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EBA Final Draft Regulatory Technical Standards

on benchmarking portfolio assessment standards and assessment sharing procedures under Article 78 of Directive 2013/36/EU (Capital Requirements Directive – CRD IV)

and

EBA Final Draft Implementing Technical Standards

on benchmarking portfolios, templates, definitions and IT solutions under Article 78 of Directive 2013/36/EU (Capital Requirements Directive – CRD IV)

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1. Executive summary

In the aftermath of the financial crises, questions have been raised as to why there were significant differences in the calculation of risk-weighted assets (RWAs). The EBA and other international bodies consequently conducted significant work on the comparability of capital requirements for the Internal Ratings-Based Approach (IRBA) and the Internal Market risk Models, leading to a greater understanding of the consistency of risk-weighted assets.

European legislators have acknowledged the need to constrain the inconsistent calculation of risk-weighted assets for equivalent portfolios and the revised Capital Requirements Regulation and Directive ('CRR' and 'CRD', respectively) now include a number of mandates for the EBA to deliver technical standards, guidelines and reports aimed at reducing uncertainty and differences in the calculation of capital requirements.

In this regard, article 78 of the CRD requires that, at least annually, competent authorities assess the consistency and comparability in risk-weighted assets (RWA) produced by institutions' internal modelling approaches (except for operational risk) for which competent authorities have granted permission to be used for capital purposes.

The benchmarking tool will, to a larger extent, enable both competent authorities and institutions to compare the outcomes of their models. It is clear that the use of internal models is a possibility for banks to enable them to model their risks in a more precise manner that fits the business model and risks faced by each individual bank. The introduction of a benchmarking tool does not change this objective, but instead aims to reduce the non-risk based variability drivers observed across institutions.

The draft implementing technical standards (ITS) specify the benchmarking portfolios as well as the templates, definitions and IT solutions that should be applied in the benchmarking exercise for market and credit risk. As part of the ITS, it is clarified that the first data to be collected under the ITS and RTS framework will be based on Q4 2015 observations.

The draft regulatory technical standards (RTS) specify the procedures for sharing the assessments between the competent authorities and with the EBA and the standards for the assessment by competent authorities of the internal approaches applied to calculating own funds for market and credit risk.

2. Background and rationale

Introduction

Following several assessment and recapitalisation exercises in the wake of the financial crises, questions were raised as to why there were significant differences in the denominator of the capital ratios (the capital requirements) stemming from material differences in banks' regulatory parameters (e.g. for credit risk: probability of default (PD) and loss given default (LGD)) and different modelling methodologies. While differences in risk parameters and capital requirements between banks may well result from differences in underlying risks and are therefore not a sign of inconsistency per se, a substantial divergence may signal that the methodologies used for estimating risk parameters require further analysis in some cases.

A great deal of work on the comparability of capital requirements for the Internal Ratings-Based Approach (IRBA) and the Internal Market Risk Model has already been finalised and published by the EBA which has led to a greater understanding of the consistency of risk-weighted assets¹.

European legislators have acknowledged the need to constrain the inconsistent calculation of risk-weighted assets for equivalent portfolios and the revised Capital Requirements Regulation² and Directive³ ('CRR' and 'CRD', respectively) now include a number of mandates for the EBA to deliver technical standards, guidelines and reports aimed at reducing uncertainty and differences in the calculation of capital requirements.

On top of the mandates for the EBA to deliver the reports mentioned above, the CRD also requires competent authorities to regularly monitor and assess internal approaches. In particular, Article 78 of the CRD establishes regular benchmarking for the capital requirements of institutions allowed to use internal approaches (except for operational risk). These institutions are required to report the results of their exposures included in the benchmark portfolio provided by the EBA. Competent authorities shall monitor the range of risk-weighted exposure amounts or own funds requirements for the benchmark portfolio. Annually, competent authorities shall assess the quality of the internal approaches paying particular attention to:

- significant differences in the own funds requirements for the same exposures; and
- a particularly high or low diversity and/or significant and systematic underestimation of own funds requirements.

Under Article 78, the EBA is required to:

¹ See <http://www.eba.europa.eu/risk-analysis-and-data/review-of-consistency-of-risk-weighted-assets>

² Regulation (EU) No 575/2013.

³ Directive 2013/36/EU.

- develop draft implementing technical standards (ITS) to specify:
 - (a) templates, definitions and IT solutions; and
 - (b) benchmark portfolios for which information needs to be submitted by institutions to competent authorities and to the EBA;
- develop draft regulatory technical standards (RTS) to specify:
 - (a) procedures for sharing assessments made by competent authorities with other competent authorities and the EBA;
 - (b) standards for the assessments to be carried out by competent authorities.

The main aspects of the ITS and the RTS are described below. The EBA is also required by Article 78 to produce a report to assist competent authorities with their assessment.

Scope of the ITS

The ITS specify: (a) the template, the definitions and the IT solutions to be applied in the Union for the reporting of benchmarking portfolios; and (b) the benchmark portfolio or portfolios for the internal models applied to calculate capital requirements for credit risk (IRBA) as well as for market risk (including VaR, SVaR, IRC and Correlation Trading models), counterparty risk and CVA risk.

The EBA has already developed several draft ITS specifying reporting requirements which were adopted by the European Commission as Reporting Regulation and are already being applied by institutions across Europe. The reporting requirements put forward in these draft ITS follow these definitions and taxonomy as much as possible.

Considering the potentially significant workload for institutions and competent authorities, the initial set of benchmarking portfolios is limited in number and a rotation approach to running the yearly assessment has been introduced. Nevertheless, additional portfolios and adaptation of the initial portfolios may be introduced in the medium term in line with a progressive implementation and learn-by-doing approach. Updates to technical standards are always possible based on EBA regulations and, in the case of benchmarking, they will likely be required to incorporate lessons learnt during previous exercises.

For market risk, the EBA consulted on two sets of portfolios, one of them largely based on pre-existing portfolios used by the BCBS and the EBA on previous exercises, and an alternative set based on plain vanilla instruments comprising portfolios which are intended to capture specific risk factors to allow an independent assessment of each of them in isolation.

Credit risk benchmarking reporting and, to an extent, market risk reporting have been designed to be flexible enough to accommodate future changes while also providing up-front clarity on the

key dimensions used for the specification of alternative and complementary benchmarking portfolios and a stable set of key reporting results.

For market risk portfolios, building on the experience gained in previous exercises, institutions are requested to submit 'initial market valuations' ahead of modelling results to ensure the instruments have been correctly understood.

Structure of the benchmarking portfolios

Market risk internal models

For market risk, the EBA is providing (i) individual and (ii) aggregated portfolios, which will comprise a number of the individual portfolios. The individual portfolios used to assess VaR, SVaR and IRC will be categorised around the following broad risk categories:

- Interest Rate
- Equity
- FX
- Commodities
- Credit

Besides the above categories, there will be a set of portfolios for correlation trading activities (which, due to their nature, encompass different risk categories) which will not be included in aggregated portfolios.

The EBA consultation paper presented two options regarding the portfolios for market risk that the relevant institutions would be required to model: (i) using broadly the same portfolios as in recent Basel and EBA hypothetical portfolio exercises (HPEs), and (ii) using modified portfolios designed to inform specific EBA proposals to assess the modelling of individual risk factors.

Respondents generally supported the rationale behind the EBA portfolios; however, they also stressed the importance of using the, already tested, Basel portfolios for the initial exercise. As a result of these responses received during the consultation, the EBA has decided to use the set of pre-existing portfolios for the first exercise to be conducted in 2015. The EBA will develop a new set of portfolios for subsequent exercises.

Approach applied for IMM and CVA models

During 2014 and 2015, the Basel Committee (through its Standards Implementation TB Subgroup SIG TB) intends to assess the variability for counterparty risk internal models (IMM) and credit valuation adjustment (CVA). The EBA will analyse and extract the relevant conclusions from the

results obtained by EU banks participating in the Basel 2014-2015 exercise. Considering the scarcity of resources and the existing workload both for institutions and competent authorities, the EBA will not assess portfolios for IMM and CVA in the exercise to be conducted in Q4 2015.

Credit risk (IRBA)

The individual portfolios used to assess credit risk exposures are the following broad risk portfolios:

- Low default portfolios (LDP: central governments, institutions, large corporate)
- High default portfolios (HDP: corporate, SMEs, residential mortgages)

In particular, it is envisaged to use: (i) a set of real LDP cluster portfolios designed by grouping the actual exposures according to some key dimensions (rating grade, facility type, collateral type, geography, economic sector, company size, etc.); (ii) a sample of actual exposures identified through a list of names for central governments, banks and large corporate; (iii) a set of real HDP cluster portfolios (corporate, SME corporate, SME retail and residential mortgages) designed by grouping the exposures according to some key dimensions (rating grade, collateral type, geography/country, company size, indexed loan to value, etc.); and (iv) a set of hypothetical transactions for LDP exposures investigating maturity, own CCF (EAD) and own LGD estimates for different transactions and collateral types.

IT solutions and the reporting templates

In accordance with Article 78, institutions should be required to provide competent authorities with the results of internal models applied to EBA-developed benchmark portfolios covering a wide range of exposures.

The EBA has reused existing definitions of the COREP part of the ITS on supervisory reporting and extended these definitions to achieve the higher level of granularity needed for benchmarking purposes. This also allows the existing infrastructure available to be used for data submissions related to the ITS on reporting. Hence, the specifications of the data requirements for the benchmarking exercise build on the existing Data Point Model (DPM)⁴, which has already been implemented by institutions.

To properly assess the internal approaches, including the effect of each of the modelling choices in isolation, excluding the capital outcome, the reporting templates include detailed information on the models' parameters (e.g. PD, LGD and EAD) for credit risk portfolios; for market risk,

⁴ See <http://www.eba.europa.eu/regulation-and-policy/supervisory-reporting/implementing-technical-standard-on-supervisory-reporting-data-point-model->

information on historical P&L data is also requested. The templates specify for each benchmarking portfolio the internal approaches applied and the main risk modelling assumptions.

Scope of the RTS

The RTS specify (i) the procedures for sharing the assessments between competent authorities and with the EBA, and (ii) the standards for assessments made by competent authorities, for the internal models applied to calculate capital requirements for credit risk (IRBA) and own funds for market risk (including VaR, SVaR, IRC and Correlation Trading models), counterparty risk and CVA risk.

Sources of variability in Market Own Funds requirements

To understand the variability stemming from the different market risk modelling options, it is important to differentiate in the analysis between different types of variability drivers.

Variability stemming from banks' modelling choices which are explicitly contemplated in regulation

The CRR allows firms a degree of freedom on many of the methodological elements incorporated in the internal models. For example, when modelling VaR, institutions can choose to use a look-back period longer than the minimum (i.e. the immediate previous year), use a weighting scheme for the data series, calculate the 10-day VaR directly or, alternatively, obtain a 1-day VaR and re-scale it using the square root of ten, etc. Likewise, when modelling IRC, firms can decide between several sources of PDs and have a certain degree of freedom when choosing the transition matrices applied or when deciding on the liquidity horizons applied to a particular instrument.

Similarly for IRBA, banks have some freedom in the selection of the data sources used, in the number of internal approaches developed, the use of global vs local models, the number of rating grades or use of continuous scale, and the inclusion of open workout procedures for defaults, etc.

It should be highlighted that all of these possibilities are, in principle, acceptable under the current regulatory framework provided they have been agreed upon with the competent authority during the validation process. Therefore, given the wide range of approaches which institutions using internal models can choose to implement, some degree of variability is expected.

Variability stemming from banks' modelling choices which are not contemplated in regulation

At the same time, these differences in implementation are clearly not the only factors behind variability. There are other modelling choices which are not explicitly contemplated in regulation (e.g. for market risk, differences in simulation engines, volatility and correlations introduced in the model or risk factors considered, etc.).

Accordingly, the design of the benchmarking exercise should allow the analysis of different variability drivers, distinguishing between those caused by approaches explicitly contemplated in regulation and those related to other causes. To this end, the EBA is requesting banks applying Historical Simulation to submit their latest year P&L daily vector used for VaR calculation purposes to assess the effects of these regulatory choices.

A similar analysis could be performed for SVaR. However, in this case it is also necessary to 'normalise' the stressed period, so, regardless of the period they might be currently applying, all banks would have to perform the SVaR calculation while considering the exact same year. Due to the additional burden that this would cause for historical simulation banks, the EBA has decided not to request this P&L information for the time being. However, this might be reconsidered for future exercises in light of the experience gained from the assessments.

Similarly, for IRBA credit risk models the EBA is proposing to collect information about calibration features and the scope of application of the different internal approaches. This information is required to enable the EBA and competent authorities to assess whether certain methods systematically lead to different outcomes.

This distinction between both types of drivers is necessary not only for analysis purposes, but also to inform any policy recommendations or guidance that the EBA might decide to issue, according to what is stated in Article 78(6).

Variability stemming from supervisory actions

Another source of potential variability originates from supervisory actions taken by competent authorities.

Market risk

In particular for market risk, the use of regulatory add-ons, both on VaR/SVaR multipliers as well as in the form of additional capital charges, and, quite significantly, the application of limits to the diversification benefits applied by banks (i.e. not allowing a single calculation at consolidated level and, instead, requesting an aggregation of the capital results at sub-consolidated and/or subsidiary levels) are likely to increase the observed variability in capital.

In most cases these supervisory actions have been established to address known flaws, model limitations, or to add an additional layer of prudence. Therefore, they typically result in higher capital requirements than would otherwise be the case. However, they can also increase the variation in market own funds requirements between banks, particularly across jurisdictions.

Though the effect in capital levels of these supervisory actions can be substantial, a benchmarking portfolio exercise is not suitable for reflecting some of these supervisory actions. In particular, any constraints on the diversification benefits and direct capital add-ons cannot be properly assessed through a limited portfolio exercise since these effects are entirely portfolio-dependant. To assess

these effects it would be necessary to have a much more realistic portfolio, comprising thousands of instruments and including partial-model approval.

However, some of these supervisory actions can be properly assessed; in particular, the effect of regulatory add-ons on the VaR and SVaR multipliers will be analysed as part of the assessment.

Credit risk

Similarly, for IRBA credit risk requirements an important source of variability is created by competent authorities imposing bank/country-specific add-ons or minimum levels of parameters/capital for some IRBA exposures and/or internal approaches.

While collecting capital requirements before and after the application of these adjustments seems the most appropriate solution to quantify their contribution to variability, it is very challenging to develop an appropriate and consistent definition of these adjustments. Furthermore, in some cases the corrections are directly embedded in the models' outcomes and it is not possible to exclude their contribution.

Notwithstanding the challenge of assessing them, supervisory capital floors and add-ons are an important source of variability and shall be properly considered by the competent authorities when assessing the significance and systematic nature of potential underestimates in the capital requirements determined using internal approaches.

Degree of acceptable variability

While an excessive heterogeneity in the observed own funds requirement is not acceptable from a supervisory perspective, absolute convergence is not a desirable outcome either. In this regard, risk management techniques, practices and methodologies are evolving constantly, not only because of market developments but also because of new emerging risk management practices.

For IRBA credit risk there is also the additional challenge of the use of actual exposures. Even when controlling for some key risk drivers, some residual variability is expected. On the other hand, the use of hypothetical exposures creates an additional challenge when trying to understand to what extent the observed or absent variability for these transactions is confirmed and representative for the bank.

The EBA considers that the objective of ensuring consistency in RWA should be compatible with the introduction of new methodologies and practices. This does not necessarily imply that all new developments will be appropriate. Some new methodologies might produce an excessive reduction in capital requirements; one of the key objectives of introducing benchmarking exercises is to provide tools to assess the effect of new methodologies on capital.

However, it is also clear that these supervisory tools should not hinder the introduction of new best practices, even if this might produce some additional variability in RWA when adopted by some institutions. This caveat is fully consistent with the objective established in Article 78(5)

where it is stated that competent authorities shall ensure that their decisions on the appropriateness of corrective actions must maintain the objectives of an internal approach and therefore must not: (a) lead to standardisation or preferred methods; (b) create wrong incentives; or (c) cause herd behaviour.

Assessment methodology to be applied by competent authorities

Assessment of variability

The design of the benchmarking portfolio exercise described in the ITS aims to ensure the quality of the data that is introduced in the report to be produced by the EBA and, more importantly, aims to spot the banks and portfolios that need specific assessment from competent authorities.

Accordingly, the report will establish thresholds of acceptable variability as a 'default' bucketing for competent authorities. Competent authorities should not pre-emptively consider that portfolios outside of these thresholds are necessarily wrong.

It should be highlighted that competent authorities may decide to assess any of the portfolios (regardless of the 'default bucketing' provided by the EBA); however, they shall assess the following portfolios in all cases:

- 'Fair valuation' extreme values spotted in the pre-validation phase;
- Extreme values spotted in the initial data analysis conducted by the EBA;
- Portfolios identified by the EBA in the report.

Market risk

When assessing the causes of the differences in VaR, competent authorities shall consider the dispersion observed in the 'alternative' calculation that the EBA will provide using available P&L data.

This data will help them to determine the effect of the differences attributed to regulatory options. In particular, they should assess whether the degree of overall variability decreases after homogenising these options, and whether extreme values become more 'central'. Regarding the 'quality' of the approaches, the level of correlation and consistency in the P&L vector are elements that competent authorities must consider.

Of course, these assessments will only be possible for banks applying Historical Simulation in their calculations.

For IRC and the internal models for correlation trading it will not be possible to homogenise the calculations. However, the EBA will provide data clustering for the outcomes of the different modelling options which should help to assess some of the known variability drivers.

Once the known causes of variability have been controlled (as much as is possible), competent authorities should assess the remaining drivers. Possible additional drivers of variability might include:

- Misunderstandings regarding the positions or risk factors involved;
- Model not fully implemented;
- Missing risk factors not incorporated in the portfolio;
- Differences in calibration or data series used in modelling simulation;
- Additional risk factor incorporated in the portfolio;
- Alternative model assumptions applied;
- Differences attributable to the methodology used (i.e. Monte Carlo vs Historical Simulation or Parametric).

As noted previously, the fact that an outcome is different does not necessarily imply that the model is incorrect; the assessments should also be used as a diagnostic tool to motivate a more in-depth analysis of banks' models and modelling assumptions.

Credit risk

When assessing the reasons for differences in IRBA capital requirements, competent authorities shall consider the results produced by the application of alternative benchmarks that the EBA will provide for the same or similar exposures. The alternative benchmarks will be computed after the aggregation in peer groups of the submissions from the participating institutions; those submissions could be, if relevant, risk adjusted by historical losses experience.

These data will help the competent authorities to determine the effect of the differences attributed to regulatory options (e.g. the choice of regulatory approach applied between FIRBA and AIRBA, in accordance with Article 143 of Regulation (EU) 575/2013 by the institutions) and disentangle risk weights variability produced by the different IRBA parameters (i.e. PD, LGD, Maturity, and credit conversion factors).

The fact that the outcome produced by the internal approach is different does not necessarily imply that the modelling practices are incorrect; but the assessments should be used as a diagnostic tool to motivate a more in-depth analysis of banks' models and modelling assumptions.

With the aim to complete a proper investigation of the potential sources of variation, the competent authorities are expected to make also use of the full set of information available (e.g. bank validation reports, model documentation, etc.). In particular the following potential drivers should be assessed:

- Key characteristics of the models such as distinguishing between global vs. local models, vendor vs. bank internal models, models developed and calibrated using internal vs external data;
- The date of model approval/development;
- The length of the time series used, inclusion of distressed years and/or nature and materiality of any adjustment for capturing downturn conditions and adding margins of conservatism in the models' calibration;
- Recent change in the composition of the portfolio of the institution to which the internal approach is applied;
- Micro-macroeconomic situation of the bank's portfolio, the risk and business strategy as well as internal process, such as recovery procedures for defaulted assets ('workout procedures');
- The current position in the cycle, choice of rating philosophy between point-in time ('PIT') or through-the-cycle ('TTC') and the observed cyclicalities in the model;
- The number of rating grades and dimensions used by the institutions in the PD, LGD and CCF models;
- The default and cure rates definitions used by the institution;
- The inclusion or not of open workout procedures in the time series used for the calibration of the LGD models.

Assessment of the level of capital

In addition to the assessment of the variability observed in the different approaches, Article 78(4) states that competent authorities shall assess the level of capital by institution.

Market risk

For market risk, apart from the level of capital by individual portfolio, the level of diversification benefit applied by each institution will be a key driver to consider. To assist competent authorities in their assessments, the EBA will provide data on the capital outcome for several aggregated portfolios in its report.

Nevertheless, any conclusions on the total levels of capital derived from the aggregated data should be taken with due caution. The aggregated portfolios will be very different from a real portfolio (in terms of size and structure). In addition, the results produced by banks for each aggregated portfolio might not be entirely comparable, since they are likely to comprise different individual portfolios (most banks will not be able to model all portfolios) and the data will not reflect all actions taken by supervisors.

Credit risk

To support the competent authorities in assessing the significance of potential underestimation, the EBA requests, for the high default portfolios, the use of back-testing. This includes the

comparison of estimated and historical observed risk parameters as well as the computation of the own fund requirements that result from the application of revised IRBA parameters that would allow internal approaches to pass a binomial test. In using the analysis provided by the EBA and the outcome of the back-testing on own fund requirements, Competent Authorities should consider possible data limitations and reflect this in their assessment as deemed appropriate.

Procedures for sharing the assessments between competent authorities and the EBA

Competent authorities shall provide the EBA with the conclusions derived from the assessments they have performed. This feedback will be aggregated and analysed by the EBA with the goal of extracting relevant common conclusions which will be provided to competent authorities. Similarly, the results of the assessment shall be shared in supervisory colleges under the coordination of the EBA.

The analysis of the assessments is intended to allow a better understanding of the effects of modelling assumptions and choices on capital levels and dispersion. They will also provide valuable input if, as stated in Article 78, the EBA decides to issue guidelines and/or recommendations to improve supervisory practices or the practices of institutions with regard to internal approaches.

3. EBA Final Draft Regulatory and Implementing Technical Standards on Benchmarking under Article 78 of Directive/2013/36/EU

(a) EBA FINAL Draft Regulatory Technical Standards on benchmarking portfolio assessment standards and assessment sharing procedures under Article 78 of Directive 2013/36/EU (Capital Requirements Directive - CRD IV)



EUROPEAN COMMISSION

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[...](2012) **XXX** draft

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of **XXX**

[...]

supplementing Directive 2013/36/EU of the European Parliament and of the Council with regard to regulatory technical Standards for benchmarking portfolio assessment standards and assessment sharing procedures under Article 78

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/EC⁵, and in particular the third subparagraph of Article 78(7) thereof,

Whereas:

- (1) The aim of the exercise of assessing the quality of advanced approaches of institutions referred to in Article 78 of Directive 2013/36/EU is to compare internal approaches at the Union level, whereby the European Banking Authority ('EBA') shall assist competent authorities with their assessment of potential underestimation of own funds requirements. As a result of the above, rules on the procedures for sharing assessments made in accordance with paragraph 3 of that Article should cover also the timing of the sharing of the assessments between competent authorities and with EBA.
- (2) Competent authorities in a group have a legitimate interest in the quality of internal approaches used in the group, as they contribute to the joint decision of the approval of the internal approaches in the first place, by virtue of Article 20 of Regulation (EU) No 575/2013. Further, competent authorities in a group have the general obligation to cooperate and exchange information between each other and with the EBA as referred to in Article 116 of Directive 2013/36/EU; and to provide one another with any information which is essential or relevant for the exercise of the other authorities' supervisory tasks, as referred to in Article 117 of that Directive. As a result, rules on the procedures for sharing assessments made in accordance with Article 78(3) of Directive 2013/36/EU should also specify how the above-mentioned general cooperation and information sharing obligations within colleges apply in the particular context of the benchmarking exercise.
- (3) In order to render meaningful the requirement to share assessments made in accordance with paragraph 3 of Article 78(7) of Directive 2013/36/EU, rules on the items to be shared as part of the assessments made in accordance with paragraph 3 of that Article, should include: their estimate or views on the level of potential underestimation of own fund requirements stemming from the internal approaches used by the institutions and the reasoning behind the conclusions of the competent authorities' assessment. Further, actual or envisaged corrective actions by competent authorities in accordance with Article 78(4) of that Directive are also relevant for all competent authorities in a group, which have a legitimate interest in the continuous quality of an internal approach used in the group; hence they should also be shared in accordance with the general obligation to cooperate and exchange information between each other and with the EBA as referred to in Article 116 of Directive 2013/36/EU. Furthermore, actual or envisaged corrective actions by

⁵ OJ L 176, 27.6.2013, p.338.

competent authorities in accordance with Article 78(4) of Directive 2013/36/EU constitute part of the information that authorities are required to share with the EBA in accordance with Article 107(1) of that Directive, and are necessary in order for the EBA to carry out the tasks assigned to it according to that Article.

- (4) Point (a) of Article 78(7) of Directive 2013/36/EU refers to the assessments made in accordance with paragraph 3. Therefore, rules on the procedures for sharing assessments should only relate to assessments made by competent authorities under that paragraph. Nevertheless, it would also be useful that the EBA provides feedback on the overall outcomes of the benchmarking exercise to the competent authorities, at the end of the exercise.
- (5) As the second subparagraph of Article 78(3) of Directive 2013/36/EU refers to the EBA report as a means for assisting competent authorities in their assessment according to the first subparagraph of that Article, such a report is a cornerstone of the benchmarking exercise as described in that Article, given that such report shall contain the results of the comparison of relevant institutions with their peers at the EU level, and given that only the EBA shall avail of all relevant data for all relevant institutions in the Union. Hence the information contained in the EBA report should constitute the basis on which to decide which firms and portfolios to assess with ‘particular attention’ as required by the first subparagraph of Article 78(3) of Directive 2013/36/EU.
- (6) It is expected that the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU will provide variability thresholds and any extreme values, since it is meant to assist competent authorities in their assessments. Nevertheless, ultimate responsibility for the assessment resides with competent authorities, who are therefore able to assess any of the institutions with internal approaches for credit or market risk.
- (7) The results of the exercise on the assessment of the quality of internal approaches depend on the quality of the data reported by relevant institutions under Regulation (EU) No xx/xx [ITS], which also need to be consistent and comparable. Therefore, competent authorities should be required to confirm the correct application of that Regulation by institutions, especially with regard to the application of the option available to institutions to refrain from reporting of certain individual portfolios.
- (8) Where competent authorities compute benchmarks based on the standardised approach, an adjustment should be made to the own fund requirements for credit risk that result from the application of the standardised approach, for reasons of prudence. This adjustment should be established at the level applied for the computation of the transitional Basel I floor based on Article 500 of Regulation (EU) No 575/2013.
- (9) Benchmarks based on the standardised approach are not currently considered appropriate to be computed in the case of market risk, in line with current international thinking, as they can lead to distortions. Due to major methodological differences in the computation of capital requirements according to the standardised and internal approaches, mainly due to sharp differences in aggregation and/or diversification of individual positions, which, although present also in the credit risk, is more pronounced in the market risk, a comparison between the two metrics

under market risk for small portfolios would not provide a meaningful indication of potential underestimation of own funds requirements. Nevertheless, given ongoing discussions on the differences of the two approaches in international standard-setting *fora* such as in the context of the envisaged Fundamental review of the Trading Book rules of the Basel Committee for Banking Supervision, the regulatory framework for market risk own funds requirements might be required to change, in which case it would be necessary to review also the appropriateness of using standardised approach-based benchmarks for the assessment of internal approaches for market risk. In any case, where standardised approach computations are considered in the assessment of credit risk models, their use should be only intended as benchmarks for assessment, rather than as floors.

- (10) According to Article 78 of Directive 2013/36/EU, in addition to assessing banks' observed regulatory own fund requirements obtained from authorised models, competent authorities shall assess the overall 'quality' of the internal approaches as well as the degree of variability observed in particular approaches. Accordingly the competent authorities' assessment should not focus solely on internal approaches' outcome; the analysis should aim to determine the key variability drivers and to extract conclusions regarding the different modelling approaches and options that institutions contemplate in their internal approaches. Hence competent authorities should be required to take into account, in the course of their assessment, of the results of the back-testing performed by institutions or of the related analyses contained in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU. Hence why competent authorities should also be required to take into account, in the course of their assessment, the results of the alternative Value at risk ('VaR') and Stressed Value at Risk ('SVaR') calculations based on the profit-and-loss ('P&L') time-series.
- (11) Given that the role of the competent authorities in investigating and confirming the quality of internal approaches is fundamental, in addition to the information reported by institutions in accordance with Regulation (EU) No ~~xx/xxx~~ [ITS], competent authorities should use the powers they have under Regulation (EU) No 575/2013 for approving and reviewing internal approaches, in a proactive manner, by seeking any further information that will be useful for their on-going assessment of the quality of internal approaches.
- (12) For the assessment of market risk, back-testing, based both on hypothetical and actual changes in a portfolio's value, is already required to be conducted on a daily basis for the end-of-day positions of the whole portfolio, as referred to in Article 366(3) of Regulation (EU) No 575/2013. In accordance with that Article, the number of over-shootings has to be communicated to competent authorities and is regularly used to assess model performance and to determine add-on factors to the regulatory Value-at-Risk ('VaR') and Stressed VaR ('SVaR') multipliers. Accordingly, no additional back-testing should be required to be applied or assessed for the portfolios relating to market risk internal approaches.
- (13) The fact that a modelling outcome of an individual portfolio is an extreme value or is identified in the EBA report as to be reviewed by competent authorities, should not necessarily imply that the model is incorrect or wrong; in this regard the assessments conducted by competent authorities should be used as a tool to get a

more in-depth knowledge of banks' models and modelling assumptions. Further, the analysis of the potential differences between the own funds requirements for credit risk as reported by the institutions under Implementing Regulation No *xx/xxx [ITS]*, and the own funds requirements for credit risk that result from the use of historically observed risk parameters ('outturns'), should be used by competent authorities as a 'proxy' indicator of significant and systematic underestimation of own funds requirements, but should never substitute proper validation of the internal approach. In using this analysis, competent authorities should consider possible data limitations and reflect this in their assessment as deemed appropriate. Additional metrics based on outturns will be calculated by the EBA based on the information collected and will further contribute to the analysis. Similarly, given that market risk model capital metrics are portfolio-dependent and any conclusions obtained at disaggregated levels cannot be uncritically extrapolated to real bank portfolios, any preliminary conclusions based solely on the total levels of capital derived from the aggregated portfolios should be considered with due caution. When assessing the results obtained, competent authorities should consider that even the aggregated portfolios comprising the largest number of instruments will still be very different from a real portfolio in terms of size and structure. In addition, since most institutions will not be able to model all non-aggregated portfolios, the results might not be comparable in all cases. Further, it should be borne in mind that the data will not be reflecting all actions on capital, such as constraints on diversification benefits or capital add-ons introduced to address known modelling flaws or missing risk factors.

- (14) This Regulation is based on the draft regulatory technical standards submitted by the European Banking Authority to the Commission.
- (15) The European Banking Authority 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 1093/2010,

HAS ADOPTED THIS REGULATION:

SECTION 1

Procedures for sharing assessments made in accordance with paragraph 3 of Article 78 of Directive 2013/36/EU between the competent authorities and with the EBA

Article 1

Recipients and timing of the sharing of the assessments made in accordance with paragraph 3 of Article 78 of Directive 2013/36/EU

1. Competent authorities shall share the assessments made in accordance with Article 78(3) of Directive 2013/36/EU between the competent authorities and with EBA, as described in paragraphs 2 and 3.

2. Competent authorities shall share the assessments made in accordance with Article 78(3) of Directive 2013/36/EU within three months after the circulation of the report produced by the EBA referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU.
3. Where applicable, the EBA shall share the assessments referred to in paragraph 1 with the relevant competent authorities of the institutions belonging to a group, immediately after receipt of the assessments by the relevant competent authorities.

Article 2

Content of the assessments made in accordance with paragraph 3 of Article 78 of Directive 2013/36/EU

When sharing the assessments made in accordance with Article 78(3) of Directive 2013/36/EU, competent authorities shall share:

- (a) the conclusions and rationale of their assessment, based on the application of the assessment standards referred to in Section 2;
- (b) their views on the level of potential underestimation of own fund requirements stemming from the internal approaches used by the institutions.

SECTION 2

Standards for the assessment to be done by competent authorities

Article 3

Overview

1. Competent authorities shall carry out their assessment of the quality of the internal approaches of institutions referred to in the first subparagraph of Article 78(3) of Directive 2013/36/EU in the manner described in paragraphs 2 to 3.
2. In accordance with the first subparagraph of Article 78(3) of Directive 2013/36/EU, competent authorities shall identify the internal approaches that need specific assessment. They shall do so by assessing internal approaches of institutions in a manner which is proportionate to the nature, scale and complexity of the risks inherent in the business model as well as the relevance of the portfolios included in the [ITS] for the institution in relation to the risk profile of the bank, while also taking into account the analysis provided in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU based on the following criteria:
 - (a) output modelling values considered as extreme values in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, as indication

of significant differences in own funds requirements in accordance with the first subparagraph of that Article;

- (b) output modelling values and standard deviation of the output modelling values for exposures in the same benchmark portfolio or similar benchmarking portfolios identified in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, based on peers' distribution, as preliminary indication of significant differences and low/high diversity in own funds requirements in accordance with the first subparagraph of that Article;
- (c) potential differences between the own funds requirements for credit risk as reported by the institutions under Implementing Regulation *xx/xxx [ITS]* and the own funds requirements that result from the application of the standardised approach for credit risk after appropriate adjustment, as preliminary indication of significant and systematic underestimation of own funds requirements in accordance with the first subparagraph of that Article, to be computed in accordance with Article 4;
- (d) potential differences between estimated risk parameters reported by the institutions under Implementing Regulation *xx/xxx [ITS]* and the historically observed risk parameters ('outturns') reported by the institutions in accordance with that Regulation [ITS].
- (e) potential differences between the own funds requirements for credit risk as reported by the institutions under Implementing Regulation *xx/xxx [ITS]* and the own funds requirements for credit risk that result from the use of historically observed risk parameters ('outturns') by the institutions in accordance with that Regulation [ITS] or computed by the EBA in its report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, was preliminary indication of significant and systematic underestimation of own funds requirements in accordance with the first subparagraph of that Article, to be computed in accordance with Article 5. When using the analysis provided by the EBA under this point, competent authorities may take into account possible data limitations and reflect this in their assessment as deemed appropriate.

3. In the course of the assessment referred to in paragraph 1, competent authorities shall apply the assessment standards referred to in Articles 6 to 11.

Article 4

*Computation of potential differences between the own funds requirements for credit risk as reported by the institutions under Implementing Regulation *xx/xxx [ITS]* and the own funds requirements for credit risk that result from the application of the standardised approach*

1. For the purposes of point (c) of Article 3(2), competent authorities shall compute the benchmark statistics regarding potential differences between the own funds requirements for credit risk as reported by the institutions under Implementing

Regulation xx/xxx [ITS] and the own funds requirements for credit risk that result from the application of the standardised approach, as follows:

- (a) for low default portfolios ('LDPs'), at the portfolio level excluding the treatment for exposures to Member States' central government and central banks denominated and funded in the domestic currency as referred to in Article 114(4) of Regulation (EU) No 575/2013;
 - (b) for high default portfolios ('HDPs') at the portfolio level.
2. For the computation of benchmark statistics referred to in paragraph 1, competent authorities shall use the own funds requirements for credit risk adjusted at the level applied for the computation of the transitional Basel I floor based on Article 500 of Regulation (EU) No 575/2013.

Article 5

Computation of potential differences between the own funds requirements for credit risk as reported by the institutions under Implementing Regulation xx/xxx [ITS] and the own funds requirements for credit risk that result from the use of outturns

For the purposes of point (d) of Article 3(2), competent authorities shall use both one year and five year average outturns for computing the results.

Article 6

Assessment of internal approaches by the competent authorities for the purposes of Article 3(1)

1. In the course of the assessment referred to in Article 3(1), competent authorities shall assess the compliance of institutions with the requirements of Implementing Regulation xx/xxx [the ITS], where institutions have exercised the option of Article 4 of that Regulation in order to submit more limited reporting under that Regulation. Competent authorities shall do so by confirming the rationale and justification behind any limitations in the reporting that these institutions have provided under that Regulation.
2. In the course of the assessment referred to in Article 3(1), competent authorities shall investigate the reasons for the significant and systematic underestimation and for the high or low diversity in the own funds requirements referred to in Article 3(2). They shall do so in accordance with paragraph 3.
3. Where the assessment referred to in Article 3(1) relates to credit risk approaches, competent authorities shall apply the standards referred to in Articles 7 and 8. Where the assessment referred to in Article 3(1) relates to market risk approaches, competent authorities shall apply the standards referred to in Articles 9 to 11.

Article 7

Assessment of credit risk internal approaches by the competent authorities - general provisions

1. In the course of the assessment referred to in Article 3(1) and where the assessment relates to credit risk approaches, competent authorities shall use at least the following information on the internal approaches applied to the supervisory benchmarking portfolios, where relevant :
 - (a) information contained in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU;
 - (b) information contained in the regular institution validation reports;
 - (c) information contained in the model documentation including manuals, documentation on the development and calibration of the model and methodology for the internal approaches;
 - (d) information contained in the reports regarding on-site visits .
2. In the course of the assessment referred to in Article 3(1) and where the assessment relates to credit risk approaches, competent authorities shall take into account the following, where relevant:
 - (a) whether the institution uses own estimates of LGD and conversion factors in accordance with Article 143 of Regulation (EU) 575/2013;
 - (b) the model's application perimeter and the representativeness of the benchmarking portfolios;
 - (c) key characteristics of the models such as distinguishing between models designed and calibrated at the centralised group level ('global') and models designed and calibrated only at the level of the host jurisdiction ('local') , vendor and institution models, models developed and calibrated using internal data and models developed and calibrated using external data;
 - (d) the date of model approval and the date of model development;
 - (e) the comparison of predicted and observed default rates over a relevant time period;
 - (f) the comparison of predicted downturn LGDs with observed LGDs;
 - (g) the comparison of estimated and observed exposures at default;
 - (h) the length of the time series used and, as applicable, the inclusion of distressed years or nature and materiality of any adjustment for capturing downturn conditions and adding margins of conservatism in the models' calibration;

- (i) recent change in the composition of the portfolio of the institution to which the internal approach is applied;
 - (j) micro- and macroeconomic situation of the institution's portfolio, the risk and business strategy as well as internal process, such as recovery procedures for defaulted assets ('workout procedures');
 - (k) the current position in the cycle, choice of rating philosophy between point-in time ('PIT') or through-the-cycle ('TTC') and the observed cyclicity in the model;
 - (l) the number of rating grades and dimensions used by the institutions in the PD, LGD and CCF models;
 - (m) the default and cure rates definitions used by the institution;
 - (n) the inclusion or not of open workout procedures in the time series used for the calibration of the LGD models, where applicable.
3. Where competent authorities deem that the information referred to in paragraph 1 is not sufficient in order to reach conclusions in relation to the points referred to in paragraph 2, they shall promptly collect from the institutions additional information the competent authorities deem necessary in order to finalise their assessment of the quality internal approaches. When deciding on what additional information to collect, competent authorities shall consider the materiality and relevance of the deviation of the institution's parameters and own funds requirements. Competent authorities shall collect the additional information in the way they deem to be most appropriate, including through questionnaires, interviews and ad hoc on-site visits.

Article 8

Assessment of credit risk internal approaches by the competent authorities - provisions specific to the LDP benchmark portfolio

1. In the course of the assessment referred to in Article 3(1) and where the assessment relates to the low default portfolios ('LDP') counterparties of Annex I (template 101) of Implementing Regulation *xx/xxx [ITS]*, competent authorities shall assess whether the differences between the capital requirements for credit risk of an institution and those of its peers are driven by:
- (a) different rank ordering of the counterparties included in the LDP samples or different PD levels assigned to each grade;
 - (b) specific facility types, collateral instruments or location of the counterparties;
 - (c) heterogeneity in the PDs, LGDs, M or CCFs;
 - (d) collateralisation practices;

- (e) level of independency from external ratings assessment and frequency in the internal rating update.
2. Competent authorities shall apply the approach referred to in paragraph 1 also for counterparties classified under the category of ‘defaults’ by others but under the category of ‘performing’ by the institution or vice versa.

Article 9

Assessment of market risk internal approaches by the competent authorities- General provisions

1. In the course of the assessment referred to in Article 3(1), competent authorities shall use at least the following information on the internal approaches applied to the supervisory benchmarking portfolios, where relevant :
- (a) information contained in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU;
 - (b) information contained in institution validation reports, conducted by qualified independent parties, when the internal model is initially developed and when any significant changes are made to the internal model. This shall include tests to demonstrate that any assumptions made within the internal approaches are appropriate and do not underestimate or overestimate the risk, specific back-testing designed in relation to the risks and structures of their portfolios and use of hypothetical portfolios to ensure that the internal approaches is able to account for particular structural features that may arise, for example material basis risks and concentration risk;
 - (c) the number and justification of daily back-testing over-shootings, observed over the previous year, on the basis of back-testing on hypothetical and actual changes in the portfolio's value;
 - (d) information contained in model documentation including manuals, documentation on the development and calibration of the model and methodology for the internal approaches;
 - (e) information contained in reports regarding onsite-visits.
2. In the course of the assessment referred to in Article 3, competent authorities shall take into account of the following information, where relevant:
- (a) the choice of the VaR methodology applied between parametric, Monte Carlo or historical simulation;
 - (b) the model's application perimeter and the representativeness of the benchmarking portfolios;

- (c) justification and rationale in case a risk factor is incorporated into the institution's pricing model but not into the risk-measurement model;
 - (d) set of risk factors incorporated corresponding to the interest rates in each currency in which the institution has interest rate sensitive on- or off-balance sheet positions;
 - (e) number of maturity segments in which each yield curve is divided;
 - (f) methodology to capture the risk of less than perfectly correlated movements between different yield curves;
 - (g) set of risk factors modelled corresponding to gold and to the individual foreign currencies in which the institution's positions are denominated;
 - (h) number of risk factors to capture equity risk;
 - (i) methodology to assess the risk arising from less liquid positions and positions with limited price transparency under realistic market scenarios;
 - (j) track record of the proxies used in the model, assessment of their impact on the risk metrics;
 - (k) the length of the time series used for VaR;
 - (l) methodology for determining the stressed period for stressed VaR, adequacy of the stressed period selected for the benchmarking portfolios;
 - (m) methodologies used in the risk- measurement model to capture nonlinearities for options, in particular where the institution uses Taylor-approximation approaches instead of full revaluation, and other products as well as correlation risk and basis risk;
 - (n) methodologies applied to capture name-related basis risk and whether they are sensitive to material idiosyncratic differences between similar but not identical positions as well as event risk;
 - (o) for IRC, methodologies applied to determine liquidity horizons by position, as well as the PDs, LGDs and transition matrices used in the simulation referred to in Article 374 of Regulation (EU) No 575/2013;
 - (p) for the internal approach for correlation trading, methodologies applied to capture risks laid down in Article 377(3) of Regulation (EU) No 575/2013, as well as the correlation assumptions between the relevant modelled risk factors.
3. Where competent authorities deem that the information referred to in paragraph 1 is not sufficient in order to reach conclusions in relation to the points referred to in

paragraph 2, they shall promptly collect from the institutions additional information the competent authorities deem necessary in order to finalise their assessment of the quality internal approaches. When deciding on what additional information to collect, competent authorities shall consider the materiality and relevance of the deviation of the institution's parameters and own funds requirements. Competent authorities shall collect the additional information in the way they deem to be most appropriate, including through questionnaires, interviews and ad hoc on-site visits.

Article 10

Assessment of market risk internal approaches by the competent authorities- determining causes for differences in the outcomes of market risk internal approaches

1. In the course of the assessment referred to in Article 3(1) and where the assessment relates to market risk approaches, competent authorities shall apply the standards referred to in paragraphs 2 to 8.
2. When assessing the causes of the differences for VaR values, competent authorities shall consider both of the following:
 - (a) any alternative homogenised VaR calculations that the EBA may provide in its report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, using available P&L data;
 - (b) the dispersion observed in the VaR metric provided by institutions under Implementing Regulation Xx/xx [ITS].
3. For institutions using historical simulation, competent authorities shall assess the variability observed both in the alternative homogenised VaR calculations and in the VaR data reported by institutions referred to in paragraph 2, in order to determine the effect of the different modelling options which are contemplated in Regulation (EU) No 575/2013.
4. Competent authorities shall assess the dispersion among institutions in relation to particular risk factors included in each one of these non-aggregated benchmark portfolios using the observed volatility and the observed correlation in the P&L vector provided by institutions applying historical simulation for non-aggregated portfolios.
5. Competent authorities shall analyse VaR models for portfolios which might show a P&L time-series that significantly diverges from its peers, as identified in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, even if the final capital outcome for that particular portfolio is similar to the one provided by their peers in absolute terms.
6. In addition, for VaR, sVaR, IRC and models used for correlation trading activities, competent authorities shall assess the effect of regulatory variability drivers. They shall do so using the data provided by the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU clustering the metric outcomes by the different modelling options.

7. Once the causes of variability stemming from the different regulatory options have been assessed, competent authorities shall assess whether the remaining variability and underestimation of own funds requirements is driven by one or more of the following:
 - (a) misunderstandings regarding the positions or risk factors involved;
 - (b) model not fully implemented;
 - (c) missing risk factors;
 - (d) differences in calibration or data series used in modelling simulation;
 - (e) additional risk factor incorporated in the model;
 - (f) alternative model assumptions applied;
 - (g) differences attributable to the methodology used such as Monte Carlo, historical simulation or parametric.
8. Competent authorities shall carry out a comparison between the outcomes obtained from portfolios, which only differ in a specific risk factor, to determine whether institutions have incorporated such a risk factor into their internal models consistently with their peer institutions.

Article 11

Assessment of market risk internal approaches by the competent authorities - assessment of the level of own funds by institution

1. Where assessing the level of own funds by institution, competent authorities shall take into account both of the following:
 - (a) the level of own funds by non-aggregated portfolio;
 - (b) the effect of the diversification benefit applied by each institution in aggregated portfolios, comparing the sum of own funds of the non-aggregated portfolios mentioned in point (a) with the level of own funds provided for the aggregated portfolio, as provided in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU.
2. Where assessing the level of own funds by institution, competent authorities shall also take into account:
 - (a) the effect of the supervisory add-ons;
 - (b) the effect of the supervisory actions not contemplated in the data collected by the EBA.

Article 12
Entry into force

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

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

Done at Brussels,

For the Commission
The President

[For the Commission
On behalf of the President
[Position]

(b) EBA FINAL Draft Implementing Technical Standards on benchmarking portfolios, templates, definitions and IT-solutions under Article 78 of Directive 2013/36/EU (Capital Requirements Directive - CRD IV)



EUROPEAN COMMISSION

Brussels, XXX
[...] (2012) XXX draft

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

of XXX

[...]

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

THE EUROPEAN COMMISSION,

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

Having regard to Directive EU/2013/36 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/EC⁶, and in particular the third subparagraph of Article 78(8) thereof,

Whereas:

- (1) In accordance with the second subparagraph of Article 78(3) of Directive 2013/36/EU, the European Banking Authority ('EBA') is required to produce regular reports in order to assist the competent authorities in their assessment of the quality of institutions' internal approaches. These reports should be based on institutions' data submissions and on common benchmarking portfolios and statistical values against which competent authorities can compare results of individual institutions. As the focus of competent authorities' assessments or of the EBA's reports may change over time, benchmarking portfolios may also need to change accordingly. The general template for defining benchmarking portfolios should be designed cognisant of the above need and should therefore allow the definition of benchmarking portfolios in various compositions and degrees of granularity.
- (2) By virtue of the second sentence of Article 78(2) of Directive 2013/36/EU, competent authorities may define own specific portfolios for assessing the quality of institutions' internal approaches, in addition to the common EBA portfolios, in consultation with the EBA. These rules defining the templates to be applied in the Union for the reporting referred to in that Article should provide templates also for the reporting of the above mentioned portfolios defined by competent authorities.
- (3) For credit risk, in order to provide analyses on comparable exposures and to ensure a minimum level of commonality between the portfolios of different banks a clustering approach should be used whereby the credit risk portfolio is decomposed into sub portfolios with roughly similar risks across institutions. Based on the categories of risk present in most of the internal approaches of institutions in the Union, as well as on the categories for defining capital requirements for credit risk, the clustering to be used for the benchmarking exercise of Article 78 of Directive 2013/36/EU should encompass corporates, credit institutions, central governments, SME retail, SME corporate, residential mortgages and construction sector, with additional clustering being applied based on the residence of the counterparty, collateralisation characteristics, default status or industry sector. Further clusters could be defined in the future, if deemed relevant.

⁶ OJ L 176, 27.6.2013, p.338.

- (4) In order to enable the benchmarking of internal approaches of institutions at a more granular level, a specific sample approach should be applied to low default portfolios, whereby the benchmarking is applied at the exposure level and at the transactions level. However, given that this approach focuses on only a sub-set of an institution's real exposures, and hence is of limited representativeness, this specific sample approach should be used only as a complement to the cluster approach.
- (5) Given the complexity of the benchmarking exercise, a progressive use of the portfolios referring to credit risk internal approaches framework should be applied. For market risk, in order to minimise the burden to institutions and supervisors, and to avoid duplication of efforts, given the parallel running of several data-collection and benchmarking initiatives, the portfolios used in earlier applications of benchmarking exercises of the Basel Committee on Banking Supervision ('BCBS') and of the European Banking Authority (EBA) in 2013 should be used as a starting point for developing the set of portfolios for the benchmarking exercise required by Article 78 of Directive 2013/36/EU, with only minor adaptations, in order to maintain the portfolio validity.
- (6) According to Article 78 of Directive 2013/36/EU, in addition to assessing banks' observed regulatory own funds requirements obtained from authorised models, competent authorities shall assess the overall 'quality' of the internal approaches as well as the degree of variability observed in particular approaches. Accordingly the competent authorities' assessment should not focus solely on internal approaches' outcome; the analysis should aim to determine the key variability drivers and to extract conclusions regarding the different modelling approaches and options that institutions contemplate in their internal approaches. Hence institutions should be required to report also the results of the use of historically observed risk parameters ('outturns') for credit risk, and their profit and loss ('P&L') time-series for market risk.
- (7) In order to have a meaningful assessment of the effect of each one of the approaches used for market risk, institutions should report the main risk modelling assumptions and competent authorities should assess the effect of each choice, in isolation, where Regulation (EU) No 575/2013 provides them with options. Therefore, it is necessary to perform alternative calculations for VaR controlling the different possibilities, explicitly contemplated in regulation, which institutions can apply. To this end, institutions using a Historical Simulation approach for VaR should be requested to deliver a one-year profit and loss ('P&L') data series for each one of the individual portfolios modelled.
- (8) In relation to reporting relating to market risk, and in order to assess whether the instruments have been correctly understood, institutions should provide an Initial Market Valuation ('IMV') of each individual instrument. This would also ensure that participating institutions have introduced the positions in their systems. Further, institutions should report this information to their competent authorities and the EBA ahead of the portfolio modelling outcome, which will be the basis for the assessment of the risk weighted exposure amounts established in Article 78(3) of Directive 2013/36/EU.

- (9) With the view to ensuring that competent authorities and the EBA have a clear view of the range of values for risk-weighted assets and own funds requirements that arise for similar exposures under internal approaches, institutions should be required to report the results of internal approaches applied to benchmark portfolios covering a wide range of exposures.
- (10) Article 78 of Directive 2013/36/EU requires the assessment of the internal approaches authorised by competent authorities to be used for the purpose of calculating own funds requirements. As a result, the benchmarking exercise should only relate to validated internal approaches. Institutions should not provide data for those portfolios which include instruments or risk factors that are reported under the standardised rules.
- (11) For market risk, despite having regulatory permission, there will be cases where there will not be an authorisation from an institution's management to operate in some of the underlying positions included in the benchmark portfolios. However, given that Article 78 of Directive 2013/36/EU does not refer to 'instruments' but to 'their exposures or positions that are included in the benchmark portfolios', the fact that an institution does not have a particular instrument in its books at the time of carrying out of the reporting does not mean that it should exclude the instrument from the relevant portfolios, provided the institution is able to model its underlying exposures or positions. Where an institution has permission but nevertheless lacks adequate experience in modelling a specific instrument, and is therefore not authorised by the institution's management to do so, it should not provide data on the individual portfolios that include this specific instrument as this risks corrupting the resulting dataset.
- (12) In relation to reporting relating to market risk, institutions should report the portfolios that will not be included in their data submission, providing also the reasons for any eventual exclusion.
- (13) Article 78(2) of Directive 2013/36/EU requires that institutions report to their competent authorities and to EBA. As a result of that, any long-term IT solution applied to the reporting for the benchmarking exercise under that Article should accommodate the possibility for direct reporting of institutions to EBA. Nevertheless, given the recent establishment of the EBA coupled with a plethora of pressures on its resources, and for as long as these result in a limited capacity at the EBA for receiving reporting by institutions directly, an alternative interim IT solution should be established. In order to avoid that any interim IT solutions create disproportionate burden on reporting institutions, an IT solution should be established that ensures consistency with other types of reporting by institutions, and in particular with the IT solution applied in Implementing Regulation (EU) 680/2014⁷.
- (14) Given institutions are already required to report information in accordance with Implementing Regulation (EU) 680/2014, it would be disproportionate to require them to report immediately all of the information necessary for the carrying out of the benchmarking exercise in accordance with Article 78(2) of Directive

⁷ OJ L 191, 28.06.2014, p. 1–1861.

2013/36/EU. Therefore, in order to allow institutions sufficient time to implement appropriate internal reporting frameworks, while at the same time ensuring the carrying out of a meaningful benchmarking exercise, the portfolios to be assessed as regards credit risk internal approaches should be introduced gradually over time.

- (15) This Regulation is based on the draft implementing technical standards submitted by the European Banking Authority to the Commission.
- (16) The European Banking Authority has conducted open public consultations on the draft implementing technical standards on which this Regulation is based, analysed the potential related costs and benefits and requested the opinion of the Banking Stakeholder Group established in accordance with Article 37 of Regulation (EU) No 1093/2010,

HAS ADOPTED THIS REGULATION:

Article 1

Reporting by institutions for the purposes of Article 78(3) of Directive 2013/36/EU

For the purposes of the reporting referred to in Article 78(2) of Directive 2013/36/EU, the institutions described in paragraph 1 of that Article shall submit all of the templates referred to in Article 2, unless they fulfil one of the conditions referred to in Article 3.

Article 2

Reporting by institutions on a consolidated and individual basis

1. For the purposes of the reporting referred to in Article 78(2) of Directive 2013/36/EU, where referring to internal approaches for credit risk, institutions shall submit the following information:
 - (a) the information specified in template 101 of Annex III, for the counterparties referred in template 101 of Annex I, in accordance with the instructions referred to in tables C.101 in Annex IV and Annex II respectively;
 - (b) the information specified in template 102 of Annex III, for the portfolios referred to in template 102 of Annex I in accordance with the instructions referred to in tables C.102 in Annex IV and Annex II respectively;
 - (c) the information specified in template 103 of Annex III, for the portfolios referred to in template 103 of Annex I in accordance with the instructions referred to in tables C.103 in Annex IV and Annex II respectively;

- (d) the information specified in template 104 of Annexes III, for the hypothetical transactions referred to in template 104 of Annex I, in accordance with the instructions referred to in tables C.104 in Annex IV and Annex II respectively;
 - (e) the information specified in template 105 of Annex III in relation to the name and characteristics of the internal approaches used for the computation of the results provided in templates 102 to 104 of Annex III, in accordance with the instructions referred to in table C.105 of Annex IV.
2. For the purposes of the reporting referred to in paragraph 2 of Article 78 of Directive 2013/36/EU, where referring to internal approaches for market risk, institutions shall submit the templates contained in Annex VII in accordance with the portfolio definitions and instructions contained in annexes V and VI, respectively, with the exceptions referred to in Article 4.

Article 3

Reference and remittance dates

1. Institutions shall submit the information referred to in Article 2 to competent authorities as it stands on the following reporting reference dates:
 - (a) for the purposes of the reporting referred to in Article 2(1), where reporting relates to internal approaches for credit risk, institutions shall submit the relevant information as it stands on 31 December of each year;
 - (b) for the purposes of the reporting referred to in Article 2(2), where reporting relates to internal approaches for market risk, institutions shall submit the relevant information at the reporting reference dates in accordance with the instructions referred to in annexes V and VI.
2. Institutions shall submit the information referred to in Article 2 to competent authorities by close of business of 11 April of each year.
3. Where the remittance day is a public holiday in the Member State of the competent authority to which the report is to be provided, or a Saturday or a Sunday, data shall be submitted on the following working day.
4. Corrections to the submitted reports shall be submitted to the competent authorities without undue delay.

Article 4

Exceptions from reporting for market risk on a consolidated and individual basis

1. For the purposes of the reporting on market risk referred to in Article 78(2) of Directive 2013/36/EU, institutions may refrain from reporting any of the templates relating to individual portfolios as referred to in Article 2, where:

- (a) such institutions do not have a model authorisation from their competent authority to model the relevant instruments, or risk factors, which are included in the portfolio;
 - (b) there is no internal authorisation by the management of these institutions to operate in certain instruments or the underlying assets included in the relevant portfolios;
 - (c) one or more of the instruments included in the portfolios incorporate underlying risks or modelling features which are not contemplated in the institution's risk metrics.
2. Where institutions meet the requirements of paragraph 1 and have exercised the option of refraining from reporting certain templates relating to individual market risk portfolios, they shall still report data for the aggregated portfolios included in Annex V, considering only the individual portfolios which they are able and authorised to model.

Article 5

Initial market valuation for market risk

Institutions shall report the following to their competent authorities:

- (a) the portfolios that they will not be able to model, indicating which of the causes listed in Article 3 justify this;
- (b) for the remaining portfolios, institutions shall provide an initial market value of the portfolios or individual instruments included in the portfolios, as applicable, at the precise date specified in the template instructions included in Annex VI.

Article 6

IT solutions for the reporting of Article 78(3) of Directive 2013/36/EU

The IT solution for the reporting of Article 78(3) of Directive 2013/36/EU shall be the same as, and shall form an integral part of, the IT solution developed for the supervisory reporting of institutions to competent authorities in accordance with Implementing Regulation (EU) No 680/2014.

Article 7

Transitional provisions for reference dates, remittance dates, and for reporting of credit risk templates

1. As a derogation from Article 2(1), during the first year of application of this Regulation, institutions shall submit only the information referred to in points (c) and (e) of that Article.

2. As a derogation from Article 2(1), during the second year of application of this Regulation, institutions shall submit only the information referred to in points (a), (b), (d) and (e) of that Article.
3. As a derogation from Article 2, and until 1.1.2017, institutions that do not compute the own funds requirements for credit risk resulting from the application of the standardised approach as referred to in Article 4 of Regulation xx/xxx [RTS], shall not be required to report column No 180 of templates No 102 and 103 of Annex III.

Article 8
Entry into force

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

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

Done at Brussels,

For the Commission
The President
[For the Commission
On behalf of the President

[Position]

4. Accompanying documents

4.1 Draft cost-benefit analysis/impact assessment

Introduction

Article 10(1) and Article 15(1) of the EBA Regulation (Regulation (EU) No 1093/2010 of the European Parliament and of the Council) provides that when any draft regulatory technical standards and draft implementing technical standards developed by the EBA are submitted to the Commission for adoption, they should be accompanied by an analysis of ‘the potential related costs and benefits’. This analysis should provide an overview of the findings regarding the problem to be dealt with, the solutions proposed and the potential impact of these options.

This section presents the impact assessment with the cost-benefit analysis of the provisions included in the RTS and the ITS described in this Consultation Paper.

Problem definition

Under the current regulatory framework there are no common standards to assess the consistency of institutions’ internal models when they calculate own funds requirements. The criteria and procedures that the national competent authorities (NCAs) may use in their assessment vary across jurisdictions.

The lack of common standards for the assessment of internal models may lead to:

- an uneven playing field: two institutions located in two different jurisdictions can be treated differently if the conditions and parameters for the assessment of the internal models are not consistent between jurisdictions;
- regulatory arbitrage: institutions may have large leeway to decide on a specific model and related assumptions that are not necessarily prudent or that are spurious. In certain cases, the objective of the institution may be capital minimisation rather than deciding on an appropriate level of capital.

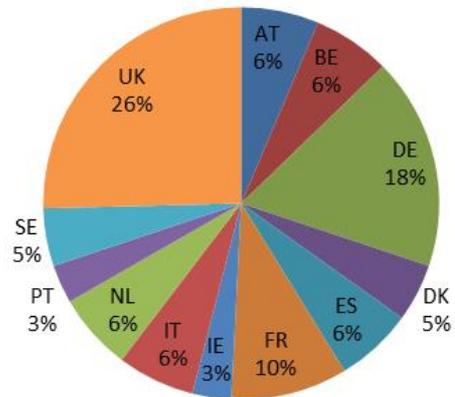
On a larger scale, these problems in the regulatory framework may prevent the effective and efficient functioning of the EU banking sector as well as the internal market.

Baseline scenario

According to an informal survey conducted by the EBA in 2013, there are around 63 institutions using internal models to calculate capital requirements for market risk. All of these institutions are expected fall under the scope of the current technical standards.

Figure 1 shows an estimation of the share of the institutions by EU Member State. The technical standards will have greater impact on the UK and Germany since these Member States have the highest shares.

Figure 1 Share of institutions using internal models for market risk by EU Member State



Source: EBA analysis

Table 1 shows the share of internal models for the market risk in EU Member States. It provides the figures for credit institutions and investment firms.

Table 1 Statistics indicating relative importance of the internal models in terms of their share in EU Member States (2012)

	Credit institutions										Investment firms									
	Share of institutions by approach*		Share of market risk in total own funds requirements by approach				Share of market risk in total own funds requirements by type of market risk				Share of institutions by approach*		Share of market risk in total own funds requirements by approach				Share of market risk in total own funds requirements by type of market risk			
	Share of market risk in total own funds requirements	VAR approach	Standardised approach	Standardised VAR approach	Standardised approach	Traded debt instruments	Equity	Exchange	Commodities	Share of market risk in total own funds requirements	VAR approach	Standardised approach	Standardised VAR approach	Standardised approach	Traded debt instruments	Equity	Exchange	Commodities		
AT	2.3%	1.6%	98.4%	26.3%	73.7%	65.6%	22.9%	9.2%	2.3%	:	:	:	:	:	:	:	:	:		
BE	4.6%	17.4%	95.7%	47.9%	52.1%	87.0%	4.6%	8.0%	0.4%	2.7%	100.0%	0.0%	100.0%	0.0%	15.6%	62.7%	21.7%	0.0%		
BG	1.1%	0.0%	100.0%	0.0%	100.0%	73.5%	15.9%	1.2%	9.5%	49.3%	100.0%	0.0%	100.0%	0.0%	14.3%	34.2%	51.5%	N/M		
CY																				
CZ	4.4%	16.7%	83.3%	18.5%	81.5%	43.4%	0.5%	35.2%	2.4%	9.0%	100.0%	0.0%	100.0%	0.0%	44.0%	6.9%	48.3%	0.8%		
DE	5.0%	0.6%	33.9%	64.5%	35.5%	23.1%	0.7%	10.4%	1.4%	5.2%	63.9%	0.0%	100.0%	0.0%	8.5%	34.9%	19.9%	36.7%		
DK		3.8%	100.0%	1.7%	6.5%	5.6%	0.6%	0.3%	0.0%		100.0%	0.0%	11.2%	0.0%	2.2%	2.0%	7.0%	0.0%		
EE	0.7%	0.0%	100.0%	0.0%	100.0%	74.2%	9.9%	15.9%	0.0%	38.5%	80.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%		
EL																				
ES	3.5%	11.4%	88.6%	43.7%	56.3%	49.0%	18.7%	31.0%	1.2%	20.9%	100.0%	N/M	100.0%	N/M	34.6%	57.7%	7.7%	N/M		
FI	5.3%	5.8%	100.0%	65.1%	34.9%	27.3%	2.8%	1.9%	2.8%	4.4%	100.0%	0.0%	100.0%	0.0%	41.5%	23.3%	12.8%	22.3%		
FR	4.5%	47.4%	52.6%	68.8%	31.2%	:	:	:	:	21.6%	78.4%	21.6%	16.9%	83.1%	:	:	:	:		
HU	4.3%	0.0%	100.0%	0.0%	100.0%	18.9%	1.0%	80.1%	0.1%	18.0%	100.0%	0.0%	100.0%	0.0%	41.7%	31.8%	25.9%	0.6%		
IE	3.8%	2.6%	73.7%	54.7%	45.3%	53.2%	28.5%	18.4%	0.0%	14.7%	100.0%	0.0%	100.0%	0.0%	20.8%	58.1%	18.9%	2.2%		
IT		0.6%	99.4%	8.9%	91.1%	55.5%	36.4%	6.2%	1.9%		100.0%	0.0%	100.0%	0.0%	17.2%	72.2%	10.7%			
LT	14.5%	0.0%	100.0%	0.0%	100.0%	11.4%	0.5%	86.7%	1.4%	30.3%	100.0%	0.0%	100.0%	0.0%	1.5%	31.0%	67.5%	0.0%		
LU	0.5%	1.9%	50.0%	34.9%	65.1%	22.3%	6.0%	36.3%	0.5%											
LV	3.0%	0.0%	100.0%	0.0%	100.0%	24.0%	4.9%	71.0%	0.1%	1.6%	100.0%	0.0%	100.0%	0.0%	0.0%	0.0%	100.0%	0.0%		
MT	0.8%	0.0%	100.0%	0.0%	100.0%	0.0%	0.0%	100.0%	0.0%	19.5%	98.0%	2.0%	78.6%	21.4%	4.2%	3.9%	30.3%	0.0%		
NL																				
PL	0.8%	0.0%	100.0%	0.0%	100.0%	94.0%	1.8%	4.0%	0.2%	11.6%	100.0%	0.0%	100.0%	0.0%	2.9%	27.9%	52.6%	15.1%		
PT	147.5%	1052.6%	10000.0%	1111.0%	8889.0%	8302.0%	894.2%	799.4%	4.5%	2036.2%	10000.0%	0.0%	10000.0%	0.0%	27.7%	8958.7%	1013.6%	0.0%		
RO																				
SE	3.0%	6.8%	100.0%	36.4%	63.6%	:	:	:	:	21.2%	100.0%	0.0%	100.0%	0.0%	4.5%	76.6%	18.6%	0.3%		
SI	0.5%	0.0%	100.0%	0.0%	100.0%	43.7%	46.5%	9.8%	0.0%	:	:	:	:	:	:	:	:	:		
SK	2.1%	14.3%	85.7%	7.3%	92.7%	71.4%	17.4%	3.3%	0.5%	11.1%	100.0%	0.0%	100.0%	0.0%	7.1%	63.5%	29.4%	0.0%		
UK	13.2%	5.5%	94.5%	54.3%	45.7%	38.1%	25.9%	11.6%	7.0%	38.5%	99.3%	0.7%	46.1%	53.9%	65.6%	11.9%	8.9%	11.4%		
IC	7.0%		100.0%		100.0%	18.0%	37.0%	45.0%		8.0%	100.0%		100.0%				100.0%			
LI																				
NO	2.4%	12.5%	87.5%	1.4%	98.6%	91.4%	6.8%	1.7%	0.1%	12.4%	100.0%	0.0%	100.0%	0.0%	:	:	:	:		

Notes and source:

<http://www.eba.europa.eu/supervisory-convergence/supervisory-disclosure/aggregate-statistical-data>

“-”: no data available

C: confidential

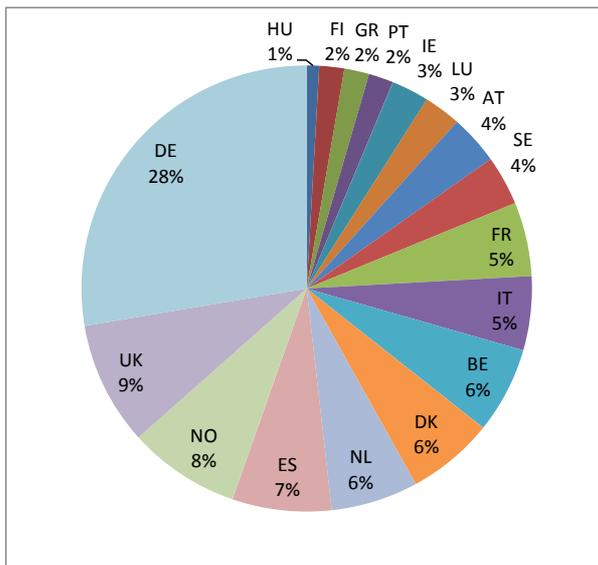
N/M: non-material

*If an institution uses more than one approach, it is counted accordingly.

Similarly there are a total of 184 institutions in the EU that are using the internal ratings-based approach (IRBA) for own funds calculation related to credit risk.

Figure 2 presents a breakdown of these institutions by jurisdiction. All of these banks are expected to fall under the scope of the current technical standards.

Figure 2 Share of IRBA institutions with local approval in the EU and Norway



Source: EBA analysis

Table 2 presents a summary of the institutions using IRBA by their exposure class. Corporates – other (13%), non-SME retail exposures secured by immovable property (11%) and institutions (10%) have the largest share.

Table 2 Number of IRBA banking groups by home country/exposure class

	Central governments and central banks	Institutions	Corporates - Other	Corporates - SME	Corporates - Specialised lending	Retail - Other non-SME	Retail - Other SME	Retail - Qualifying revolving	Retail - Secured by immovable property non-SME	Retail - Secured by immovable property SME	Securitisations	Equity exposures
AT		2	2	4	4	4	4	4	4	4	3	4
BE		5	6	6	2	3	3	3	2	4	1	4
DE		20	25	25	8	15	13	8	2	7	7	9
DK		0	1	5	6	0	6	6	6	6	6	3
ES		3	6	7	8	7	8	7	6	8	7	5
FI		0	1	1	1	1	2	2	0	2	2	1
FR		5	6	6	5	5	4	5	5	5	5	4
GR		0	0	1	2	2	1	2	1	2	1	0
HU		0	1	0	0	1	1	0	0	1	0	0
IE		2	3	3	1	1	1	2	2	3	0	0
IT		1	1	6	6	3	2	5	1	5	2	1
LU		3	3	2	1	2	2	2	0	2	0	1
NL		3	5	5	4	3	3	5	3	5	4	3
NO		0	0	6	6	5	5	4	0	5	4	0
PT		0	1	2	2	2	2	2	1	2	2	2
SE		0	4	4	4	4	4	4	3	4	4	1
UK		6	7	7	2	6	7	5	7	10	0	0
Total	50	72	90	62	64	68	66	43	75	49	37	38

Source: EBA analysis

Objectives of the technical standards

The objective of the current Regulatory and Implementing Technical Standards is to establish a harmonised regulatory framework by:

- introducing a set of criteria and parameters that authorities shall use in the assessment of the approaches applied by institutions in their internal models;
- introducing a set of benchmark portfolios;
- developing technical procedures for the institutions and the NCAs to follow, including a common template and a set of definitions and IT-solutions.

The policy intervention is expected to provide NCAs with more information in terms of benchmarking and cross-jurisdiction comparison when they assess the robustness of the internal models of the institutions.

Technical options

The formulation of the technical options is based on the scope of the benchmark portfolios and the templates. In line with the problem definition, the following alternative approaches in the development of the benchmark portfolios were considered:

Technical options for RTS

Market and credit risk

Options related to the assessment standards

Option 1: High-level/ principle-based assessment standards

Option 2: Detailed rule-based assessment standards

Option 3: A combination of high-level/principle-based and detailed rule-based assessment standards

Technical options for ITS

Market risk

Options related to the scope of the portfolios

Option 1a: Creating a new list of portfolios (EBA proposal) without complex products

Option 1b: Introducing the scope of the Supervision and Implementation Group Trading Book (SIG TB) exercise for benchmark portfolios

Option 1c: A combination of Option 1c (in 2015) and Option 1a (in 2016 and onwards)

Credit risk

Options related to the scope of the portfolios

Option 1a: Creating a list of benchmark portfolios based on actual exposures including asset classes broadly covered in previous EBA TCOR studies (e.g. low default portfolios, corporate, SMEs and residential mortgages)

Option 1b: Replicating Option 1a together with introducing benchmark portfolios composed of a set of hypothetical transactions for large corporate (current proposal)

Option 1c: Replicating Option 1b together with the introduction of benchmark portfolios composed of a set of hypothetical transactions for residential mortgages

Option 1d: Replicating Option 1c together with the introduction of a set of benchmarking portfolios covering all the other IRB credit risk exposures (e.g. specialised lending, equity, securitisations, qualifying revolving) not included in any of the previous options

Options related to the list of counterparties for low default portfolios sample

Option 2a: Including a list that identifies all counterparties and amending the list on a yearly basis

Option 2b: Including an empty template which specifies the criteria for identifying counterparties and the EBA will identify the counterparties on a yearly basis

Options related to benchmark portfolios

Option 3a: Defining the portfolios only for the exercise in 2015 and introducing new portfolios for future years

Option 3b: Providing a complete list of portfolios in 2014 and including provisions that specify a rotation or a phase-in period

Market and credit risk

Options related to the level of implementation: consolidated and solo levels

Option 1a: The exercise covers consolidated and solo levels

Option 1b: The exercise covers consolidated level only

Assessment of the technical options and the set of preferred options

Market and credit risk

Assessment standards

Option 1 sets high-level, principle-based standards for NCAs when they assess institutions' internal models for own funds calculations. The option is expected to provide greater flexibility for NCAs and they can easily adapt their assessment criteria to models of different types. The major disadvantage of this option is in achieving a harmonised set of standards across EU Member States.

Option 2 aims to draw up very detailed rules for the assessment standards, indicating the different and very precise steps to be taken by the NCAs, the levels of acceptable variability and possible corrective actions to be taken for outliers and extreme values. This option provides a precise set of rules and achieves maximum harmonisation. However, once the criteria have been set it is very difficult to modify them so that they proactively address potential cases that are currently unknown to the policy-maker but that may occur in the future. In this case, there may be gaps in the regulatory framework and drafting the set of criteria becomes a difficult task. Very precise criteria may also give unreasonable outcomes as it is also necessary to treat cases on an ad hoc basis.

Given these arguments, a combination of principle-based and detailed assessment standards (i.e. Option 3) is the preferred option. Articles 8-9 for credit risk and Articles 10-12 of the RTS for market risk give a set of assessment criteria that the NCAs shall consider in their assessment without being too prescriptive or exhaustive. On one hand, the RTS provide NCAs across EU Member States with common content to facilitate the exchange of information and effective cooperation, for example when NCAs identify significant and systemic underestimation and low/high diversity in own funds calculations. On the other hand, the RTS allow NCAs to treat cases on an ad hoc basis, for example when they decide which corrective actions to take when NCAs identify an underestimation of own funds.

Market risk

The scope of the portfolios

The EBA considered a set of options to determine the portfolios to be applied for the 2015 exercise and for the exercises to be carried out in 2016 and onwards. Table 3 presents a summary of the main advantages and disadvantages of the options.

Three technical options have been considered for market portfolios: (i) applying the benchmark portfolios developed by the EBA, (ii) applying those produced by the Supervision and Implementation Group Trading Book (SIG TB) in 2013, or (iii) applying a mixture of both.

The main discussion points behind the technical options were:

- administrative cost for institutions and the NCAs due to increasing and sometimes overlapping data requirements;
- the scope and the type of portfolios to be included in the exercise to allow an assessment of each individual risk factor; and
- the scope of the alternative exercise in terms of institutions and jurisdictions covered.

Table 3 A summary of the advantages and disadvantages of the technical options related to the scope of the portfolios under market risk

	EBA portfolios without complex products (Option 1a)	SIG TB portfolios (Option 1b)	Combination of SIG TB (initially one-off) and EBA portfolios (permanent) (Option 1c)
Advantages	Captures risk factors individually (comparing very similar portfolios)	Low administrative burden since some institutions and NCAs are already familiar with the exercise	Provides a smooth 'phase-in' period
	Low operational cost in the long run	High data quality	Capital cost due to IT investment can be spread over a longer period
	Great comparability across EU institutions		Provides full coverage of the EU institutions
	Great coverage of EU jurisdictions		Provides full coverage of EU jurisdictions
Disadvantages	High administrative burden for NCAs due to unfamiliarity with the new exercise (especially if the template will be used in 2014)	Adjustments to the portfolios are nevertheless needed	High administrative burden for NCAs given other data collection initiatives
	High administrative burden for the institutions due to unfamiliarity with the new exercise (especially if the template will be used in 2014)	Cannot capture the incremental risk factor	High administrative burden for the institutions given other data collection initiatives
	High capital cost, e.g. IT infrastructure	Low/incomplete coverage of EU jurisdictions such as DK, SE, UK	
	Room for overlap with other data collection requirements, e.g. SSM AQR, TBG QIS	Low/incomplete coverage of EU markets, therefore further adjustment is necessary	
	Data uncertainty, e.g. quality, availability	Only institutions that are already participating in the exercise will benefit	
	Does not assess the variability of RWAs stemming from complex instruments		

In 2013, the SIG TB (non-CRM) exercise covered 42 portfolios (seven CTPs and 35 other portfolios) that included both simple and complex products in five major asset classes including equity, interest rates, foreign exchange, commodities and credit spread, whilst the initial proposal developed by the EBA includes about 66 instruments and 56 portfolios in the same five broad risk categories of interest rate, equity, foreign exchange, commodities and credit. The EBA has also included local relevant portfolios for EU jurisdictions which were not considered in Basel.

In addition, the exercise proposed by the EBA has to cover counterparty and credit valuation adjustment (CVA) risks, which were not considered under the 2013 SIG TB exercise. However, the SIG TB will assess counterparty risk in 2014 with the objective of minimising the burden for firms and supervisors. The EBA is proposing to rely on the work of the SIG TB to assess counterparty risk in 2014, since the sample of EU institutions should be the same in both exercises.

The technical options assess the trade-off between the additional cost that the EBA proposal may generate and the limited added value of repeating the SIG TB exercise in terms of portfolios in the EU. Member States are concerned about the increasing and sometimes overlapping data collection initiatives such as SSM AQR and the TBG QIS. The EBA proposal may then put additional cost on the institutions and the NCAs in the EU as the proposal covers a larger number of (new) portfolios. Member States have suggested that the application of the SIG TB framework would reduce the administrative burden of the exercise since institutions and NCAs are already carrying out the exercise and are familiar with it. Additionally, portfolios and instruments under SIG TB have already been tested and refined. In this regard, most Member States believe that it would be a challenge to make significant changes to the portfolios and instruments and carry out a larger immediate exercise. It might even risk undermining the entire purpose and may lead to an unreliable dataset.

The framework developed by the EBA comprises a larger number of portfolios since it aims to capture individual risk factors and this is only possible when a large number of similar portfolios are included in the exercise. There are doubts over the effectiveness of the SIG TB framework for the current technical standards. In addition, in terms of geographical coverage, the SIG TB exercise is limited. The EBA has the additional task of producing portfolios for some specific jurisdictions such as DK, SE and UK.

Another element to be considering when assessing which portfolios are the most appropriate stems from the fact that the SIG TB exercise may not be representative in terms of the number of institutions within EU jurisdictions. The institutions that participate in the SIG TB exercise only represent a small portion of the institutions that use internal models in EU Member States. For example, there are about 10 banks in Germany that use internal models but only one of them (or 10%) is participating in the SIG TB exercise. This number is 50% in Italy and the Netherlands, 33% in France and 13% in the UK. Therefore, in most jurisdictions only a small number of institutions in the participating Member States will benefit from the implementation of the SIG TB exercise under the current technical standards and most of the institutions will have to bear some additional cost regardless of the selected option.

The analysis team believes that in order to assess the entire costs (and benefits) of the policy alternatives (e.g. using SIG TB or EBA portfolios) before making a final decision, it is necessary to obtain and analyse data related to future operational costs.

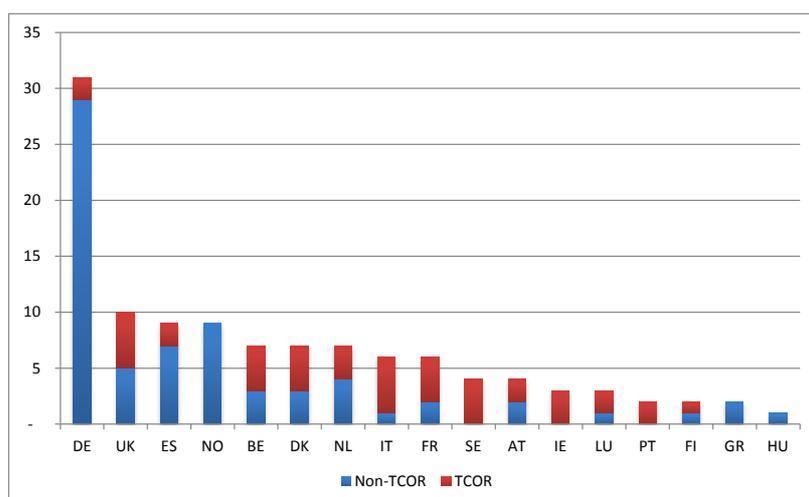
Credit risk

The scope of the portfolios

For credit portfolios, four technical options have been considered: (i) repetition of TCOR 2012-2013 benchmarking exercises, (ii) as in (i) but adding some hypothetical transactions for large corporate, (iii) as in (ii) but including some hypothetical transactions for residential mortgages; (iv) full coverage of the credit IRB exposures by developing new portfolios on an ad hoc basis.

In 2012-2013, the EBA TCOR exercises for credit risk covered approximately 89 EU institutions from 16 jurisdictions in the top-down study. In the more comprehensive bottom-up studies (e.g. low default portfolios and SMEs/residential mortgages), the exercises covered about half of these EU institutions in 14 jurisdictions. For the bottom-up studies the EBA collected data from the institutions, while for the top-down investigation TCOR used the reporting data that were already available.

Figure 3 Number of IRBA banking groups by home country (in red the banks involved in the TCOR bottom-up studies for LDP, SMEs and Residential mortgages)



Source: EBA analysis

Table 4 gives an overview of the main advantages and disadvantages of the technical options considered for credit risk.

Table 4 A summary of the advantages and disadvantages of the technical options related to credit risk

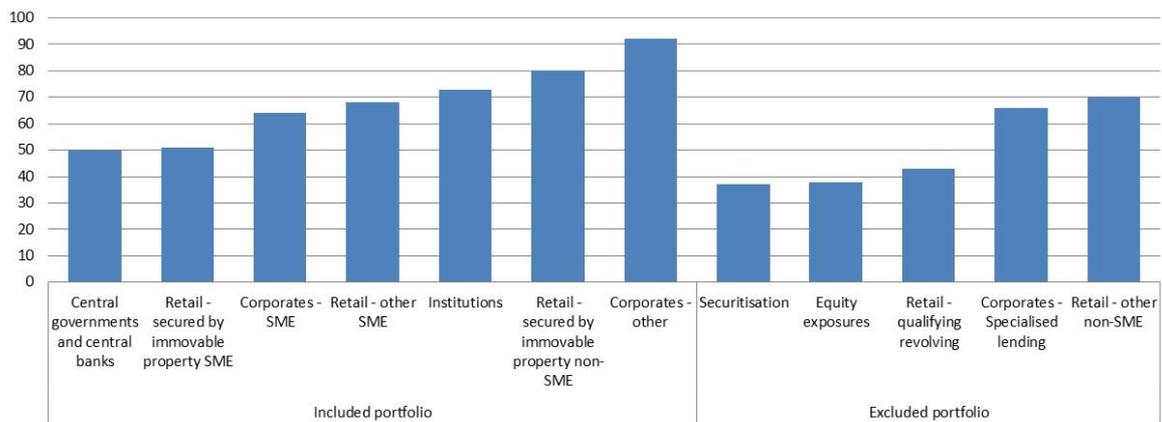
Technical options	Advantages	Disadvantages
1a: Creating a list of benchmark portfolios based on actual exposures including asset classes broadly covered in previous EBA TCOR studies (e.g. low default portfolios, corporate, SMEs and residential mortgages)	<p>The set of benchmark portfolios cover the bulk of the IRBA exposures</p> <p>Institutions participating in previous EBA TCOR studies did have experience in running similar</p>	<p>It does not address the limitations experienced by the EBA in previous TCOR studies (e.g. low default portfolios).</p> <p>The use of actual exposures strongly limit the possibility to investigate the</p>

	<p>exercises</p> <p>The reporting format and content is broadly in line with ITS on reporting (COREP)</p>	<p>variation in risk weights caused by differences in the facilities</p>
<p>1b: Replicating Option 1a with the introduction of benchmark portfolios composed of a set of hypothetical transactions for large corporate (current proposal)</p>	<p>It addresses some of the limits experienced in previous TCOR studies for large corporate exposures, allowing a comparison of identical transactions</p>	<p>The use of hypothetical transactions creates some additional challenges in drawing conclusions for the real exposures held by the institutions</p> <p>There is limited experience in using hypothetical transactions.</p>
<p>1c: Replicating Option 1b together with the introduction of benchmark portfolios composed of a set of hypothetical transactions for residential mortgages</p>	<p>It address some of the limits experienced in previous TCOR studies for residential mortgages exposures, allowing a comparison of same transactions</p>	<p>The use of hypothetical transactions creates some additional challenges in drawing conclusions for the real exposures held by the institutions</p> <p>There is limited experience in using hypothetical transactions</p> <p>It is very difficult to provide all the appropriate details properly specify the transactions</p>
<p>1d: Replicating Option 1c together with the introduction of a set of benchmarking portfolios covering all the other IRB credit risk exposures (e.g. specialised lending, equity, securitisations, qualifying revolving) not included in any of the previous options.</p>	<p>It allows a more comprehensive coverage of the IRBA asset classes</p>	<p>It creates additional complexity for exposures that overall are not material</p> <p>There is no experience</p>
<p>2a: Including a list that identifies all counterparties and amending the list on a yearly basis</p>	<p>The list is stable over time, facilitating cross time-series analysis</p> <p>It limits the burden for the institutions on to identify in their internal system the counterpart included in the reporting</p>	<p>It might create herd behaviour</p> <p>There will always be the need to amend the list due to potential extraordinary events involving the companies in the list (liquidation, mergers, name change)</p>
<p>2b: Including an empty template which specifies the criteria for identifying counterparties and the EBA identifies the counterparties on a yearly basis</p>	<p>It increases flexibility in the ITS. It will be possible to amend the list of names without introducing any change in the ITS</p>	<p>Requires the institutions to periodically identify the companies in their IT systems</p>
<p>3a: Defining the portfolios only for the exercise in 2015 and introducing new portfolios for future years</p>	<p>Increases the flexibility for the EBA in the identification of the benchmarking portfolios</p>	<p>Requires a periodic review of the benchmarking portfolios</p> <p>Does not allow the institutions any planning/preparation as regards future</p>

	reporting
3b: Providing a complete list of portfolios in 2014 and including provisions that specify a rotation or a phase-in period	Allows for an appropriate planning for the work of institutions and competent authorities
	The EBA pre-commitments partially limit the feasibility to introduce any material change in the future
	The rotation or phase-in period recognises explicitly the need for a proportionate and progressive application of the framework

While aiming to keep the exercise manageable, the current EBA proposal aims to cover the bulk of the IRB credit exposures in Europe and address some of the weakness of the previous studies. It suggests the introduction of additional hypothetical transactions for selected large corporate exposures to understand the sources of variations and to exclude a number of benchmarking portfolios whose inclusion has not demonstrated clear benefits. Figure 4 shows the portfolio categories included in the RTS/ITS together with the corresponding aggregate number of potential institutions involved by IRBA exposure class.

Figure 4 Number of European IRBA institutions by exposure class included and excluded in the technical standards



Source: EBA analysis

List of counterparties

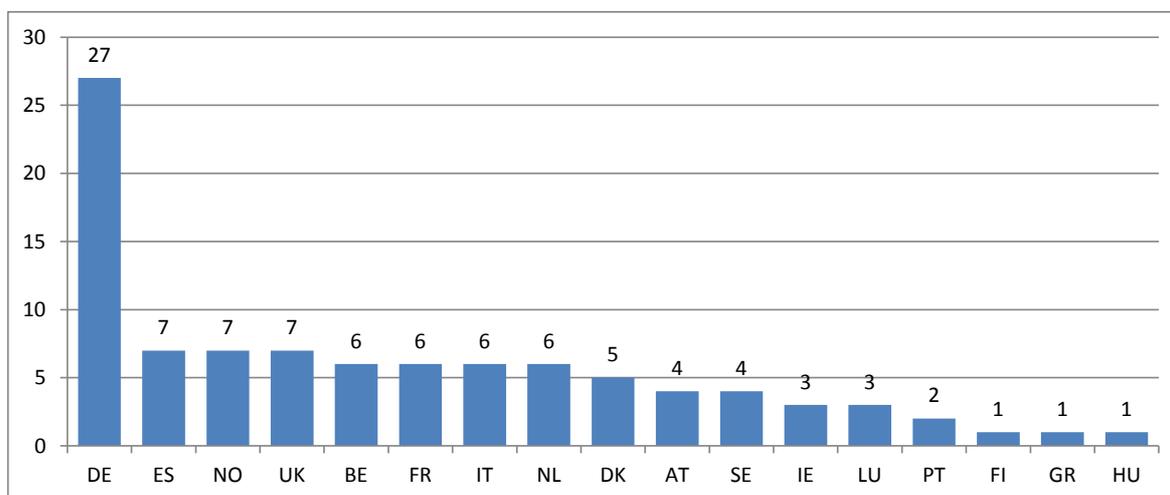
The list of counterparties for which institutions will be required to submit data is likely to change on an annual basis. Option 2a suggests the amendment of the relevant section of the benchmarking exercise every year before the exercise takes place. Option 2b therefore is considered to be a more flexible solution for running the benchmarking exercise where there is no need for formal technical amendment in the ITS. However, the EBA is legally obliged to identify *ex ante* all benchmark portfolios and allow the definition of low default portfolios by the list of counterparties. In this case, Option 2a is redundant and Option 2b is the preferred option.

Benchmark portfolios

Benchmark portfolios that are designed under the technical standards are expected to be stable in nature since the objective of the policy intervention is to provide a set of standardised inputs for the NCAs to follow in their assessments. NCAs are expected to build their assessments around the report that will be prepared by the EBA. Any changes in that report will also have an impact on the assessment. On the other hand, it is beneficial to integrate into the policy formulation a phase-in period to facilitate the implementation of the regulatory practice.

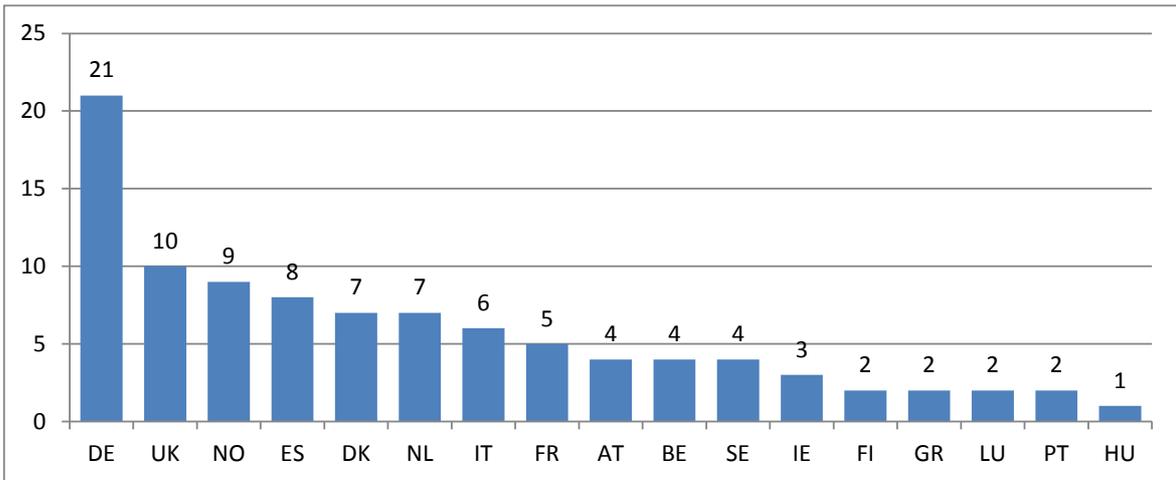
The current sub-section considers two technical options. Option 3a suggests defining portfolios on an annual basis through the amendment of the relevant technical standards. Option 3b suggests defining all portfolios ex-ante and legally specifying a phase-in/rotation period in the regulatory standards. To clarify, institutions are required to submit data for low default portfolios (central governments and central banks, institutions and corporates – other) in 2016 and 2018, and to submit data related to high default portfolios (i.e. retail – secured by immovable property SME, corporates – SME, retail – other SME, retail – secured by immovable property non-SME) in 2015 and 2017. Figure 5 and Figure 6 show the number of institutions that are covered by the gradual implementation under Option 3b.

Figure 5 Number of IRBA banking groups potentially involved in the low default portfolios benchmarking by jurisdiction



Source: EBA analysis

Figure 6 Number of IRBA banking groups potentially involved in the high default portfolios benchmarking by jurisdiction



Source: EBA analysis

The task force believes that the administrative and operational costs associated with Option 3b are lower than those of Option 3a because the former provides all the necessary information in advance (i.e. one-off costs) and avoids repetitive actions.

Market and credit risk

The level of implementation: consolidated and solo levels

The option discusses whether data submission and reporting should be implemented at both consolidated and solo levels or at consolidated level only. The decision on the level (consolidated or solo) at which the implementation will be carried out is directly related to the focus of the capital requirements.

Precisely, solo level implementation of the standards and data collection and reporting involves:

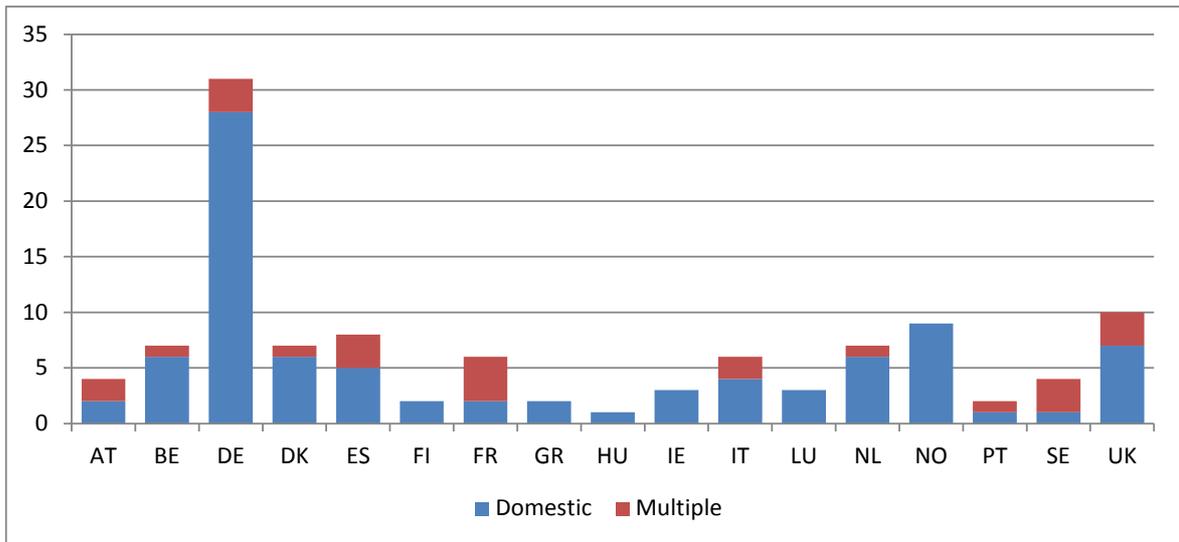
- subsidiaries of EU institutions in the EU, and;
- subsidiaries of third-country institutions in the EU

The decision on the level of reporting, whether consolidated or solo, should depend on the similarity of the models and the calibration between the entities. In other words, unless the models and the calibration output are identical, it is reasonable and beneficial to report at solo level because it is then possible to capture more information and to provide better support to the local competent authorities to assess local models. If both the model calibration and output are identical then the information collected is redundant.

On the other hand, host authorities have a clear interest over the individual firms under their responsibility; this could be achieved by sharing information via supervisory colleges. However, it seems sensible that all competent authorities have full information on the performance of all models under their responsibility. This is the preferred option, considering the very limited burden of submitting the same information twice.

Figure 7 shows the magnitude of the impact of credit risk of the options in the EU banking sector in terms of the number of institutions, i.e. the number of EU institutions that are affected when the technical standards apply at consolidated level (Option 4b) and at both consolidated and solo levels (Option 4a) for cross border institutions.

Figure 7 Number of IRBA banking group domestic and cross border subsidiaries by jurisdiction



Source: EBA analysis

Also from the analysis of the above data it seems that, given the small number of cross-border subsidiaries, it is more effective and beneficial to capture the additional level of information by applying the practice at the solo level.

4.2 Views of the Banking Stakeholder Group (BSG)

General comments

The challenge of assessing the models developed and used by institutions still lies in the evaluation of the actual underlying risk models. Because of this, the BSG emphasises that banks should be involved at an early stage in the process to mitigate potentially erroneous conclusions driven by lack of sufficient information on the subject.

Every effort should be made to use existing reporting systems, standards and regulatory authorised figures and parameters. The suggestion to base reporting on the existing Data Point Model (DPM) is therefore welcomed.

The requirements for competent authorities when assessing the internal models as laid down in Articles 8 – 12 are already described in the CRR for all model categories.

The BSG agrees with the EBA on the anticipated additional burden for banks regarding the Stressed Value-at-Risk (VaR) calculation under a uniform stress period. Nevertheless, a harmonization of the stress period appears to be useful with respect to a benchmarking exercise. The BSG would welcome this harmonization under the condition of a sufficient implementation period and a stress period defined in coordination with the credit institutions.

Further clarification is needed with respect to the level of detailed feedback that will be given to participating banks regarding the benchmarking results.

Comments on the specific consultation questions

Question 1: The use of common benchmarks would help considerably in the assessment of differences in capital requirement calculations across banks. However, given the approach outlined, there might be differences in the development of underlying risk models, which are difficult to compare and assess, since they could stem from practices and modelling choices whose effects on the capital requirement calculation are not explicitly measurable. In their opinion, the draft RTS do not sufficiently address these issues. Until these issues are resolved, there is a real risk that the proposed approach will prove to be counterproductive and will fail to identify the actual reasons for diversity across institutions' risk estimates.

Question 2: The benchmarks proposed are largely unsuitable for the purpose described; there is a set of criteria that good benchmarks must fulfil, including: (i) clarity of definition and uniqueness, and (ii) stability in time over several benchmarking cycles.

According to the BSG, Article 3 (2a) of the RTS violates criterion (i), unless the absolute maximum and minimum of the sample are implied by the term “extremes”, whilst Article 3 (2b) violates criterion (ii) in that the same number of portfolios will be subject to increased scrutiny and a specific supervisory assessment in every benchmarking cycle, no matter what changes are implemented by banks as a result of the preceding benchmarking cycles. This is also inconsistent with Article 78(5), since, after successive iterations, the first and fourth quartiles will be much closer to the median than in the first cycle.

To solve these issues, BSG proposes two changes to the RTS, in Article 3 (2a) and (2b):

- RTS Article 3 (2a): Replace the ill-defined term “extremes” with “outliers”.

- RTS Article 3 (2b): Replace the metric of the first and fourth quartiles with the metric of outliers as identified by Box plots.

Question 3: The problems relating to the proposed benchmarks are described in Question 2; alternatively, the BSG proposes to use the 90% and 10% quartiles.

In the BSG's view, the comparison of own funds based on the standardized approach and on internal models is of limited use, given that the standardized approach is not adequately risk sensitive. In addition, the calculation of a standardized approach is a laborious and costly process and should be avoided.

The comparison of estimates and actual outturns would be suitable for forming the foundation of the benchmarking exercise. However, methods for evaluating differences in the rating philosophy between modelling approaches would need to be further defined to ensure that all participating institutions use the same definitions of default and the consideration of collaterals, which would lead to a change in the Loss Given Default (LGD).

In addition, calculating the RWA on historical defaults and losses for low default rates in wholesale portfolios lead to the problem that quite a lot of rating classes do not contain defaults. An EBA standard is required to ensure a homogeneous determination of loss rates.

Question 4: In the BSG's opinion the most appropriate approach would be to compare model estimates with an estimate based on actual long-term default rates and long-term credit losses.

Question 5: The BSG considers that the use of the Trading Book Group (TBG) benchmark portfolio (Annex VII b) could be especially useful for those institutions participating in the QIS on "Fundamental Review of the Trading Book (FRTB)" where the portfolios have already been integrated. On the other hand, a limitation to plain vanilla instruments could improve comparability since not all institutions are able to evaluate double-no-touch-options and variance swaps. In this regard, the exercise described in Annex VII (a) seems to be more extensive than the benchmark portfolio of the TBG.

Question 6: Although the EBA approach for market portfolios seems appropriate for the purpose of benchmarking portfolio assessment across institutions, the extent of the information that will be requested calls for a prior establishment of the role and impact of the benchmarking approach as outlined in the RTS. This is in addition to the need for the establishment of well-defined methods of comparison for the risk assessment systems developed in the institutions across the EU.

Question 8: The BSG is in favour of Option 2, on the basis of cost efficiency.

Question 9: Overall, the portfolio definitions for credit portfolios seem adequate and reasonably well defined in conjunction with the accompanying information on the risk models. However, there are potential differences regarding modeling practices, e.g. concerning the rating philosophy and economic cycle definition, as well as adjustments due to data quality and the

issue of the conservativeness of estimates. These factors are not defined in the benchmark portfolio outline. They could be embedded in the model estimates and thus be difficult to assess in terms of their impact on capital requirement calculations.

Further clarifications are needed with regard to counterparties to be understood as legal entities. With regards to reporting on a consolidated basis, clarification should be provided on how to report credit risk parameters which are not identical within the banking group. The portfolio of large corporates is defined as “annual turnover > EUR 200 million” in Annex I. Banks’ internal rating models for corporates are likely to have deviating turnover categories.

Question 13: The BSG agrees that banks should have the possibility to refrain from reporting requirements. In addition, it should be clarified whether basic IRB banks would need to complete the information for LGD (and Exposure at Default (EAD) and maturity).

Question 14: The BSG considers that it should be possible for a bank to abstain from the reporting of certain exposures based on their immateriality in individual clusters. In addition, banks should only calculate risks for those products and risk categories for which they have regulatory model approval.

4.3 Feedback on the public consultation and on the opinion of the BSG

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
General comments			
<p>Benchmarking must not lead to standardization. Need to avoid using the benchmarking results as the sole validation tool.</p>	<p>Several respondents in addition to the BSG note that though benchmarking is a useful tool to support supervisory assessments of models and to analyse the dispersion of banks' Risk Weighted Assets (RWAs) it should not be a substitute for competent authorities' expert judgment and common sense, which should be informed by the full range of tools available, which include internal models, stress testing, and the ICAAP/SREP review process. These respondents highlight that the objective of the internal models benchmarking exercise should not be to ensure a common approach to these models, since a degree of flexibility should be retained to promote improvements in risk management.</p> <p>One respondent notes that the improvement of methodologies adopted for internal approaches is part of the usual life cycle of models, stemming from advances in research, indications from internal control functions, evolutions in the risk profile of portfolios. The respondent suggests to clarify better the EBA attitude with regard to evolution in methodologies, in order to avoid the risk of interpreting it as a preference for a</p>	<p>The objective of the RTS-ITS is not to standardize the internal models, though some convergence in certain elements might be anticipated in the medium term. Indeed, this is the aim with regard to non-risk based drivers.</p> <p>It should also be noted that the mandate includes the objective of limiting the variability but also is also intended to address potential underestimation of Own Funds requirements; accordingly, there is a preference for conservative approaches.</p> <p>The EBA considers benchmarking to be a very useful tool (which supervisors were missing) in the validation process, but it certainly does not completely substitute the full validation. In this regard, the EBA is currently producing RTS on the modelling validation of internal models for market, credit and operational risks.</p>	No change

more conservative approach

One firm notes that the assessment of the quality of internal models is not a standalone process that can be performed purely based on the results of hypothetical portfolios supplemented with certain additional information on model validation and performance. Using the information described in Articles 8 and 10 will support this understanding but assessing of the quality of a model is a much broader exercise to be performed by competent authorities over an extended period of time.

One respondent notes that the objective of benchmarking credit risk models lacks specificity. The objective is to “constrain the inconsistent calculation” of RWA (and EL). However this concept is not defined. In addition the respondent notes that individual banks are better placed to evaluate the cost/benefits of enhancements than are competent authorities.

Regarding Market risk portfolios, they note that, when evaluating modelling decisions that can impact the variations between banks, the market circumstances during the benchmark period should also be taken into account.

Finally, one respondent notes that the internal models are not exclusively used to calculate capital requirements. In fact daily risk management, portfolio

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
	allocation and clients' selection are also based on model parameters.		
Additional reasons for divergence in RWAs outcome.	<p>One respondent notes that the consistency of risk weights depends not only on modelling choices, but also on the consistent application of internationally agreed regulatory standards by supervisory authorities. Another respondent specifies 4 primary factors that drive variability for credit: (i) Institution's approach; (ii) supervisory policy; (iii) Country specific (or EU-wide) economic, legal and accounting factors and, finally, (iv) the IRB formula itself. In light of these factors the respondent is not convinced that the approach set out in the RTS and ITS will enable competent authorities to comply with the requirements specified in the directive and/or to achieve their objective based upon the information provided by the EBA.</p> <p>Another respondent agrees that it may be difficult to benchmark quantitatively the influence of supervisory actions on models' estimates. The respondent therefore proposes allowing institutions to provide considerations in this regard for models covered in the benchmarking exercise in a qualitative/descriptive manner.</p> <p>Specifically for Credit risk portfolios, one respondent notes that differences in practices related to the probability of default (PD) calibration (rating philosophy, determination of economic cycle,</p>	<p>The EBA is aware that benchmarking cannot be a standalone tool and must be supplemented by further convergence in the supervisory approach taken. This is already envisaged under the CRR. In particular the EBA is currently developing RTS on assessment methodologies to be used by competent authorities for model validation for market, credit and operational risks when validating internal models to harmonize practices across the EU. Benchmarking is seen as an additional tool that, certainly, does not substitute the validation process.</p> <p>Firms should introduce the necessary changes in their IT systems to allow the computation of benchmark portfolios risk metrics as if they were real transactions. Of course, since the objective is to assess the capital metrics coming from these specific trades in isolation, this should never imply that the risk and sensitivities produced by these 'dummy' instruments are considered in the 'official and real' risk metrics used in the trading area. The IT system should allow a full isolation of these trades, which shall never be confused with real transactions.</p>	No change.

adjustments for low default portfolios and data challenges, conservatism), loss given default (LGD) calibration (determination of downturn conditions, determination of current conditions for best estimate of expected loss (BEEL)) and the treatment of defaulted assets, exist across all portfolios. These differences in practices explain divergent outcomes. This respondent believes that the benchmarking approach cannot serve its real purpose and may in fact exacerbate legitimate differences in outcomes between institutions that do not represent different underlying risks.

The same respondent considers that differences in RWA (in relation to the EBA benchmark report) caused by local discretionary regulatory requirements/floors should be analysed and included in the list given in Article 8 (2), and suggests that, due to differences in supervisory practices market characteristics and coverage, conclusions should not be drawn directly from the RWA but from the statistical predictive power of the models.

Finally, one firm considers that part of the variability can stem from the fact that banks may not be using their 'production systems' to determine the outcomes. According to this bank, there are often very good reasons why firms are prevented from using production systems when participating in these types of exercises

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
	beyond availability of systems and resource constraints, for example, unauthorised trading controls prevent “dummy” bookings of benchmark portfolios.		
Consistent outlier detection, quality assurance.	<p>A respondent notes that, since the responsibility for detecting outliers and explaining differences in outcomes between banks’ models lies with the CAs, in order to ensure comparability of the exercise throughout Europe, the EBA should be responsible for producing guidelines to determine the points of comparison against which the models are assessed.</p> <p>Another respondent recommends that the EBA ensures sufficient time is allowed for validation loops and provides comprehensive guidance through multiple channels. Recognizing that the EBA is subject to certain mandated benchmarking development and timing constraints, consideration should be given to exploring ways for informal feedback to further ensure the exercises are conducted effectively and to reduce the risk of operational errors.</p> <p>One firm requests more specification about the proposed approach for the assessment of potential underestimation of the level of capital for credit risk. They also request details about the definition and criteria for identifying extreme values.</p>	<p>The RTS includes some ‘presumptions’ regarding the portfolios that should be further assessed by the competent authorities (CAs) precisely to address this issue. Of course CAs are free to assess any additional portfolios they may deem relevant.</p> <p>The timing of the exercise includes time for data quality checks to be performed and, for the market portfolios, there is an initial submission of initial market valuation templates to try to minimise operational errors and portfolio misinterpretations.</p>	No change.
Burden on banks stemming from the	One respondent considers that the exercise should be targeted to minimize implementation costs whenever	The request for granular information on individual risk factors may not be necessary to monitor or assess the	No change.

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
collection of granular information on individual risk factors	<p>possible, in their view, there are certain aspects of the proposals that seem to go beyond what should be required to conduct the benchmarking exercise. For instance, the collection of granular information on individual risk factors is not necessary to monitor or assess the range of RWA or own funds.</p> <p>However another respondent considers that insufficient attention has been paid by the EBA to the collection of data to identify differences and/or similarities in the drivers of credit risk. This respondent believes that the starting point and priority should be the assessment and comparison of the quality of internal approaches to modelling the Credit Risk drivers, specifically for Credit Risk, PD, LGD, EAD and Maturity.</p> <p>This respondent considers that the templates set out in Annexes V and VI are insufficient and incomplete. The templates should require institutions to provide details of all the key drivers of each risk to enable competent authorities to assess the explanations of the outputs as required in the second sentence of Article 78 (1).</p> <p>Finally, another firm notes that competent authorities will need to give careful consideration to achieving the right balance between firms providing high level portfolio information and very detailed transaction level data, as the former could prove insufficient and the latter disproportionate.</p>	<p>range of RWA; however, it is necessary to assess the quality of the internal models and to be able to explain the variability observed. This request is included in the CRD mandate.</p> <p>To avoid undue burden, the templates try to request only the information that is necessary to assess the main variability drivers. This is always a balancing act and the EBA acknowledges that some simplifications have been introduced to foster comparability and allow an efficient aggregation of the data. Should systemic drivers arise in the identification of institutions with higher or lower model outputs relative to the benchmarks, the EBA will always have the possibility to update the technical standard or include this in its subsequent analysis.</p>	<p>No change.</p> <p>However for 2015 the SIG-TB</p>
Alignment with other benchmarking	<p>Several respondents request the EBA to align the benchmarking initiative with existing exercises from other regulators (in particular the BCBS) or industry</p>	<p>The EBA has a legal mandate to establish the portfolios applicable across EU banks, this may imply the need to develop specific portfolios for certain jurisdictions or</p>	<p>No change.</p> <p>However for 2015 the SIG-TB</p>

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
exercises	initiatives (such as GARP) to prevent duplication, overlaps and inconsistencies from multiple initiatives in the same area. These respondents consider that it may not be proportionate for firms to provide responses to multiple data requests all looking at the same aspect, aiming to achieve the same result, as these exercises are resource and time intensive and may detract from other activities	markets that may not be relevant for international active banks. Accordingly, some differences with other global initiatives may be expected, however, the EBA is mindful of the burden caused by these exercises and participates actively in the work of the BCBS, so, where feasible, the EBA coordinates its work on benchmarking with the BCBS or other initiatives.	portfolios will be used in the market risk exercise.
Proposal to segregate the TS by type of risk	One respondent considers that the ITS is over-complicated and confusing because it combines Credit and Market Risk. The EBA should establish separate ITS for each type of risk.	The portfolios, instructions and templates used in the ITS for Market and Credit are independent, so there should be no room for confusion. Furthermore the RTS clearly identify where separate standards are applied to market and credit risk respectively.	No change.
Use of a common period to determine the Stressed VaR.	Two of the respondents agree with the EBA that there is an additional burden for banks in relation to performing the Stress VaR calculation under a uniform stress period (page 16). Nevertheless, a harmonization of the stress period appears to be useful with respect to a benchmarking exercise. These respondents welcome harmonization, under the condition of a sufficient implementation period and a stress period defined in coordination with the credit institutions.	Due to the considerable burden caused by the initial introduction of this yearly exercise the EBA considered it appropriate not to request a common period for the Stressed VaR calculation, however this may change in future exercises.	No change.
Need to ensure effective communication.	A majority of respondents request clarification regarding how the results of the benchmarking exercise will be conveyed to banks as well as how they will be disseminated into the public domain (i.e. organized	The EBA agrees this close interaction is very beneficial and nothing in the RTS-ITS precludes it, however the interaction between the CAs and participating banks once the exercise has been completed and any	No change.

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
	<p>around principles of explaining the divergence to meet transparency objectives).</p> <p>Two respondents suggest that, upon completion of the benchmarking exercises, bilateral feed-back sessions between supervisors and banks should be organised, as this will not only allow banks to better understand their own position in the exercise but is also likely to aid the analysis and interpretation of the result, as well as the understanding the characteristics of positive and negative outliers (without needing to specifically identify the outlier banks). According to their perspective, this would also be beneficial as it would lead to targeted improvement programs at banks.</p> <p>Additionally, these respondents see benefits in publicly disseminating the results on a peer-group basis so that banks can analyse the results in an attempt to identify the reasons for potential divergence with their peers.</p>	<p>publication of the results is outside the mandate established in article 78 of the CRD.</p>	
<p>Specific suggestion to remove or revise part of the legal text</p>	<p>One respondent requests to remove Articles 3 paragraphs 2(c)&(d), 4, 5 and 7 to 11 from the RTS completely. In this respondent's view, these provisions would be better suited for inclusion in the EBA guidelines.</p> <p>In addition this respondent suggests some changes in the following articles, due to the reasons stated:</p> <ul style="list-style-type: none"> - Article 5: they consider that the calculation of benchmark results should not be an integral part of a 	<p>Article 3.2 (c) (d) and articles 4 & 5 relate to the use of the standardised approach as well as to the use of outturns as a benchmark (see specific question on this matter).</p> <p>The IT requirement in article 5 of the ITS is merely for reporting (not internal risk systems).</p> <p>Articles 8&10: Indeed these areas for consideration are general requirements for banks using credit and market internal models for capital purposes which are already</p>	<p>Some of the suggested changes have been introduced.</p>

firm's IT solution since there are significant operational risks involved in having fictitious trades running through live production systems.

- Article 8 1.(i): Since parameter calibrations and application are usually not done at the level of supervisory benchmark portfolios (or indeed individual counterparties) the results can be significantly different compared to internal performance monitoring outcomes

- Articles 8 1.(ii) and 10.1.a These provisions require replication of work done during the approval and review process by competent authorities and should not be repeated in a benchmarking exercise

- Article 8 2.j: Default and cure rate definitions contain discretionary elements linked to local accounting requirements that establish when a risk provision must be created. Regulatory agreement is therefore a prerequisite to assessing and comparing default and cure rates as part of a benchmarking exercise.

- Article 10 2: The extensive list of areas for consideration here imposes significant data requirements but does not provide any indication of how the information will be assessed or how conclusions regarding the quality of the underlying models will be derived.

Other respondents note that that the requirements for

requested in the CRR text. Accordingly they should not create any additional burden. The EBA considers it is important that CAs have all this information in mind when assessing modelling outcomes, where the information is relevant, of course. Accordingly, the language has been amended to ensure this is not seen as a 'check list'.

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
	<p>competent authorities when assessing the internal models as specified in Articles 8 – 12 are already described in the CRR for all model categories.</p>		
<p>Possible legal issues regarding ‘rotation’ of types of portfolio.</p>	<p>One respondent supports the approach to the assessment of internal approaches by performing some rotation in the type of portfolios used. However, the respondent is concerned that performing an assessment on a rotational basis every two years might not comply with the Directive text, which requires annual assessments.</p>	<p>The scope of the benchmarking exercise covers all internal models (except for operational risks); however it may not be possible to assess all possible types of underlying risks every year. The rotation approach allows the EBA to focus on some specific risks and models on a yearly basis, while covering the vast majority of risks permanently. This approach ensures that the benchmarking exercise is introduced in a proportionate manner. The rotation approach only determines the major focus of the assessment and does not exclude any further analysis by the competent authorities.</p>	<p>No change.</p>
<p>Comments related to the templates. Need to avoid duplicities in the templates with COREP.</p>	<p>One respondent recognises that the templates are designed to capture some data that is different to COREP, however this respondent considers that there is also some duplication, that should be avoided. Several respondents note that the IT and reporting requirements imposed by the ITS should be recognized as burdensome. One of them refers to the huge work already achieved by banks regarding COREP/FINREP reporting. Moreover this respondent considers that the 30 day enforcement delay after publication is unrealistic for the implementation of the reporting</p>	<p>There is no duplicity for market risk portfolios (none of the data points requested are in COREP). The market templates include boxes for the main modelling assumptions and free-text boxes in case banks need to clarify their response. Any duplicity in the credit portfolios should not be too burdensome, since they only entail reporting the same information twice. The first reporting would happen by mid-April 2016, so the EBA considers this to be appropriate time to implement the new reporting, bearing in mind that not</p>	<p>No change.</p>

processes and should be adjusted. Another firm considers that the process will result in considerable costs. The implementation period until 11th June 2015 would not be realistic, according to his view, banks would need at least 1 year of implementation to be able to prepare IT-systems and reporting systems so they believe that the implementation should be moved to 1st January 2016 and first remittance date moved to 11th March 2016.

One firm notes that, given the permanent nature of the benchmarking exercise, they will need to set up an appropriate IT infrastructure at Group level to support data extractions and reporting. This firm therefore requests a certain degree of stability.

This firm also considers that it is not clear where the internal approaches applied and main risk modelling assumptions have to be specified in the credit risk templates. According to this firm it could be really useful to allow for a template where qualitative considerations may be included to explain the modelling assumptions and constraints, for instance via open-text boxes.

all portfolios will have to be reported in the first year.

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
Specific consultation questions			
<p>Q1. Do you consider the use of common benchmarks for credit and market portfolios necessary to ensure a common approach?</p>	<p>Several respondents welcome the use of common benchmarks to increase market transparency and restore market confidence in the internal models. One respondent, however, points out that there might be differences in the development of underlying risk models stemming from practices and modelling choices whose effects on the capital requirement calculation are not explicitly measurable.</p> <p>Some respondents see a clear added value in defining common criteria to identify extreme values but do not support a common absolute benchmark such as the Standardised Approach (due to the lack of risk sensitivity and a general conservativeness). These respondents also point out, that inappropriate benchmarks will make the assessment process burdensome and ineffective, meaning that the objective of harmonising the assessment by competent authorities would not be achieved.</p> <p>Instead of defining single benchmark values, some respondents favour the idea of defining an acceptable range of variations of risk metrics.</p> <p>Other respondents do not see the need to have benchmark common across the disciplines given the differing nature of credit and market portfolios and the differing sources of variability.</p> <p>Several respondents highlight that common standard benchmarks should only be considered as general guides to further enquiries.</p>	<p>The EBA acknowledges that common benchmark approaches might not be appropriate in all cases. However, the EBA tries to build the benchmarks as close as possible along the risk drivers. Furthermore, the benchmark will only be used as an initial indication for the competent authorities for their detailed assessment. The important thing is that benchmarks are used to aid, rather than to replace the judgment of NSAs.</p> <p>The EBA has decided to drop from the RTS the reference to an explicit benchmark based on quartiles, which instead will be determined yearly by the EBA in its report.</p> <p>As regards the specific requests to increase the precision in the benchmarking by taking into account additional information, the EBA sees the merit of doing this. However, the EBA also considers that it would not be proportionate to collect additional information beyond what is already proposed. The EBA will have access to more information, for instance COREP, and will still be in a position to identify country-specific effects. The EBA therefore does not acknowledge there is a need to collect additional information in this regard.</p>	<p>Drop the explicit reference to a benchmark based on quartiles from the RTS text.</p>

Respondents emphasise that a common benchmarking is only appropriate where portfolios and risk management practices are similar. However, significant variances can be expected between banks as a natural consequence of different

- business models and focus;
- risk profile, risk appetite and strategy;
- internal processes;
- portfolio composition and size;
- modelling approaches and approvals;
- local/national regulation and legislation (e.g. legal terms of debt recovery and property law);
- environmental factors and market position.

Furthermore, the use of common benchmarks across countries is questionable. Common benchmarks should, therefore, be supplemented by more specific benchmarks aimed at certain portfolios. Moreover, imposing risk uniformity in the financial sector could jeopardise resilience and increase systemic risk.

One respondent believes that the use of standard benchmarks is not needed and advocates a solution where the benchmarks are defined by national supervisory authorities (NSAs).

Some respondents suggest putting more effort into the preparation of the benchmark assessment (i.e. how conclusions shall be drawn and when to use benchmarking) involving institutions and national competent authorities. Bank-specific approaches and

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supervisory practices should be examined across member states and common approaches should be established with regard to the calibration of IRB parameters, the definition of default and the treatment of defaulted assets. National competent authorities should perform a national benchmarking in parallel to the EBA benchmarking to also develop an understanding of differences of banks within a country. Several respondents recommend segmenting the benchmark portfolios (along peer groups) by using drivers that have proved to be strongly predictive, such as bank type, asset class, portfolio balance and size, geographies, etc.

Other respondents stresses that internal models are built for internal target portfolios which are probably different to a benchmark segment/cluster. Results from mixed models cannot easily be interpreted as an indicator of an under- or overestimation of own funds requirements, it could indicate a lack of representativeness.

Q2. Do you consider that the benchmarks outlined in the RTS are sufficiently proportionate and flexible? Do you have any alternative

Most respondents highlight that with the proposed benchmark, i.e. the usage of quartiles and 80% RW of the standardised approach most contributions would be regarded as outliers. The question of proportion and flexibility is, therefore, closely related to the obligations imposed on the competent authorities when a contribution is deemed to be an outlier. The additional use of further statistical information (e.g. mean) is proposed.

The EBA will use the results of the different benchmark approaches and portfolios will be used to calculate a score, which will then form the basis for the analysis performed by the competent authorities. To ensure a proportionate approach is taken, the EBA will consider differentiating between: (i) results that significantly breach a criterion vs. those that only marginally breach it, and (ii) results that breach only one criterion and those that breach several.

Drop the explicit reference to a benchmark based on quartiles from the RTS text.

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benchmark proposals? If yes, please provide details.	<p>Another respondent criticizes that the benchmark metric proposed by the EBA (e.g. the choice of quartiles) is not supported by any statistical evidence. This respondent does not believe the benchmarks to be sufficiently proportionate and/or flexible. Benchmarks should be specific for each risk type (credit and market risk).</p> <p>Other respondents deem the classes of benchmarks outlined in the RTS to be sufficiently flexible. In particular, if used as a variable in a scorecard built on several benchmarks.</p> <p>Some respondents challenge whether the benchmarks proposed fulfil the criteria of good benchmarks, i.e.</p> <ol style="list-style-type: none"> 1. clarity of definition and uniqueness, 2. stability in time over several benchmarking cycles. <p>It is proposed to replace “extremes” by “outlier” and to replace the quartiles by box plots.</p> <p>Respondents were concerned that the term “outliers” was inappropriate as this was a statistically defined term with a definition different to that expressed through the criteria in the RTS (e.g. quartiles would require half of all models to be investigated; not right to refer to these models as “outliers”).</p>	<p>Therefore, the EBA has decided to drop from the RTS the reference to an explicit benchmark based on quartiles. The portfolios to be assessed will be determined yearly by the EBA in its report.</p>	
Q3. What limitations do you see in relation to the use of the proposed	<p>Several respondents fear that the proposed metrics (quartiles approach and SA) might lead to a standardisation of approaches thereby creating wrong incentives and triggering herd behavior.</p>	<p>The EBA will use the results of the different benchmark approaches and portfolios will be used to calculate a score, which will then form the basis for the analysis performed by the competent authorities.</p> <p>To ensure a proportionate approach, the EBA will</p>	<p>Drop the explicit reference to a benchmark based on quartiles from</p>

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<p>benchmark, i.e. (i) first and fourth quartiles; (ii) comparison between own funds under the internal models and the standardised approach; (iii) comparison between estimates and outturns?</p>	<p>(i) First and fourth quartiles Many respondents criticise the fact that in the quartile solution 50% of contributions are automatically marked as outliers. A large majority of respondents suggest using other quantiles, e.g. 10% and 90% quantiles. In addition certain materiality thresholds for the deviation from the benchmark could be applied. One respondent proposes to replace the quartiles with box plots. Respondents stress that the general working hypothesis that the median corresponds to the “true level of risk” is by no means true. Respondent suggest that there should be no need to identify outliers, if the dispersion is tight. Furthermore, there is no reason, why the number of outliers on both sides of the distribution should be equal. One respondent suggested disregarding the fourth quartile in particular. Another respondent recommends the use of an indicator of dispersion for the minimum number of outlier contributions.</p> <p>(ii) Standardised approach Regarding the comparison with the standardised approach, most respondents fear that the calculation of standardised approach risk weights is a laborious and costly procedure and should, therefore, be avoided. Due to the insufficient risk sensitivity, in particular in the credit risk area, the standardised approach cannot</p>	<p>consider differentiating between (i) results that significantly breach a criterion vs. those that only marginally breach it, and (ii) results that breach only one criterion and those that breach several. Thus, the EBA has decided to drop from the RTS the reference to an explicit benchmark based on quartiles. The portfolios to be assessed will be determined yearly by the EBA in its report. In addition, due to the lack of alignment between the standardised and internal model approaches for Market risk the EBA has also decided to drop the use of the standardised metric as a benchmark for Market Risk (though it is still kept for credit, with adjustments if deemed necessary). In addition, during a transitional period until 2017, institutions which do not compute the calculation of the standardized approach for credit risk are not required to provide this information. The EBA acknowledges that all benchmarking / backtesting methodologies have limitations. For this reason, no single approach is used but rather the outcomes of different methodologies complement each other and are assessed by the competent authorities when reaching their conclusions. The EBA will take into account experiences that will be gained in the initial exercise, and might provide more technical guidance as regards the computation of outturns.</p>	<p>the RTS text. Regarding the use of the Standardised as a benchmark for Credit risk portfolios, a transition period till 2017 has been introduced for banks that do not currently compute it.</p>

be regarded as an appropriate benchmark. Moreover the calculation of standardised risk weights might not be uniform among institutions. Furthermore, the need to calculate standardised risk weights is not in line with the requirements of the CRR, why the draft Technical Standards exceed their legal mandate. If required, the calculation should at least be performed on EBA level.

A large majority of respondents opposed use of the standardized as a benchmark specifically for market risk, since it would be too burdensome, and for minimal benefit as it doesn't account for netting and diversification and is therefore a poor 'comparator' to modelled approaches. The notion of P&L requires further specification for comparable results.

(iii) Outturns

For the comparison of estimates with outturns, many respondents see the need to receive more technical guidance from the EBA regarding the computation of outturns (e.g. number of years, default sample size, number of models in use for clusters) and common definitions (default and loss rates). Moreover, further information, such as rating philosophy (PiT vs. TtC), time horizon of data, downturn periods, etc. should be taken into account.

One institution recommends the provision of high level information only, rather than disclosing institutions specific results. The emphasis on the assessment of results should be placed on the dispersion of results

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(quartile approach) and on achieving an acceptable range of outcomes.

Backtesting is largely dependent on the rating scale used. In particular for LDP a backtesting on rating grade level might cause problems due to the low data availability. Moreover, even for HDP defaults can be rare in certain clusters.

Respondents ask for further clarification regarding the use of the binomial back test. One respondent complains that the approach might be extremely difficult and burdensome to implement. The confidence level of 97.5% is put into question by several respondents.

Q4. What in your view is the most appropriate benchmark and/or approach for the assessment of the level of potential underestimation of own funds requirements?

Most respondents believe that backtesting, i.e. a comparison of model-estimated values and realised values is the only robust and valuable approach for identifying any potential underestimation of own funds requirements.

Other respondents believe that the question cannot easily be answered and that a combination of quantitative and qualitative analyses over a period of time will be needed. Simple statistical approaches may easily result in misleading conclusions without fully understanding all factors.

One respondent stresses that benchmarking can never be a substitute for NCAs exercising expert judgment. It must be fully understood that being an outlier in the context of the RWA benchmarking exercise does not necessarily imply that the models are not performing

The EBA confirms that, where possible, backtesting is deemed as one of the most important tools to assess the level of under estimation of own funds requirements. Furthermore, the benchmarking will always be accompanied by an in-depth expert analysis.

The EBA will consider the importance of international coordination. Coordinating HPEs (both in terms of timing and content) with international bodies such as the BCBS will both increase the usefulness of the EBA exercise and reduce the burden on institutions and NSAs.

However, it should be noted that the EBA exercise will inherently involve differences compared to those designed elsewhere; the EBA has a legal obligation to involve all EU institutions with the relevant permissions, and will need to explore EU specificities, such as

No change.

appropriately.

Some respondents emphasise that the identification of outliers and the responsibility of explaining differences should be centralized by the EBA, in order to foster harmonisation of supervisory practices. One respondent reiterated that the EBA should actively coordinate its work with other international bodies.

For Market Risk portfolios, several respondents suggested internal backtesting results. In particular, respondents individually proposed backtesting against unadjusted P&L, backtesting consistent with the FRTB approach and in alignment with Basel timelines, to understand differences in risk factors, respondents also suggested that a combination of qualitative and quantitative factors should be considered together and developed through an iterative approach. One respondent suggested that, while in both cases over-reliance on an individual benchmark was problematic, it was less problematic for the market risk – the same respondent reiterated the importance of portfolio specification in allowing regulators to compare like-with-like.

Regarding Credit Risk portfolios, several respondents believe that benchmarking should be performed at RW or EL level only and not at PD or LGD level. Otherwise early or late default definitions would trigger unwanted differences.

One respondent argues that for HDP the key issue is defining the portfolios for which data is requested to

currencies not used by Basel members.

The EBA is also subject to legal constraints regarding timelines. This might on occasions limit the EBA's ability to coordinate; mutual cooperation of the kind that is already ongoing, should continue, and the success of international cooperation will be monitored on an ongoing basis.

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<p>identify the institutions and areas for further investigation.</p> <p>Other respondent points out that in some cases NCAs have introduced floors or restrictions on the parameters that institutions may use in their internal approaches. The EBA needs controls for these kinds of differences. One respondent suggests using country specific peer group benchmarks. For the IRBA, estimates of pool data providers might be used.</p> <p>Q5. Which set of portfolios do you consider more appropriate for the initial exercise conducted under article 78?</p>	<p>A large majority of respondents favoured the BCBS (SIG TB) portfolios for the initial exercise. Reasons given included that these portfolios were more specified, and lower in overall number. According to these respondents the use of SIGTB portfolios would generate higher quality of results with less burden and duplication. This was partly due to the lack of time; one respondent noted that, for the initial 2014/15 exercise at least, the EBA would not have time to perform the necessary quality assurance.</p> <p>There was support for applying the EBA portfolios after the initial exercise is conducted. In general, respondents supported the rationale behind the EBA portfolios and agreed that these portfolios would be better for assessing individual risk factors.</p> <p>While supporting use of the BCBS portfolios, two respondents noted that this may disadvantage institutions that had not been involved in the BCBS exercise, suggesting that these institutions may be exempted or allowed to run the EBA portfolios for the</p>	<p>The EBA will use the SIG TB portfolios for the 2014/15 exercise, with amendments made only where necessary (updating dates, references etc.). EBA specific portfolios will be used thereafter.</p>	<p>SIGTB market portfolios to be used in the initial exercise. EBA ones thereafter.</p>

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	initial exercise. However, a separate respondent stated that a unified approach would be important.		
Q6. As explained in the background section, do you consider the approach proposed by the EBA appropriate for future annual exercises?	<p>Several respondents suggest following best practices principles, i.e.</p> <ul style="list-style-type: none"> • allowing sufficient time for multiple iterations during the validation stage, • starting with a pilot exercise (limited number of firms) and • implementing an effective communication. <p>One respondent underlines that the benchmarking analysis should take into account the type of banks being compared.</p> <p>Another respondent puts the whole benchmarking exercise into question. In his opinion, the limited added value of the benchmarking exercise as proposed by the EBA fails to justify the required deployment of major resources by institutions and supervisors.</p> <p>Market Risk</p> <p>Some respondents were open to the idea of moving to EBA market risk portfolios in the longer run, with one stating that these portfolios are more appropriate for identifying model-related RWA discrepancies across the industry. They emphasised the importance of the pre-validation phase to ensure that the appropriate instruments are booked, as well as the importance of providing the relevant portfolios to institutions at an early stage, with the same caveats: the burden resulting from large-scale HPEs should be proportionate to the</p>	<p>The EBA will work, in cooperation with other international regulatory bodies, to further develop and specify a set of portfolios for use in future exercises, noting the importance of ongoing international cooperation both in terms of quality of results and the burden on firms / supervisors.</p> <p>The EBA acknowledges that the hypothetical transactions for LDP have their drawbacks but so have all the other approaches (e.g. cluster approach). The EBA will take into account the experience that will be gained in the first exercise for future exercises.</p> <p>The cluster definition is quite granular, but this is required to define clusters of broadly comparable risk. The EBA will take into account the experience that will be gained in the first exercise for future exercises.</p>	<p>SIGTB market portfolios to be used in the initial exercise. EBA ones thereafter. No change for credit risk.</p>

role of HPEs and the practical usability of the results. However, other respondents emphasised the importance of establishing a common approach both in terms of content and timing. Most respondents reiterated the importance of providing institutions with portfolios sets well in advance of the exercise.

Credit Risk

Regarding the HPE for LDP, several respondents deem the use of non-existing transactions as unrealistic and of little use, especially as far as secured LGD is concerned. Secured LGD is not a simple function of the collateral only, but also of

- the ability to have access to it (seniority of the claim, legal environment, nature of the counterparty, etc.);
- the characteristics of the loan;
- the usage of the assets and
- the area of expertise of the institution (e.g. a retail bank might find it difficult to estimate a LGD for a foreign real estate).

The value of the approach is felt to be limited, mainly owing to representativeness issues.

For the cluster approach, some respondents emphasise that the clusters should be defined pragmatically along drivers that are applicable to the majority of banks and with appropriate thresholds of materiality. They fear that the level of granularity of the clusters as proposed by the EBA (e.g. for mortgages) will produce immaterial

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	<p>and unusable clusters. In particular the cluster definition might not be in line with the scope of institutions' models (e.g. one cluster could be covered by two models) which makes backtesting difficult to implement and interpret. Furthermore, the required information might not be directly available in the institutions' IT systems.</p> <p>One respondent feels that due to the current divergent background of practices the EBA benchmarking proposal for credit risk hardly justifies the costs, considering the limited utility it offers. Instead, additional guidance on the internal approaches should be developed to achieve consistency in internal approaches.</p>		
<p>Q7. Do you have any alternative proposals? If yes, please provide details.</p>	<p>Some respondents highlight that any benchmark should always respect the following principles:</p> <ul style="list-style-type: none"> • any benchmarking exercise shall establish what the key drivers behind RWA divergences are. • benchmarks shall be expressed in terms of ranges of acceptable divergences rather than single simplistic values. • benchmarking frameworks shall be refined by segmentation according to the relevant key drivers of divergences (e.g. bank type, asset cases, geographical sector) <p>One respondent highlighted the need to select assessment criteria with care, i.e. criteria should not lead to a situation where all institutions are affected for all portfolios, leading to major cost without providing</p>	<p>The EBA believes that the observed distribution of reported data is an important piece of information to be used in the benchmarking. However, as the use of quartiles might not in all cases be appropriate for the benchmark definition, the EBA has decided not to include any reference to predefined percentiles in the RTS. The concrete benchmark definition will be determined during the data analysis.</p> <p>As per responses elsewhere, the EBA recognises the benefits of ongoing international cooperation (reduced burden and more global comparability), subject to the legal constraints that the EBA faces (the need to define portfolio sets annually, and for EU specificities to be accommodated.)</p> <p>The portfolio definition in the templates takes into</p>	<p>Reference to predefined percentiles has been eliminated from the final draft.</p>

any added value. Therefore, the comparison with the standardised should be dropped and 10% or 90% quantiles used instead of quartiles.

Respondents ask for synchronisation of the EBA benchmarking exercise with other initiatives in place (e.g. BCBS)

Market Risk

Some respondents emphasised the importance of coordinating content and timing with other HPEs, with most referencing the BCBS's work in this area. One respondent proposed that portfolios from the GARP Benchmark Portfolio Initiative (GBPI) might be used instead of either option.. One respondent emphasised the importance of allowing a sufficient period for validation and for the industry to reach consensus on the specification of positions. One respondent reiterated a suggestion that comparisons with the standardised approach should be avoided, and that quartile criteria should be replaced with something more proportionate, e.g. deciles.

Credit risk

Some respondents suggest to alternatively use country - specific industry means/medians together with a definition of a relative acceptable variation from the mean/median to be defined by the EBA or the NCA (in particular for mortgage portfolios).

account the country dimension. The EBA will use the country dimension in its benchmarking.

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Q8. Which of the two options for phasing-in do you consider preferable?	<p>Most respondents are in favour of Option 2. In particular the rotation process is broadly accepted. Option 2 is deemed to be the less costly option and the one with the longest lead-in time.</p> <p>Only one respondent argues in favour of option 1, since it would allow learning from the 2015 exercise. Experiences gained can then be incorporated into a larger set of portfolios for 2016.</p> <p>One respondent points out that the rotation approach and the exclusion of some portfolios (e.g. QRRE and Retail Other) is not in line with the Directive, recommending an according amendment of the Directive. Furthermore the respondent recommends an amendment of the Directive to exclude all exposures to Central Banks, Central Governments and Institutions on the basis that it is very difficult to validate these internal models. The same respondent proposes an alternative option involving phasing with rotation by risk: all credit risk in even years and market risk (starting 2015) as well as other risk (starting 2017) in odd years.</p>	<p>In line with the comments received, the EBA will choose Option 2 for phasing-in. This will ease the implementation burden to both institutions and competent authorities.</p> <p>The EBA notes that the CRD requires an annual assessment of all internal models by the competent authorities. The rotation approach only determines the major focus of the assessment and does not exclude any further analysis by the competent authorities.</p>	Option 2 for phasing-in is selected.
Q9. Do you see any potential ambiguities in the credit risk portfolios defined in Annex I? Please identify the relevant portfolio	<p>Various issues are raised with responses going into some details (e.g. need for clarification of single data fields in the templates). Therefore only the main items are mentioned at this point.</p> <p>One respondent proposes to have a targeted Q&A process for regular benchmarking exercises to deal with any ambiguities. The danger of a mismatch between the benchmark portfolio definition and the banks' internal rating models (e.g. corporate vs. retail definition,</p>	<p>The EBA has revised the templates to remove potential ambiguities. In particular a further alignment with the regulatory reporting has been assessed.</p> <p>Furthermore the EBA intends to establish a Q&A process for the regular benchmarking.</p> <p>As a result of the rotation approach, counterparty risk and CVA will not be assessed in the first exercise to be conducted in Q4 2015. After this initial exercise all the detailed portfolio information will be provided in the</p>	See Annexes of the ITS

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<p>providing details and any suggestions that would eliminate these ambiguities.</p>	<p>definition of large corporates) is mentioned by several respondents. Such a mismatch might be costly for institutions</p> <p>One respondent highlights that there are inconsistencies with the COREP and FINREP definitions (segmentation, coverage of different asset classes in one template, different format and data items definitions, different data element requirements). A duplicated reporting of figures under COREP and the benchmarking exercise should be avoided.</p> <p>Another respondent believes that the definition of clusters (e.g. the use of the ILTV in Annex I/II C103) goes beyond the requirements of the CRR.</p> <p>Several respondents point out the need to consider different forms of state guarantee programs for residential mortgages, as credit loss experiences for these exposures will be different.</p> <p>Some respondents ask for clarification as to whether specialised lending is included in the LDP benchmarking, in which case a clear definition of specialised lending is required</p> <p>One respondent emphasises that there are differences in model practices (e.g. rating philosophy, economic cycle definition, adjustments due to data quality issues and the issue of conservativeness of estimates) that are not defined in the benchmark portfolio outline, which makes an assessment difficult.</p> <p>Furthermore, clarification is needed by some respondents regarding the reporting on a consolidated</p>	<p>ITS market Annexes.</p>	

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basis in situations where different institutions within a group (parent company or subsidiaries) use different approaches. This might lead to a mismatch between reported PDs (i.e. only one PD reported at group level) and overall reported RWAs (different PDs used for RWA calculation on group level).

Some respondents believe that insufficient information is provided on the benchmarking of IMM and CVA models. Regarding counterparty risk, one respondent proposes to have a phase-in approach starting with only one asset class in the first year. With the publication of details on the counterparty risk benchmarking, consistent margin terms and collateralisation agreements are required. Furthermore this respondent criticises that the standard for the assessment of counterparty risk is not clear (e.g. will the benchmarking of CVA require both advanced and standardised calculations to be captured?).

Q10. Do you have any suggestions for additional credit risk portfolios? Please provide details.

Most respondents do not come up with any suggestions for the inclusion of further portfolios. One respondent argues that all other IRB portfolios (i.e. QRRE and Retail Others) need to be included. Furthermore this respondent believes that the exclusion of exposures to EU Central Banks and Central Governments in local currency whereas exposures to non EU G20 countries are included, leads to incomparable distortions in the assessment of the estimation of own funds requirements for this asset class.
According to another respondent credit risk portfolios

The EBA will decide on basis of the experiences to be gained in the first benchmarking exercises if portfolios are to be added in future, and which ones to add if so (for the current portfolio coverage see also question 8).

No change.

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<p>should be identified to increase the possibility of “like being compared with like” (e.g. by using risk drivers, and other factors such as time on book or degree of delinquency and by taking into account the legal jurisdiction).</p> <p>Respondents support the EBA view that the focus should be on plain vanilla credit instruments, since comparability is likely to be difficult to achieve with more sophisticated exposures or exposures held by a limited number of contributing banks (such as securitisation, private equity holdings). One respondent proposes to include in a second stage plain vanilla debt securities held in the banking book and equity holdings, another to cover liquidity buffer securities held as available for sale in the banking book.</p> <p>Q11. Do you see any potential ambiguities in the market risk portfolios defined in Annexes VII.a and VII.b? Please identify the relevant portfolio providing details and any suggestion that would eliminate these.</p>	<p>Several respondents proposed the use of term sheets to ensure that market risk portfolios were appropriately specified or otherwise expressed concerns about under specification. Some respondents provided specific proposals that they suggested would reduce unhelpful variability and better isolate relevant drivers of differences in results. Two respondents proposed a clarifying how instruments matched to portfolios, suggesting spreadsheets that would specify each instrument in each portfolio. A specific issue regarding the use of non-euro EU currencies was raised.</p>	<p>The EBA has decided to use the SIGTB portfolios for the initial exercise. These portfolios have been extensively used, so this should address most issues relating to misinterpretations. Nevertheless a Q&A process will also be established.</p>	<p>SIGTB portfolios selected for the initial exercise.</p>

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<p>Q12. Do you have any suggestions for additional market risk portfolios? Please provide details.</p>	<p>Four respondents proposed the addition of a specific FX vanilla option designed to test whether VaR captures the convexity between the current FX spot and the 99% FX spot bump.</p>	<p>The EBA will include the proposed instrument in the second round of the annual exercise, subject to agreement and any subsequent consultation. The EBA welcomes suggestions for additional portfolios/instruments on an ongoing basis, and appreciates the importance of cooperation with the industry to ensure that instruments are specified in as much detail as necessary to render any variance not related to internal model differences insignificant.</p>	<p>Additional portfolio to be added in the future.</p>
<p>Q13. Do you agree with the possibility of allowing firms to refrain from reporting portfolios if one of the conditions stated in Article 3 is met?</p>	<p>All respondents commenting on this question agree with the possibility to refrain from reporting certain portfolios, if well justified.</p> <p>Several respondents point out that models without regulatory approval (i.e. models used only for internal purposes) should explicitly be excluded from the benchmarking exercise to avoid consistency and comparability issues.</p> <p>If an institution is unable to provide results on a significant individual portfolio one of the respondents suggests excluding it from the peer's distribution for aggregated portfolios that are affected.</p> <p>Some respondents ask for clarification as to whether F-IRB institutions need to report LGD, EAD and maturity values. Even for F-IRB institutions the LGD has a bank-estimated component where there is physical collateral (e.g. collateral value of real estate).</p> <p>One respondent questions what option (c) adds to options (a) and (b).</p>	<p>The exceptions stated in the ITS are for market risk portfolios. This is clarified in the final draft text.</p> <p>Regarding the existing wording in Article 4, point (a) is the regulatory authorisation, (b) relates to a lack of internal authorisation to operate in certain instruments or underlyings, whilst point (c) relates to the 'risk or modelling features' not contemplated in the risk metric.</p> <p>For instance, considering a barrier knock-in option over an EU financial institution; the bank may be authorised by its regulator to use an internal model for general and specific equity risks for capital purposes, management may have authorised trading options with EU equities as underlying, however traders may not be authorised to trade barrier options (i.e. the bank would meet conditions (a) and (b) but not (c)).</p> <p>In all cases, institutions without regulatory approval to model a portfolio are excluded from the reporting of this portfolio.</p>	<p>Text has been introduced to clarify that the exceptions stated in art 3 are for market risk.</p>

Comments	Summary of responses received	EBA analysis	Amendments to the draft RTS
<p>Q14. Do you have any suggestion about additional exemptions from reporting? If yes, please provide details.</p>	<p>Several respondents would also welcome exemptions from reporting also for credit risk.</p> <p>Many respondents suggest defining further reporting exemptions as follows: In a first step an institution may select portfolios to be excluded on the basis of quantitative and qualitative factors as defined by the NCA (e.g. portfolios in run-off). In a second step the appropriateness of such an exclusion from reporting is discussed between the supervisor and the institution, taking into consideration the fact that exemptions might lead to consistency and comparability issues for all-in portfolios. Respondents suggest having reporting exemptions</p> <ul style="list-style-type: none"> • where an institution is under a model validation process; • where a materiality threshold is broken (e.g. absolute/relative portfolio size to total consolidated/subsidiary's balance-sheet, a percentage of an institution's RWA, a percentage of a market); • for portfolios with partial roll-out (alternatively the share of the portfolio under the standardised approach should be highlighted); • in exceptional and temporary situations, such as merger and acquisition situations impacting existing or new assets of the bank. <p>Furthermore, local entities supervised by a host supervisor should be exempt from solo reporting as long as their portfolios are included in the consolidated</p>	<p>Regarding credit risk, the EBA sees no need to have further exemptions from reporting, where models have received a regulatory approval, which is in line with COREP reporting.</p> <p>Regarding market risk, to ensure a high-quality dataset, the EBA will continue to include the three criteria, to ensure that, where an institution has permission from the NSA to model a specific risk category / instrument but lacks internal authorisation to do so, the institution can exempt this product (but not the rest of the portfolio) from reporting. This is to ensure that the resulting dataset is not corrupted by results that reflect poor understanding, rather than variable modelling, of a specific instrument / risk category.</p>	<p>No change.</p>

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vision of the home supervisor.

Other respondents asked for an exemption from reporting individual clusters (credit risk) that are immaterial for certain banks (e.g. 5% of total RWA) and where a reporting is overly burdensome (e.g. if reporting of a specific cluster would be costly, but would not significantly add to the quality of the assessment of the institution).

Another respondent recommends an exemption from reporting for portfolios that have supervisory floors/add-ons, as well as slotting for in-scope property exposure, as by definition the risk weights should be the same.

One respondent points out that there should not be any exemptions other than those permitted by the Directive.
