EBA/CP/2014/07

28 May 2014

Consultation Paper

EBA 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 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)

Contents

1. Responding to this consultation

The European Banking Authority (EBA) invites comments on all proposals put forward in this paper and in particular on the specific questions summarised in section 5.2.

Comments are most helpful if they:

- respond to the question posed;
- indicate the specific point to which a comment relates;
- contain a clear rationale;
- provide evidence to support the views expressed or rationale proposed; and
- describe any alternative regulatory choices the EBA should consider.

Submission of responses

To submit your comments, click the 'send your comments' button on the consultation page by 19.08.2014. Please note that comments submitted after this deadline or via other means may not be processed.

Publication of responses

Please clearly indicate in the consultation form if you wish your comments to be treated as confidential. A confidential response may be requested from us in accordance with the EBA's rules on public access to documents. We may consult you if we receive such a request. Any decision we make not to disclose the response is reviewable by the EBA's Board of Appeal and the European Ombudsman.

Data protection

The protection of individuals with regard to the processing of personal data by the EBA is based on Regulation (EC) No 45/2001 of the European Parliament and of the Council of 18 December 2000 as implemented by the EBA in its implementing rules adopted by its Management Board. Further information on data protection can be found under the Legal notice section of the EBA website.

2. Executive summary

In the aftermath of the financial crises, questions have been raised as to why there were significant differences in the denominator of the calculation of risk-weighted assets (RWAs). The EBA and other international bodies have already 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 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.

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, IMM, CVA and credit risk.

3. 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 assets[1].

European legislators have acknowledged the need to constrain the inconsistent calculation of risk-weighted assets for equivalent portfolios and the revised Capital Requirements Regulation[2] and Directive[3] ('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 for credit risk. 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.

For market risk the EBA is consulting 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. Considering current resource constraints, the EBA is requesting feedback on the most appropriate approach for exercises to be conducted in 2014 and from 2015 onwards.

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, the EBA is proposing that banks 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 proposing (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.

This consultation paper presents two options regarding the portfolios for market risk that the relevant institutions would be required to model.

1. Using modified portfolios relative to recent Basel and EBA hypothetical portfolio exercises (HPEs). These will be designed to inform specific EBA proposals to assess modelling of individual risk factors, but may suffer from additional data quality issues as a result of the portfolios being relatively untested and unfamiliar.

2. Using broadly the same portfolios as in recent Basel and EBA HPEs. The experience gained from these exercises should foster a solid foundation for high quality data, but there will be less room for designing exercises to assess individual modelling choices.

We seek the views of industry on which option is preferable.

Option 1: Modified portfolios relative to recent Basel and EBA HPEs

This option constitutes the EBA baseline proposal (see Annex VII.a). Although the set of portfolios developed by the Basel Trading Book Group's hypothetical impact study have been used as a starting point for this option, considerable changes have been made. Only the simplest products have been included, these have been organised into a large number of portfolios in order to incorporate different risk factors in an 'incremental' way.

According to this proposal, the different 'risk factors' that are included in each individual portfolio are identified. For example, within equity the EBA intends to assess delta 1 general and specific position risk, basis risk between related equities, and forward volatility surface for options, etc. It may not always be possible to entirely isolate these 'main' risk factors, but the effect coming from any other risks must be negligible.

This approach is designed to facilitate an 'incremental' assessment of risk factors, i.e. a portfolio might differ from its previous one only slightly to allow the 'incremental' introduction of a different or additional risk factor; the comparison between the outcomes obtained from both portfolios should allow a meaningful analysis of the variability stemming from the incremental risk factor incorporated. In addition, a comparison of the outcome obtained in both portfolios will allow an assessment of each bank's individual modelling.

For the aggregated portfolios, the objective is not so much to assess individual risk factors, but assess diversification benefits. To this end, two types of 'aggregation' are proposed:

- First, aggregating directionally 'long' portfolios in different (though related) instruments.

- Second, aggregating directionally 'long' together with directionally 'short' portfolios in different (though related) instruments.

The rationale behind this proposal would be to assess diversification for both types of portfolio ('long only'/'long-short'), while avoiding hedges being 'accidentally' incorporated in the actual aggregated portfolios. Hedging and, in particular, imperfect hedging (i.e. 'basis' risk), is certainly assessed, but this will be done in the individual portfolios.

The modelling information will be reported in the base currency (the currency in which each portfolio is denominated) to eliminate the effect of the FX component and make the results comparable across euro and non-euro EU firms.

Instead of defining the instruments that form part of each portfolio every time, the EBA is proposing to list and define all the individual instruments at the beginning, and form each portfolio as a combination of the different instruments. Therefore, the portfolios will simply indicate the combination (and number, if the same instrument is used several times) of the different instruments listed initially.

Under this proposal the Initial Market Valuation would be requested by instrument (instead of by portfolio) to allow a more specific identification of the instruments which may be producing differences.

Specific treatment of EU non-euro local markets for market risk models

Apart from capturing the most global and common risk factors included in the portfolios for internationally active banks, the EBA intends to assess EU local banks which might be largely focused in local non-euro markets.

Due to limited resources it might not be possible to cover all EU non-euro markets; however, the annual exercise will take a more in-depth look (albeit always limited) at particular EU non-euro jurisdictions. As a starting point it is proposed to cover the following jurisdictions which have internal model banks.

- Denmark
- Sweden
- UK

It is likely that most UK banks will be internationally active; however, it is still appropriate to provide a set of instruments specific to the UK market. It should also be noted that in future exercises the EBA might want to look at other markets, especially those which are not part of the eurozone (such as Bulgarian Lev (BGN), Croatian Kuna (HRK), Czech Koruna (CZK), Hungarian Forint (HUF), Lithuanian Litas (LTL), Polish Zloty (PLN) or Romanian Leu (RON))

The EBA proposal incorporates portfolios particular to each of the three jurisdictions listed above, including local equity stocks (both delta 1 and also including simple options), interest rate (swaps and swaptions), FX (outright forwards against euro) and credit (sovereign risk). Obviously commodities are not considered in these 'local' portfolios.

Since it is likely that a significant proportion of banks might not be able to model these local instruments (except for some UK portfolios) it has been decided to exclude them from the global aggregated portfolios.

Option 2: Same portfolios as in recent Basel and EBA HPEs

Given the current workload for banks and supervisors resulting from a number of overlapping data-collection initiatives such as the SSM AQR, EBA ST and the BCBS Fundamental review QIS, the EBA is considering limiting this first ITS to the set of portfolios included in Basel's Trading Book Group's hypothetical impact study. These portfolios are largely based on the Standards Implementation Trading Book Subgroup (SIG TB) portfolios which were already applied by some EU banks in an exercise conducted by the SIG TB and the EBA in 2013[4].

[4] Nine EU banks participated in the SIG TB 2013 exercise, whilst four additional participated in the one conducted by the EBA: http://www.eba.europa.eu/documents/10180/15947/20131217+Report+on+variability+of+Market+RWA.pdf

These portfolios (see Annex VII.b) have been subject to extensive revision and Q&A based on consultations with the institutions that were voluntarily involved in the SIG TB exercise. They have been amended where necessary (i.e. dates of instruments changed), and the aggregated portfolios have been altered to ensure they are comparable even where some banks are unable to provide results for more complex instruments. The portfolios in Option 2 are therefore already been tested, which is intended to ease the burden on institutions and supervisors and improve the quality of the resulting dataset.

Both sets of portfolios are included in Annex VII of the ITS.

Approach applied for IMM and CVA models

In 2014, the Basel Committee (through its Standards Implementation TB Subgroup SIG TB) intends to assess the variability for counterparty risk internal models (IMM) and, at a later stage, CVA. Considering the scarcity of resources and the existing workload both for banks and CAs, the EBA thinks that it is highly desirable to align our 2014 exercise with the one conducted at the Basel level for counterparty risk[5].

Since the sample of EU IMM banks completely overlaps with the banks that are potentially participating in the SIG TB 2014 exercise, this proposed way forward would allow the EBA to benefit from the expertise of the SIG TB and would also allow the SIG TB to obtain a larger sample of EU participating banks. However, it is worth noting that the SIG TB does not intend to assess CVA in 2014. The EBA portfolios will incorporate this CVA assessment as well.

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

[5] In fact, it is worth highlighting that the SIG TB has agreed to modify their initial timetable to meet the EBA's needs, proposing to run the exercise in Q4 2014.

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.

It is envisaged to reuse already existing definitions of the COREP part of the ITS on supervisory reporting and extend these to achieve the higher granularity needed for benchmarking purposes. It would consequently make sense to use the existing infrastructure available for data submissions related to the ITS on Reporting. Hence, the specification of the data requirements for the credit risk exercise would build on the existing Data Point Model (DPM)[6], which will already be implemented in banks.

To properly assess the internal approaches, including the effect of each of the modelling choices in isolation, apart from the capital outcome, the reporting templates include a collection of detailed information on the models' parameters (e.g. PD, LGD and EAD for credit risk portfolios; for market risk, information on historical P&L data is also requested), to specify for each benchmarking portfolio the internal approaches applied and the main risk modelling assumptions, specifying those which are explicitly contemplated in the regulation.

For market risk portfolios it is proposed to gather information on the following modelling choices, some of which will be requested to be specified for the model as a whole, while others should be detailed by individual portfolio.

Categories to be covered in VaR (all requested at the MODEL level)

Methodology

1. Historical Simulation
2. Monte Carlo
3. Parametric

[6] See http://www.eba.europa.eu/regulation-and-policy/supervisory-reporting/implementing-technical-standard-on-supervisory-reporting-data-point-model-

4. Other/combination of methodologies + blank cell for clarification

Time-horizon computation

1. 1-day VaR re-scaled to 10 days
2. 10 days computed using overlapping (non-independent) periods
3. 10 days computed using other methodology + blank cell for clarification

Length of look-back period

1. 1 year
2. Between 1 and 2 years
3. Between 2 and 3 years
4. More than 3 years

Data weighting

1. Unweighted data
2. Weighting scheme applied
3. Combination of approaches (i.e. Higher of 1 or 2) + blank cell for clarification

Categories to be covered in SVaR (all requested at the MODEL level)

Methodology

1. Historical Simulation
2. Monte Carlo
3. Parametric
4. Other/combination of methodologies + blank cell for clarification

Horizon computation

1. 1-day VaR re-scaled to 10 days
2. 10 days computed using overlapping (non-independent) periods
3. 10 days computed using other methodology + blank cell for clarification

Categories to be covered in IRC and CRM

Due to its complexity, diminishing importance and the limited number of firms with this kind of modelling, the EBA proposes to capture only the credit risk component of CRM.

Request at model level:

Number of factors modelled:

1. 1
2. 2
3. More than 2

Source of LGDs:

1. Market convention
2. LGD used in IRB
3. Other + blank cell for clarification

Request at portfolio level:

Liquidity Horizon used:

1. 3 months
2. 3 to 6 months
3. 6 to 9 months
4. 9 to 12 months

Source of PDs

1. Rating agencies
2. IRB
3. Market-spread implied
4. Other + blank cell for clarification

Source of Transition matrices

1. Rating agencies
2. IRB
3. Market-spread implied
4. Other + blank cell for clarification.

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 proposing to request 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 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 the imposition by the competent authorities of bank/country specific add-ons or minimum levels of parameters/capital for some IRBA exposures and/or internal approaches.

While the collection of 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 their assessment, supervisory capital floors and add-ons are an important source of variation and shall be properly considered by the competent authorities when assessing the significance and systematic nature of potential underestimates in the capital requirements computed 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 outside the threshold areas proposed 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 APR 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 benchmark portfolio of the institution to which the internal approach is applied;
- Micro-macroeconomic situation of the bank/benchmark 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 cyclicality 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 underestimates, the EBA requests high default portfolios to simulate the application of revised IRBA parameters that would be appropriate to allow internal approaches to pass a binomial back-test. The EBA also requests the submission of appropriate complementary information to allow competent authorities to observe the different benchmarking portfolios for assessing the variation in capital requirements caused by the application of benchmark parameters, while also taking into account the potential representativeness fragility of the benchmark portfolio sample.

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.

4. Draft regulatory and draft implementing TS on benchmarking under Article 78 of Directive/2013/36/EU

In between the text of the draft RTS and ITS that follows, further explanations on specific aspects of the proposed text are occasionally provided, which either offer examples or provide the rationale behind a provision, or specify questions for the consultation process. Where this is the case, this explanatory text appears in a framed text box.

Contents

(a) EBA 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

Brussels, XXX
[…](2012) XXX draft

COMMISSION DELEGATED REGULATION (EU) No …/..

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/EC[7], 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) Rules on the procedures for sharing assessments made in accordance with paragraph 3 of Article 78 of Directive 2013/36/EU should include procedures relating to the sharing of assessments with other competent authorities in a group, given both the wording of point (a) of paragraph 7 of that Article, and the fact that competent authorities in a group also have a legitimate interest in the quality of an internal model approach used in the group, as they contribute to the joint decision of the approval of the internal model approach in the first place, by virtue of Article 20 of Regulation (EU) No 575/2013.

(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; the competent authorities' decision on any corrective actions taken or envisaged; and the reasoning behind the conclusions of the competent authorities' assessment. Nevertheless, the potential decision to take any corrective actions shall be taken by competent authorities under Article 78(4) of that Directive and hence should not be covered by these rules.

(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.

[7] OJ L 176, 27.6.2013, p.338.

(5) Given the importance of reviewing the quality of internal approaches and based on point (d) of Article 29(1) of Regulation (EU) No 1093/2010, the EBA should review the application of the regulatory and implementing technical standards relating to article 78 of Directive 2013/36/EU by competent authorities.

(6) 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 benchmark based 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.

(7) 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, and not simply those identified as extreme values or outside the variability thresholds in the EBA report referred to in the above Article.

(8) The results of the exercise on the assessment of the quality of internal modelling 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.

Explanatory box for consultation purposes

The limited set of exemptions from reporting aim to increase the quality of the results submitted by the institutions avoiding to collect data when the internal approaches haven't been developed and used for the computation of capital requirements for actual similar exposures to the ones in the benchmarking portfolios.

(9) The presence of extreme modelling outcomes in the data used to assess variability ('extreme values') is likely to weigh heavily on the final results of the overall assessment of internal approaches, providing a distorted image of the level of variability observed. Accordingly, for the purpose of establishing a range of expected variability in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, extreme values should not be considered. These extreme values should nevertheless be assessed by competent authorities.

(10) Where competent authorities compute benchmarks based on standardised risk weights, an adjustment should be made to the own fund requirements for credit and market risk that result from the application of the standardized 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.

(11) 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 models 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 models. 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 P&L time-series.

(12) 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 avail 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.

(13) 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.

(14) The fact that a modelling outcome of an individual portfolio is an extreme value or is outside the variability thresholds provided in the report, 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. 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.

(15) This Regulation is based on the draft regulatory technical standards submitted by the European Banking Authority to the Commission.

(16) 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 the 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 as 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;

(c) their eventual decision on any corrective actions taken or envisaged, and the descriptions of these actions.

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 5.

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 that have portfolios showing one or more of the following:

(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 falling in the first and fourth quartile of the peers' sample distribution as provided in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, 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 as reported by the institutions under Regulation xx/xxx [ITS] and the own funds requirements that result from the application of the standardized approach, 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 for credit risk, and Article 5 for market risk;

(d) potential differences between the own funds requirements as reported by the institutions under Regulation xx/xxx [ITS] and the own funds requirements that result from the use of outturns by the institutions in accordance with Regulation xx/xxx [ITS] or computed by the EBA in its report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, 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 6 for credit risk.

Explanatory text for consultation purposes

The EBA is proposing the use of: (i) quartiles to provide a preliminary indication of significant differences and low/high diversity in own funds requirements and (ii) differences between modelling outcomes and the own funds requirements that result from the application of the standardized approach as preliminary indication of significant and systematic underestimation of own funds requirements. The EBA acknowledges that a mechanistic use of these benchmarks might not deliver appropriate results in all cases, for example, if there is very little dispersion observed in one portfolio the application of the quartiles would still imply that half of the firms would have to be assessed. However the EBA considers there is a need to establish clear and common benchmarks to achieve the objectives established in Art.78.

The EBA is requesting feedback on possible alternative benchmarks.

Q1. Do you consider the use of common benchmarks for credit and market portfolios necessary to ensure a common approach?

Q2. Do you consider that the benchmarks outlined in the RTS are sufficiently proportionate and flexible? Do you have any alternative benchmark proposals? If yes, please provide details.

Q3. What limitations do you see in relation to the use of the proposed benchmarks, i.e., (i) first and the fourth quartiles; (ii) comparison between own funds under the internal models and the standardised approach; and (iii) comparison between estimates and outturns?

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?

3. Competent authorities may assess any other of the internal approaches of institutions that have portfolios which have been reported in accordance with Regulation xx/xx [ITS].

4. In the course of the assessment referred to in paragraph 1, competent authorities shall apply the assessment standards referred to in Articles 7 to 12.

Article 4

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

(a) for low default portfolios ('LDPs'), at the portfolio level disregarding the special 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. An adjustment of 80% shall be made to the own funs requirements for credit risk that result from the application of the standardized approach used by the competent authorities for the calculation of paragraph 1.

Article 5

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

1. For the purposes of point (d) of Article 3(2), competent authorities shall compute the benchmark statistics regarding potential differences between the own funds requirements for market risk as reported by the institutions under Regulation xx/xxx [ITS] and the own funds requirements for market risk that result from the application of the standardized approach, as defined in Title IV, Chapters 2 to 4 of Regulation (EU) No 575/2013.

2. An adjustment of 80% shall be made to the own funs requirements for market risk that result from the application of the standardized approach used by the competent authorities for the calculation of paragraph 1.

Article 6

Computation of potential differences between the own funds requirements for credit as reported by the institutions under Regulation xx/xxx *[ITS] and the own funds requirements for credit 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 7

Assessment of internal models by the competent authorities for the purposes of Article 4(5)

1. In the course of the assessment referred to in Article 3(1), competent authorities shall assess compliance of institutions with the requirements of Regulation xx/xxx [the ITS], where institutions have exercised the option of Article x 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 4(1) relates to credit risk approaches, competent authorities shall apply the standards referred to in Articles 8 and 9. Where the assessment referred to in Article 4(1) relates to market risk approaches, competent authorities shall apply the standards referred to in Articles 10 to 12.

Article 8

Assessment of credit risk internal models 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 make use, in addition to the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, at least of the following other relevant information:

   i. regular bank validation reports for the internal approaches applied to the supervisory benchmarking portfolios. This shall include comparison of predicted and observed default rates over relevant time period (i.e. longer for through the cycle PDs, shorter 1/year for point in time PDs), comparison of predicted (downturn) with observed LGDs; comparison of estimated and observed exposures at default;

   ii. model documentation including manuals, documentation on the development and calibration of the model and methodology for the internal approaches applied to the supervisory benchmarking portfolios;

   iii. reports regarding on-site visits and list of open findings for the internal approaches applied to the supervisory benchmarking portfolios.

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 all of the following:

   (a) the choice of regulatory approach applied between FIRBA and AIRBA, in accordance with Article 143 of Regulation (EU) 575/2013 by the institutions;

   (b) the model's application perimeter and the representativeness of the benchmarking portfolios;

   (c) 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;

(d) the date of model approval/development;

(e) 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;

(f) recent change in the composition of the benchmark portfolio of the institution to which the internal approach is applied;

(g) micro-macroeconomic situation of the bank/benchmark portfolio, the risk and business strategy as well as internal process, such as recovery procedures for defaulted assets ('workout procedures');

(h) the current position in the cycle, choice of rating philosophy between point-in time ('PIT') or through-the-cycle ('TTC') and the observed cyclicality in the model;

(i) the number of rating grades and dimensions used by the institutions in the PD, LGD and CCF models;

(j) the default and cure rates definitions used by the institution;

(k) the inclusion or not of open workout procedures in the time series used for the calibration of the LGD models.

3. Where competent authorities do not dispose any of the information referred to in paragraphs 1 in order to reach conclusions in relation to the points referred to in paragraph to 2 or those are deemed not sufficient, they shall promptly collect from the institutions, considering the materiality and relevance of the deviation of the institution's parameters and own funds requirements, what is necessary in order to finalize their assessment of the quality internal approaches in the way deemed more appropriate, including addressing questionnaires, perform interviews and conduct ad hoc on-site visits.

Article 9

Assessment of credit risk internal models by the competent authorities- provisions specific to 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 Regulation xx/xxx [ITS], competent authorities shall assess whether the differences in the capital requirements compared to the 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) collateralization practices;

(e) level of independency from external ratings assessment and frequency in the internal rating update.

2. A similar approach shall be followed for counterparties classified under the category of 'defaults' by others but under the category of 'performing' by the institution or vice versa.

Article 10

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

1. In the course of the assessment referred to in Article 3(1), competent authorities shall make use, in addition to the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU, at least of the following other relevant information, which is already required under articles 362 to 377 of Regulation (EU) No 575/2013 before a model can be approved:

   (a) bank 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 model 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 model is able to account for particular structural features that may arise, for example material basis risks and concentration risk;

   (b) 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;

   (c) model documentation including manuals, documentation on the development and calibration of the model and methodology for the internal approaches applied to the supervisory benchmarking portfolios;

   (d) reports regarding onsite-visits and list of open findings for the internal approaches applied to the supervisory benchmarking portfolios.

2. In the course of the assessment referred to in Article 6, competent authorities shall take into account all of the following:

   (a) the choice of the VaR methodology applied between Parametric, Montecarlo 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. Number of maturity segments in which each yield curve is divided. Methodology to capture the risk of less than perfectly correlated movements between different yield curves;

(e) set of risk factors modelled corresponding to gold and to the individual foreign currencies in which the institution's positions are denominated;

(f) number of risk factors to capture equity risk;

(g) methodology to assess the risk arising from less liquid positions and positions with limited price transparency under realistic market scenarios;

(h) track record of the proxies used in the model, assessment of their impact on the risk metrics;

(i) the length of the time series used for VaR;

(j) methodology for determining the stressed period for Stressed VaR, adequacy of the Stressed period selected for the benchmarking portfolios;

(k) methodologies used in the risk- measurement model to capture nonlinearities for options (in particular if the institution uses Taylor-approximation approaches instead of full revaluation) and other products as well as correlation risk and basis risk;

(l) methodologies applied to capture name-related basis risk and shall in particular be sensitive to material idiosyncratic differences between similar but not identical positions as well as event risk.

(m) for IRC and internal models used for correlation trading, methodologies applied to determine Liquidity Horizons by position, as well as the PDs, LGDs and transition matrices used in the simulation.

(n) 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.

3. Where competent authorities do not dispose any of the information referred to in paragraphs 1 in order to reach conclusions in relation to the points referred to in paragraph 2 or those are deemed not sufficient, they shall promptly collect from the

institutions, considering the materiality and relevance of the deviation of the institution's parameters and own funds requirements, what is necessary in order to finalize their assessment of the quality internal approaches in the way deemed more appropriate, including addressing questionnaires, perform interviews and conduct ad hoc on-site visits.

Article 11

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

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 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 as well as the dispersion observed in the VaR metric provided by institutions under 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 market convergence around particular risk factors included in each one of these non-aggregated benchmark portfolios using the degree of correlation between institutions and the level of volatility shown in the Profit and Loss ('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, based on 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 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 Montecarlo, Historical Simulation or Parametric.

8. Competent authorities shall carry out a comparison between the outcomes obtained from similar 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 12
Assessment of market risk internal models by the competent authorities- assessment of the level of capital by institution

2. Where assessing the level of capital by institution, competent authorities shall take into account both of the following:

(a) the level of capital by non-aggregated portfolio;

(b) the effect of the diversification benefit applied by each institution in aggregated portfolios, comparing the sum of the non-aggregated portfolios mentioned in point (a) with the level of capital provided for the aggregated portfolio. This data will be provided in the EBA report referred to in the second subparagraph of Article 78(3) of Directive 2013/36/EU.

3. Where assessing the level of capital 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 13

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 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/EC[8], 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 EU/2013/36, the European Banking Authority ('EBA') is expected to produce regular reports in order to assist the competent authorities in their assessment of the quality of institutions' internal approaches. These reports will 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 is 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 EU/2013/36, 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 EU/2013/36 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.

8 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.

(6) [VERSION 1 -EBA portfolios]

For market risk, in order to ensure consistency with benchmarking standards that have already been used in earlier applications of the benchmarking exercise in the EU, such as in the 2013 Risk Weighted Assets exercise performed by the European Banking Authority ('EBA'), and also to ensure consistency with international standards, such as those developed by the Basel Committee on Banking Supervision ('BCBS'), these previous experiences, should be used as the basis for developing the set of portfolios for the benchmarking exercise required by Article 78 of Directive EU/2013/36, adapted in order to allow a more detailed and 'isolated' assessment of individual risk factors, with the view to producing the meaningful assessment that is implied in that Article. As a result of that approach on occasions very 'similar' portfolios should be tested, which are only different in the 'incremental' risk factor to be assessed. Despite the potential of this approach for producing large numbers of portfolios, this approach should be used given that the number of instruments is not necessarily higher than would be based on other approaches; further, such an increase in the number of portfolios as compared to earlier benchmarking exercises would anyway result from the need to incorporate under the benchmarking exercise of Article 78 of Directive EU/2013/36 some jurisdictions of the Union and their respective currencies (such as DKK, SEK and GBP) not previously covered.

[VERSION 2– BCBS portfolios]

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 EU/2013/36, with only minor adaptations, in order to maintain the portfolio validity.

<u>**Explanatory text for consultation purposes**</u>

Q5. Which set of market risk portfolios do you consider more appropriate for the initial exercise conducted under Article 78?

Q6. As explained in the background section, do you consider the approach proposed by the

EBA appropriate for future annual exercises?

Q7. Do you have any alternative proposals? If yes, please provide details.

(7) 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 models 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 models. Hence institutions should be required to report also the results of the use of outturns for credit risk, and their profit and loss ('P&L') time-series for market risk.

(8) 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 'P&L' data series for each one of the individual portfolios modelled.

(9) 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.

(10) 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 modelling approaches, institutions should be required to report the results of internal models applied to benchmark portfolios covering a wide range of exposures.

(11) Article 78 of Directive EU/2013/36 requires the assessment of the internal approaches authorised by competent authorities to be used for the purpose of calculating own fund 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.

(12) 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 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.

(13) 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.

(14) Article 78(2) of Directive EU/2013/36 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 more in particular with the IT solution applied in Regulation xx/xxx [ITS on reporting].

(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 paragraph 2 of Article 78 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
Default reporting by institutions

1. For the purposes of the reporting referred to in paragraph 2 of Article 78 of Directive 2013/36/EU, when referring to internal approaches for credit risk, institutions shall submit the following information, at the reporting reference and remittance dates specified therein:

   (a) the information specified in template 101 of Annex III, for the counterparties referred in template 101 of Annex I, in accordance with the definitions contained 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 definitions contained 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 definitions contained in tables C.103 in Annex IV and Annex II respectively;

Explanatory text for consultation purposes

Benchmarking portfolios

On the one hand, the benchmarking portfolios defined by EBA should be stable over time in order for the report to be produced by EBA to provide a standardized input to competent authorities. Competent authorities will have to build their assessment process around the EBA report and therefore changes in the EBA report will impact also this assessment.

On the other hand, a phasing-in of benchmarking portfolios (starting with only a few basic portfolios) can be one way of facilitating implementation.
A phasing-in could be achieved with the following options:
Option 1: Define only the portfolios for the exercise in 2015. Introduce new portfolios via an ITS amendment for the exercise in 2016 etc.
Option 2: Define all portfolios and include provisions in the ITS that specify the phasing-in over time. For example, require institutions to submit in 2015 only data relating high default portfolios, while require them to submit data relating to LDP portfolios in 2016, then instituting a rotation process with LDP portfolio the even years and the other portfolios the odd years.

Option 2 would seem to be preferable as providing all the necessary information upfront would ease the implementation burden to both institutions and competent authorities.

Q8. Which of the two options for phasing-in do you consider preferable?

(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 definitions contained in tables C.104 in Annex IV and Annex II respectively;

(e) the information specified in template 105 of annex V in relation to the name and characteristics of the internal approaches used for the computation of the results provided in Annex xx, in accordance with the definitions contained in table C.105 in Annex VI.

Explanatory text for consultation purposes

Benchmarking portfolios

Benchmarking portfolios consist of (i) common benchmarking portfolios which are required to produce the EBA report which in turn will assist competent authorities' assessment of internal approaches and (ii) specific portfolios which may be defined by competent authorities in addition to the common benchmark portfolios. Competent Authorities might be encouraged to use the same template and a common set of definition parameters in order to facilitate an efficient communication of applicable portfolios and to ease the implementation of reporting requirements (or changes thereof from one year to another).

2. For the purposes of the reporting referred to in paragraph 2 of Article 78 of Directive 2013/36/EU, when referring to internal approaches for market risk, institutions shall submit following information, at the reporting reference and remittance dates specified therein:

(a) the templates contained in Annex IX in accordance with the portfolio definitions and instructions contained in annexes VII(a/b) and VIII respectively;

Explanatory text for consultation purposes

Q9. Do you see any potential ambiguities in the credit risk portfolios defined in Annex I? Please identify the relevant portfolio providing details and any suggestions that would eliminate these ambiguities.

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

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 suggestions that would eliminate these.

Q12. Do you have any suggestions for additional market risk portfolios? Please provide details.

Article 3
Exceptions from reporting

1. For the purposes of the reporting referred to in paragraph 2 of Article 78 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 VII(a/b), considering only the individual portfolios which they are able and authorized to model.

Explanatory text for consultation purposes

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?

Q14. Do you have any suggestion about additional exemptions from reporting? If yes, please provide details.

Article 4

Initial market valuation for market risk

Institutions shall report 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/individual instruments included in the portfolios at the precise date specified in the template instructions included in Annex VIII.

Article 5

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 an integral part of the IT solution developed for the supervisory reporting of institutions to competent authorities under Regulation (EU) No 575/2014.

Article 6

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*.

It shall apply from 1 January 2015.

Points (c) and (e) of Article 2(1) shall apply for the odd years starting from 2015.

Points (a), (b), (d) and (e) of Article 2(1) shall apply for the even years starting from 2016.

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]

5. Accompanying documents

5.1 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 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.

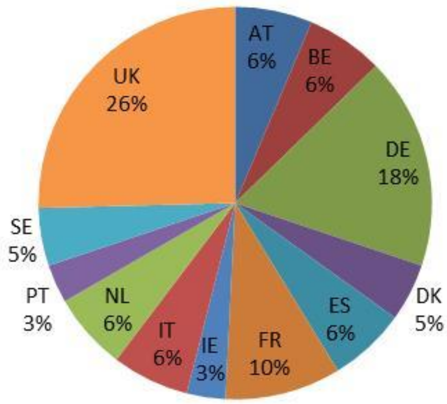
On a larger scale, these problems in the regulatory framework may prevent the effective and efficient functioning of the EU banking sector as well as the internal market.

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	VAR approach	Standardised approach	Traded debt instruments	Equity	Foreign Exchange	Commodities	Share of market risk in total own funds requirements	VAR approach	Standardised approach	VAR approach	Standardised approach	Traded debt instruments	Equity	Foreign 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

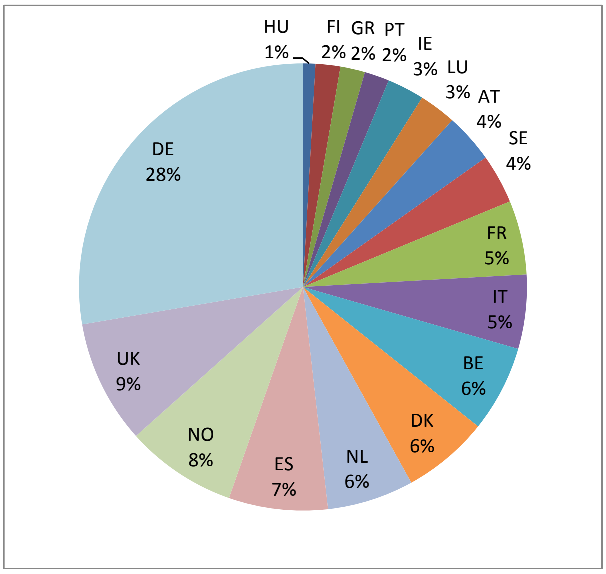
N/M: non-material

*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	4	3	4
BE	5	6	6	2	3	3	3	2	4	1	4	2
DE	20	25	25	8	15	13	8	2	7	7	9	6
DK	0	1	5	6	0	6	6	6	6	6	3	2
ES	3	6	7	8	7	8	7	6	8	7	5	6
FI	0	1	1	1	1	2	2	0	2	2	1	1
FR	5	6	6	5	5	4	5	5	5	5	4	4
GR	0	0	1	2	2	1	2	1	2	1	0	0
HU	0	1	0	0	1	1	0	0	1	0	0	0
IE	2	3	3	1	1	1	2	2	3	0	0	0
IT	1	1	6	6	3	2	5	1	5	2	1	2
LU	3	3	2	1	2	2	2	0	2	0	1	3
NL	3	5	5	4	3	3	5	3	5	4	3	3
NO	0	0	7	7	7	7	6	0	9	6	0	0
PT	0	1	2	2	2	2	2	1	2	2	2	2
SE	0	4	4	4	4	4	4	3	4	4	1	3
UK	6	7	7	2	6	7	5	7	10	0	0	0
Grand Total	**50**	**72**	**91**	**63**	**66**	**70**	**68**	**43**	**79**	**51**	**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 2014) and Option 1a (in 2015 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 2014 exercise and for the exercises to be carried out in 2015 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.

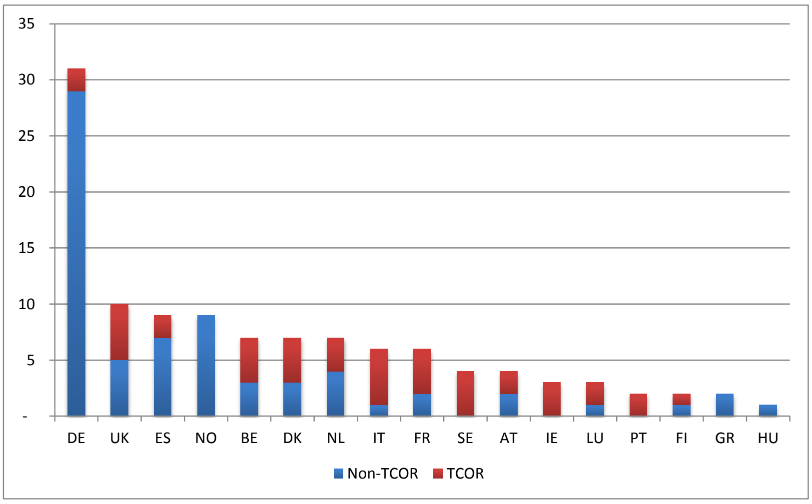
Credit risk

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 (**Error! Reference source not found.**). 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

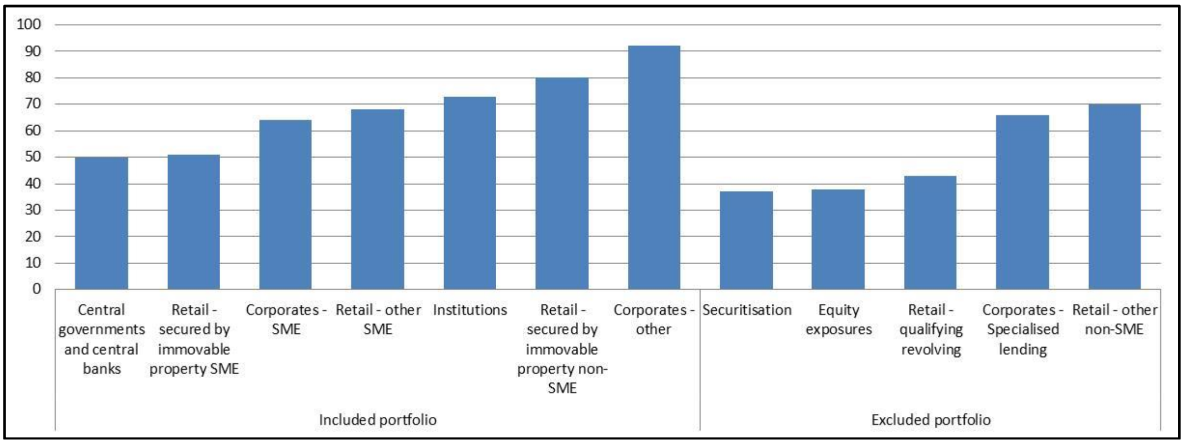
Technical options	Advantages	Disadvantages
1a: Creating a list of benchmark portfolios based on actual exposures including asset classes broadly covered in previous EBA TCOR studies (e.g. low default portfolios, corporate, SMEs and residential mortgages)	The set of benchmark portfolios cover the bulk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

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

		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 rotation or phase-in period recognises explicitly the need for a proportionate and progressive application of the framework	The EBA pre-commitments partially limit the feasibility to introduce any material change in the future

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

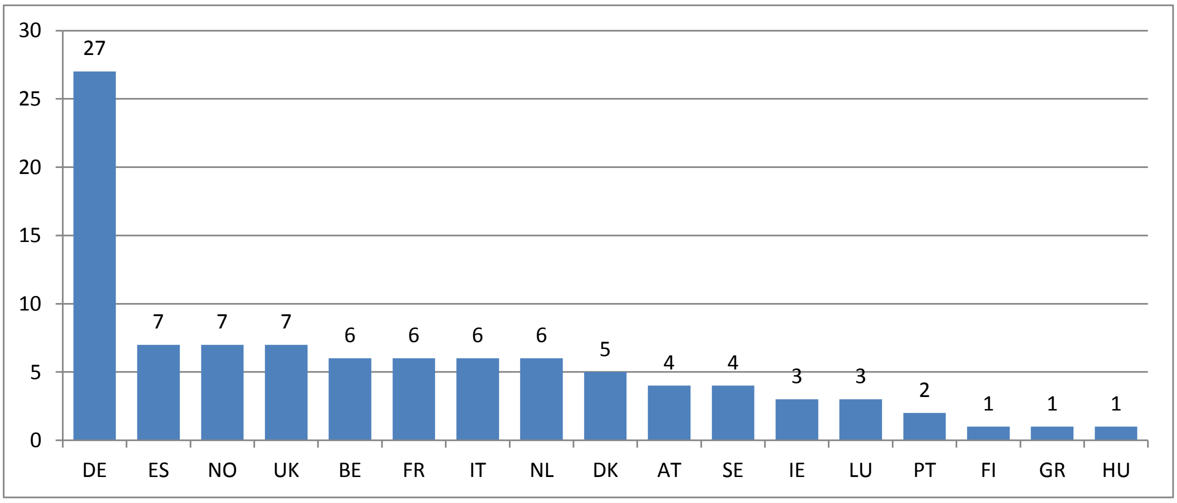
The list of counterparties for which institutions will be required to submit data is likely to change on an annual basis. Option 2a suggests the amendment of the relevant section of the benchmarking exercise every year before the exercise takes place. Option 2b therefore is considered to be a more flexible 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.

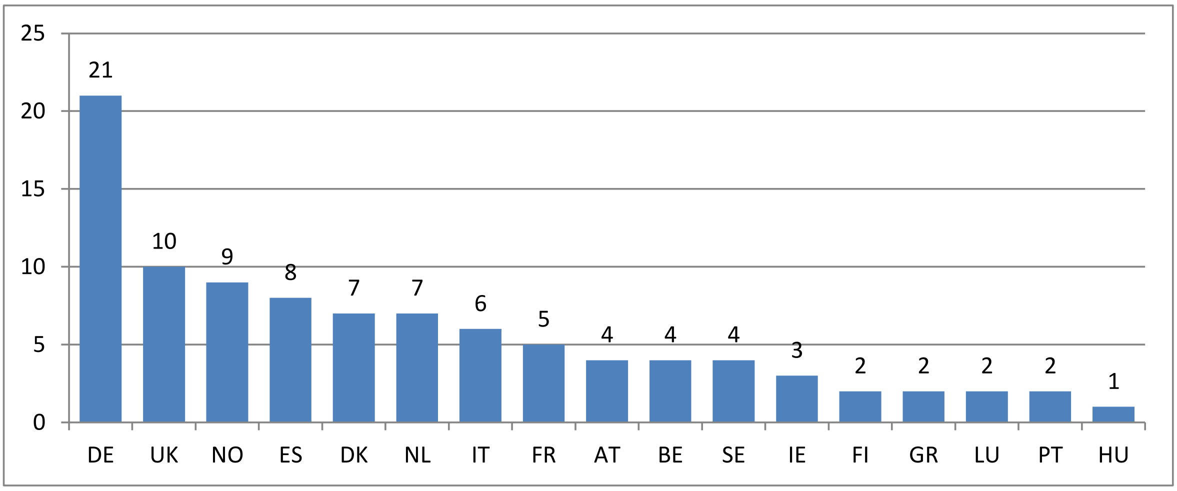
The current sub-section considers two technical options. Option 3a suggests defining portfolios on an annual basis through the amendment of the relevant technical standards. Option 3b suggests defining all portfolios ex-ante and legally specifying a phase-in/rotation period in the regulatory standards. 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:

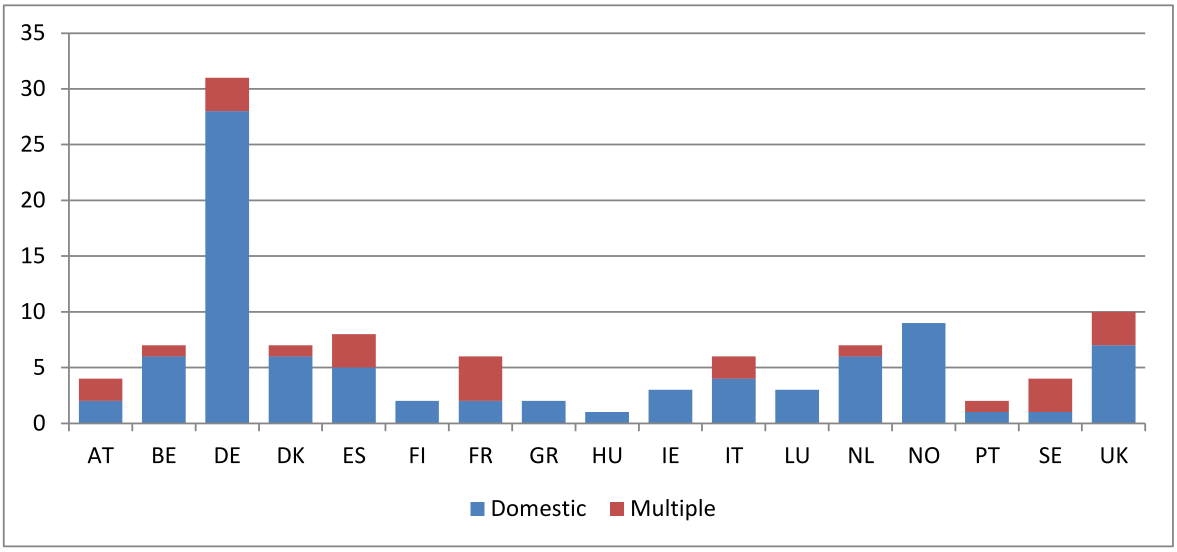
- subsidiaries of EU institutions in the EU, and;
- subsidiaries of third-country institutions in the EU

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.

5.2 Overview of questions for consultation

Q1. Do you consider the use of common benchmarks for credit and market portfolios necessary to ensure a common approach?

Q2. Do you consider that the benchmarks outlined in the RTS are sufficiently proportionate and flexible? Do you have any alternative benchmark proposals? If yes, please provide details.

Q3. What limitations do you see in relation to the use of the proposed benchmarks, i.e., (i) first and the fourth quartiles; (ii) comparison between own funds under the internal models and the standardised approach; and (iii) comparison between estimates and outturns?

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?

Q5. Which set of market risk portfolios do you consider more appropriate for the initial exercise conducted under Article 78?

Q6. As explained in the background section, do you consider the approach proposed by the EBA appropriate for future annual exercises?

Q7. Do you have any alternative proposals? If yes, please provide details.

Q8. Which of the two options for phasing-in do you consider preferable?

Q9. Do you see any potential ambiguities in the credit risk portfolios defined in Annex I? Please identify the relevant portfolio providing details and any suggestions that would eliminate these ambiguities.

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

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 suggestions that would eliminate these.

Q12. Do you have any suggestions for additional market risk portfolios? Please provide details.

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?

Q14 Do you have any suggestion about additional exemptions from reporting? If yes, please provide details.