 51 are clarified to be cash-settled. Maturity dates for credit instruments are shifted from 19 September to 20 September. Maturity dates of instruments 19 and 20 are shifted from 19 September to 20 September.
Portfolios	<p>A series of suggestions on removing some portfolios were made. The suggestions for removal are summarised below:</p> <ul style="list-style-type: none"> a) portfolio 8, as largely covering the same risk as portfolio 6; b) portfolios 17, 25 and 43, as they do not target a specific risk but are also not at a sufficiently aggregate level, so they appear to provide limited added value; c) instruments 25 and 27 from portfolio 18 to make it focus on long-term euro rates; d) portfolio 26, as largely covering the same risk as portfolio 18; 	<ul style="list-style-type: none"> a) The different base currency effect and option trading strategies are deemed important to investigate. b) Portfolios are defined with different instruments and base currencies that are deemed important to investigate. c) The focus is not only on the long term but on the medium term as well. d) Portfolios are not perfectly overlapped and the effect of different components (e.g. long 	None

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
	e) portfolio 46, as largely covering the same risk as portfolio 45; and f) portfolios 51, 52 and 53, as largely covering the same risk as portfolios 44 and 45.	only vs long and short) is deemed important to investigate. e) Different underlying securities (i.e. utility vs insurance) need to be investigated. f) Different sovereign and corporate underlying securities need to be investigated.	
Portfolios	Additional suggestions received regarding the portfolios: a) Replace portfolio 43 with portfolios 44 and 45 in the aggregated portfolios 57 and 62. b) Instruments 18, 23 and 47 are comparatively complex and may not be straightforward to price for all institutions. This leaves room for differing interpretations and therefore decreases the comparable use of these instruments for the purpose of this exercise. We would propose removing them. That would include the removal of portfolios 7, 15 and 32.	a) This suggestion implies that instrument 59 would be repeated in these portfolios. b) Instruments 18 and 23 are the only complex ones within their asset class. These have been chosen for benchmarking results from more sophisticated participating banks that are currently using similar instruments in their proprietary trading books. Instrument 47 is similar to a pre-existing trade in the previous EBA and Basel benchmarking studies.	None
SVaR additional information	The industry made no particular comments on the introduction of additional information for SVaR, in particular the SVaR window time.		None

Comments	Summary of responses received	EBA analysis	Amendments to the proposals
Other comments	<p>The respondents envisaged the possibility of having specific portfolios for IRC. Indeed, the specific nature of risks captured by IRC requires many data points to make it relevant. Respondents therefore argued that specific portfolios with more numerous names would be relevant. Since the number issue is particularly linked with IRC, respondents proposed that those portfolios with numerous names should not be subject to the requirement of computing metrics other than IRC.</p>	<p>The EBA understands the rationale of such a proposal and will assess its feasibility for later exercises.</p>	None

