

## Comments

### **by the German Banking Industry Committee on the current version of the European Central Bank's Guide to the Targeted Review of Internal Models (TRIM)**

Contact:

Bernhard Krob

Telephone: +49 228 509 311

Fax: +49 228 509 344

E-mail: [krob@bvr.de](mailto:krob@bvr.de)

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Coordinator:

National Association of German Cooperative  
Banks

Schellingstraße 4 | 10785 Berlin | Germany

Telephone: +49 30 2021-0

Fax: +49 30 2021-1900

[www.die-deutsche-kreditwirtschaft.de](http://www.die-deutsche-kreditwirtschaft.de)

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## 1. General comments

The Foreword to the TRIM Guide states that a major objective of the TRIM exercise is to reduce unwarranted variability in model outcomes. We support this aim as a general principle, even though the term 'unwarranted variability' is not defined precisely, with the result that it is unclear what it encompasses. On no account can variability be eliminated in its entirety, as it is a characteristic of internal models – in contrast to standardised approaches. A fundamental function of internal models is to model bank-specific risks in the portfolios on a bank-specific basis.

According to the ECB, this unwarranted variability is driven by inappropriate modelling decisions by the institutions that have taken advantage of the modelling freedom granted to them. We should note here that the institutions required to conduct the TRIM exercise use all the authorised supervisory models under Pillar I. At least one national competent authority (NCA) has already decided in this respect that the relevant modelling decisions of the institution were appropriate. We therefore do not understand this assessment. If the ECB now arrives at new findings in the context of the investigations, these generally contradict the assessments made by the NCA investigations conducted so far.

Overall, the TRIM Guide is an undefined category of document – a 'guide' – that is of course in principle suitable for acting as the basis for conducting an investigation. However, we do believe there is a problem if such a document sets out requirements that contradict valid legal requirements. This is not the mandate of a 'guide'.

The standards against which the institutions will be reviewed are of essential importance. We reject the use of any EBA RTS, ITS or Guideline in the course of on-site investigations that is not yet in force. Final drafts issued by the EBA that have been communicated to the Commission can also not be allowed to serve as the basis for the corresponding assessments.

For example, the TRIM Guide cites as a source the 'EBA Consultation paper on Guidelines on PD estimation, LGD estimation and the treatment of defaulted exposures' (EBA/CP/2016/21) dated 14 November 2016. It is our view that it is not legally acceptable for a consultation paper to serve as the basis for on-site investigations, because the findings of the investigations will already establish a standard. Another question that arises is how findings arrived at on the basis of a consultation paper are to be treated subsequently if the final version of the Guidelines differs in matters of detail.

An additional factor is that the EBA generally does not require implementation of the relevant RTS in the area of IRBA models until the end of 2020. Even after the relevant IRBA requirements have entered into force, this means that there are typically relatively long implementation periods. A similar situation applies in the area of market risk models. According to the Commission itself, the Capital Requirements Regulation (CRR) amendments reflecting the Fundamental Review of the Trading Book (FRTB) will not take effect until the beginning of 2019 at the earliest, and will be subject to mandatory application as of the beginning of 2021. The ECB should not therefore bring forward the effective date of any requirements.

The ECB states, further, that its requirements are guided by the best practice that it has itself defined. We strongly reject such requirements because we do not believe that they are CRR-compliant. For example, the Internal Ratings-Based Approach (IRBA) qualitative requirements merely represent minimum requirements that the institutions have to comply with. If individual institutions go beyond these minimum requirements because of internal requirements (example: number of rating classes), under no circumstances can these be applied to all other institutions with internal models. We do not believe that the ECB has the right to

increase the barriers for access to model authorisation in this way. It is also likely to be difficult in individual cases to identify a best practice that could be applied by all institutions with internal models.

Finally, it is particularly important to highlight in the TRIM Guide as well that variability in model outcomes is also determined to a very significant extent by the previous decisions of national supervisors or their modelling targets. The variability in model outcomes now viewed as a problem is hence attributable to a very considerable extent to decisions of the NCAs themselves that were not coordinated with other NCAs (e.g. when determining margins of conservatism in the IRBA models). The cause of the variability in model outcomes now diagnosed and erroneously laid at the door of the banks was thus the relevant supervisors themselves. Restoring stakeholder confidence in the outcomes of internal models is therefore as much a responsibility of the NCAs and the ECB as it is of the institutions affected.

To reduce variability in model outcomes, the ECB intends to deliver interpretations of the CRR and the relevant Level 2 regulations and to use its own requirements to address identified gaps. In doing so, the ECB departs from its proper role as an interpreter of rules and acts as a rule-setter, a role that is generally held by the EBA at European level. We would comment on this as follows from a legal perspective:

The Single Supervisory Mechanism (SSM) Regulation and the SSM Framework Regulation do not explicitly provide for the instrument of a guide. Nevertheless, the ECB is using this tool in order to harmonise gaps in the regulations and scope for interpretation, as it itself says in the Foreword to the TRIM Guide. The question of the legal status of a guide such as the TRIM Guide remains unanswered. An instrument that is comparable to the guide, but at a superordinate level, is the Guideline, which is governed legally by Article 4(3) of the SSM Regulation. Guidelines are not legally binding, but they do take effect in practice as soon as the ECB (or an NCA) states that it is compliant (comply or explain mechanism). In the case of Guidelines, we also believe it is questionable whether they can be issued by the authority itself without being reviewed by the lawmakers, even though they take effect in practice. It is therefore all the more important for Guidelines to be used only for harmonisation purposes in cases where mere questions of interpretation have to be clarified without having any severe impact. It cannot be permissible for this instrument to close 'gaps' that the Level 1 or Level 2 lawmakers have deliberately omitted from the regulatory requirements. Under no circumstances can a Guideline be used to create new requirements. The comments above on Guidelines apply to an even extent to the Guide, which appears to represent a form of administrative instruction.

The TRIM project aims to harmonise practices. It should be ensured that proven practices can continue to be used in individual countries. In Germany, for example, this relates to the widespread pool models used in IRBA. These national specifics must be appropriately considered in the on-site investigations. For this reason, we recommend describing the limits of the TRIM in the Foreword to the TRIM Guide.

Because the on-site investigations are very broad in scope, the institutions affected will face a considerable strain on their resources. We are therefore advocating the determination of points of emphasis.

## 2. Specific comments

### a. Comments on the General Topics

It is our understanding that the General Topics are common requirements for all three major categories of models that are addressed by the TRIM Guide (IRBA, IMA, IMM). However, it is our impression that the authors of this chapter have only focussed on the IRBA models as a benchmark. As a result, the overwhelming majority of General Topics can only be applied to IRBA investigations (example: chapter 4 on internal governance), but not to the other model categories. In many cases, there are no comparable General Topics for the other models.

Additionally, it is essential to note that an EBA RTS that governs model authorisation (assessment methodology) is only available for IRBA and IMA models, but not for IMM models used for counterparty credit risk. There is no authorisation in the CRR for RTS in this case. The General Topics rules that might be applicable to IRBA and IMA models cannot also be applied to the IMM because of the lack of any legal basis. We would ask you to observe this closely.

Additionally, it is not clear in some cases which model categories the requirements are actually supposed to apply to. It should be stated explicitly which requirements are supposed to apply to which models. Additionally, the relevant legal background for the General Topics is only listed at the beginning of chapter 10; the legal background should be given for each sub-chapter. However, this does not always appear to exist in each individual case, with the result that the ECB is imposing requirements without a corresponding legal basis. We strongly reject this approach and will address this situation in detail.

#### Re chapter 2 (Overarching principles for internal models)

As regards the establishment of a model risk management framework (sub-chapter 2.2), it should be noted that there is no legal basis whatsoever for any of the three model categories, either at Level 1 or at Level 2. This sub-chapter should therefore be deleted.

Sub-chapter 2.3 merely refers to Capital Requirements Directive (CRD IV) requirements. However, CRD requirements cannot be a legal basis for the investigative activities of the ECB, as this must be reserved for the national transpositions in the relevant jurisdictions. The corresponding national requirements, rather than the CRD, must be observed and applied by the ECB. We would ask you to clarify this and incorporate the appropriate references.

As regards the independence of the internal validation function for IMA market risk models (sub-chapter 2.5), it should be noted that Article 22 of the Final Draft RTS cited in paragraph 16 (p. 7) breaches the requirement of the first sentence of Article 369(1) of the CRR, which merely requires the staff to be independent. In this respect, only paragraph 15(c) is CRR-compliant for IMA models, regardless of the size of the institution. We would ask you to note this fact and adjust the text accordingly.

Relating to paragraph 17 (p. 7) an organizational separation of the development function and validation function into two different units is not useful for smaller institutions including smaller subsidiaries of SIs, G-SIIs or O-SIIs. Please keep in mind that those institutions have a limited number of IRB models in place. Therefore, smaller institutions including smaller subsidiaries of SIs, G-SIIs or O-SIIs should be allowed to use "Option C".

The requirement stipulated in paragraph 18 (p. 7) goes beyond the requirements of the RTS governing the IRBA assessment methodology (EBA/RTS/2016/03) without any substantive grounds being given. In particular, this rules out a possibility that was regarded up to now as an option for smaller institutions in direct talks with representatives of the supervisor in application of the principle of proportionality.

Furthermore, the new requirements of the TRIM Guide are not in line with the requirements of the RTS on assessment methodology for IRB. In terms of paragraph 18 institutions should be allowed to validate their internal models alternatively by their different units (Option A and B) or staff (Option C) if the level of independence is adequacy. The level of independence is for example adequacy, if the Unit A develops the non-retail models and validates the retail models and Unit B develops the retail models and validates the non-retail models. The level of independence is also adequacy in smaller institutions, if one staff member develops the PD models and validates the LGD models and his colleague develops the same LGD models and validates the same PD models.

### Re chapter 3 (Roll-out and permanent partial use)

This entire chapter applies only to the IRBA. The corresponding requirements for e.g. the IMA are to be found in sub-chapter 2.3 of the IMA part, which is inconsistent.

As far as the IRBA coverage ratio is concerned, there are specific, mature requirements anchored in national laws or regulations in individual jurisdictions such as German Solvency Regulation (Solvabilitätsverordnung). We therefore do not understand how ECB requirements in this Guide, whose legal status is unclear (see general comments) can overrule national legislation.

As a matter of principle, we welcome a situation in which the institutions are not forced by an inappropriately high coverage ratio to obtain IRBA access for portfolios for which the data situation makes it extremely difficult to estimate the relevant parameters. However, estimating the 80% target in paragraph 24 is not possible at present because there is no precise definition of the universe to which the 80% applies. In addition, the ECB should stick to the targets in the corresponding RTS, which is still at the draft stage (no Final Draft RTS).

In the majority of cases, the asset classes named here do not correspond conceptually to the CRR exposure classes. The term 'asset classes' is not defined in the CRR, which refers instead to 'exposure classes'. Additionally, the asset classes 'sovereigns', 'banks', 'residential real estate RRE', 'corporates – purchased receivables' and 'retail – purchased receivables' are not described in the CRR.

Overall, there is a need to clarify how these classes should be derived for evaluations from the IRBA and SA reporting data.

For some of the classes, questions also arise regarding the assignment of positions:

- Because the 'residential real estate RRE' asset class appears in the list between retail sub-portfolios, clarification is needed as to whether this also refers only to retail positions. If this is the case, the question arises as to how retail positions secured by commercial real estate should be assigned. If this is not the case, there is a need to clarify how corporate positions secured by residential real estate should be assigned.

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- In the CRR, the 'retail other' exposure class covers all retail exposures that are not secured by mortgages and do not qualify as revolving. There is a need to clarify in this connection whether the 'other retail' asset class referred to here contains the same exposures.
- In the case of the 'corporates – purchased receivables' and 'retail – purchased receivables' asset classes, the question arises of how purchased positions secured by residential or commercial real estate must be assigned to these classes.

In addition, the supervisory practice in the past was to grant authorisation only for the notified rating systems, not for exposure classes or the 'asset classes' described here. Accordingly, it is necessary to clarify the asset classes for which there is IRBA authorisation if some sub-portfolios of this asset class have IRBA authorisation and some do not.

According to German national law (section 10(3) of the Solvency Regulation), institutions that use the IRB approach are currently obliged to reach an overall coverage of at least 92% for IRBA positions and risk-weighted IRBA positions. Paragraph 25 suggests that the ECB's proposal of an asset class-based minimum coverage ratio of 50% and a target ratio of 80% would overrule 'any related regulatory constraint for SIs', and thus also the threshold that is provided for currently in the German Solvency Regulation. It would be helpful if the ECB could clarify how the implementation of such overruling would take place. Is the TRIM Guide itself envisaged as a means to overrule national law or would such an overrule require an amendment to the CRR or related European legislation?

We also believe that the requirement in paragraph 26 under which the IRBA is expected to be rolled out for all core asset classes is problematic. This might run counter to the requirement for a coverage ratio. Additionally, the term 'core asset classes' is not defined. The criteria to be applied for defining a core asset class for which an SI is required to seek IRBA authorisation are also unclear. We are also of the opinion that such a requirement is not CRR-compliant and call for it to be deleted.

With regard to the portfolios that qualify for permanent partial use, paragraph 31 (p. 11) requires the institution to continuously review materiality. It is unclear whether this monitoring also extends to sub-portfolios that the CRR permits to be permanently in partial use (for example central governments in the EU). We do not regard the approach as rational in this respect.

#### Re chapter 4 (Internal governance)

As stated above, the entire chapter is applicable solely to the IRBA. It is therefore unclear what applies to the IMA and IMM. Sub-chapter 4.2 expects the 'management body' and 'senior management' to be informed about the performance of the IRBA model (under sub-chapter 2.3, senior management is a level below the management body). SIs generally use a variety of internal rating systems. We believe that it is excessive to establish such a reporting system. In this case, it should be possible for the management body/senior management to delegate responsibility to lower levels of the hierarchy.

#### Re chapter 6 (Internal Validation)

Chapter 6, too, only addresses the validation requirements for the IRBA, although there are, of course, equivalent requirements for the IMA and IMM.

Above all, we believe the TRIM Guide goes beyond the requirements of the current Regulation: according to the CRR (Article 185(b)) and EBA/RTS/2016/03 (Article 11(3)), indeed, the analysis that should represent the baseline to be applied to all rating models at least on an annual basis is limited to the calibration. Even if it could be reasonable to expect a monitoring of all rating systems more detailed than the mere calibration, the set of analyses (as well as the level of detail) required by the TRIM Guide is regarded as appropriate for a full validation that should be performed only on the rating systems covering material types of exposures (see EBA/RTS/2016/03 Article 11(3)(b)).

In light of this, we believe that paragraph 57(d) should be modified as follows: 'Analyses and tests that should be performed on rating systems covering material types of exposures at least on an annual basis are: (...)'

We would like to have a clearer picture of what is meant by 'stability of the model design' (paragraph 57(d)(v), second indent): in our opinion, the quantification of model weights is something more detailed than the concept of 'model design'. Moreover, considering the other tests each factor will be subject to, it is not clear what value will be added by the simulation of a new weights estimation: the analysis of the representativeness, of the discriminatory power and of the calibration in our opinion are able to highlight cases in which the performance of the model is decreasing, moreover providing a high level indication of the cause of the weakness.

According to paragraph 57(b) the validation unit should have its own access to the relevant databases. For pool models that are developed based on a data pool of many different institutions, analyses at a pool level are a cornerstone for the validation of the model by each institution. However, for confidentiality reasons no single institution can have access to the whole data pool. As a consequence, the validation unit of each institution, while having full access to the institution's own share of the pool, cannot have direct access to the pool database itself. This situation is recognized by the EBA 'RTS on Assessment methodology for IRB' (Article 4(3)): 'Where, for the purpose of developing a rating system and risk estimation, the institution uses data that is pooled across institutions and a third party is developing the rating system, the third party may assist the institution in its validation activities by performing those tasks of validation which require access to the pooled data'. As a consequence we interpret the TRIM Guide's requirement in such a way that for pool models 'access to the database' means that the validation units should have the possibility to request any analyses based on the data pool at their own discretion, but no direct access to the underlying pool data base is required.

In paragraph 57(d)(iii), the analyses of representativeness refer to comparisons between the 'data set used to build the model' and the current portfolio. However, it should be kept in mind that the initial model development may have taken place more than 10 years ago and that the model may have undergone several model changes since then. Certain pool models, for example, were developed in the years 2000 to 2004 and implemented after a prototype phase. Many of the (sub-)modules were developed based on benchmarking methods since there were no/few defaults available. They were validated for the first time in 2005 or 2006 before being presented to supervisory authorities for initial IRBA approval. Again, many of the (sub-)modules were validated based on benchmarking methods since there were no/few defaults available. Since then the modules have been reviewed and validated every year (in depth every two or three years) and re-optimised, adjusted and recalibrated as required. Each of these measures was based on the complete data pool of the time covering all institutions. The model adjustments were then taken into account in the subsequent validations. During in-depth reviews/validations, referred to as 'Standard Reviews', extensive bottom-up analyses on the core models are performed and models are re-optimised for comparison. These measures are also based on the entire data pool available at a given time, covering all institutions and years. As a consequence, in many cases the comparison with the very old development samples will not produce meaningful results. We therefore suggest including at least further options for analyses of



representativeness. In our view, a comparison with the last adjustment or (hypothetical) re-optimisation of a model would make more sense for the pool models mentioned above. This (hypothetical) re-optimisation is usually performed during a standard review. In any case, it should be ensured that the analyses focus on the relevant question with regard to representativeness, which is whether or not a model developed from a particular dataset is demonstrably capable of providing appropriate risk differentiation and an adequate mean estimate of the risk parameter 'probability of default' for the current portfolio.

From our point of view, some of the provisions for validation activities in paragraph 57 are excessive regarding an annual frequency: while drilling down to each individual risk factor when analysing discriminatory power (57(d)(ii)) or comparing the weights of each risk driver to a hypothetical re-optimised model (57(d)(v)) should certainly be performed at regular intervals, performance on an annual basis will not provide more insight than performance every two or three years, depending on the model and portfolio characteristics. Furthermore, while the performance of such analyses may be comparatively easy for models that are developed on a purely statistical basis, it will be very burdensome to perform these analyses annually for models that are at least partially based on expert judgement and/or external data as well, which is a common scenario for models concerning low default portfolios. As a consequence, we recommend allowing greater flexibility for scheduling such 'deep dive' validation activities.

We are of the opinion that the matters addressed in paragraph 57(d)(viii) should be moved to the list of analyses to be performed on a periodic basis, considering that those topics are characterised by a high degree of stability and thus are not expected to change frequently.

If possible, we would like to have more details on how the regulator expects institutions to perform benchmarking as per paragraph 57(e)(i), in particular if no external data sources are available for a given segment.

Under paragraph 57(f)(i) (p. 20), continuous validation and communication between the model development and model validation functions during model development is not expedient. We believe that this requirement does not make sense because it is an obstacle to targeted model development and enhancement in terms of both substance and timing.

According to paragraph 57(f)(i), the initial validation of a model should include a replication of the model development phase by the independent validation unit. While this may be feasible for simple scorecards that are developed purely based on statistical methods and data, a replication of the complete model development will not be realistic for more complex models, especially if the model development also relies on expert judgement. For such models, the development phase naturally includes economic assessments and extensive discussions with economic experts, which the independent validation unit will not be able to conduct in the same way at a later stage. We therefore recommend changing the expectations regarding the initial validation to a more realistic approach, for example by requiring the validation unit to check the transparency and traceability of each development step without expecting a complete reproduction.

According to paragraph 58, the duration of a yearly validation 'from the start (reference date of data) to the end (approval of the validation results) should not be more than one year'. We cannot see the rationale behind this requirement, since the key requirement of a mandatory annual validation should always ensure that the validation is performed 'every year'. Whereas in fact the vast majority of validation projects are finished within much less than one year, there may be exceptions for which the goal of non-violation of a one year-limit should be balanced against other goals. For example, it may happen that during a validation project which includes a thorough challenge of the model, new insights are gained that lead to the need for deeper and possibly time-consuming further analyses. In such cases it would be absurd to cancel a running

project only to meet the time limit. We propose dropping this requirement as a mandatory rule and transform it into a more flexible recommendation.

We would like to have more details on:

- i. the scope and the details of the data cleansing analysis, as per paragraph 57(e)(ii);
- ii. what is meant by 'computer code' (i.e. the code underlying model development or the one implementing the model in the production systems of the institution) in paragraph 57(f)(ii)?

Footnote 27 on paragraph 59 (p. 20) implies that institutions cannot expect any legal certainty for implementation regarding the independence of validation in accordance with the third option, despite the final status of the 'RTS on the IRBA assessment methodology' – regardless of whether this option is deemed to be appropriate for the institution in question. There is thus no legal certainty in this regard, and hence a need for clarification.

Paragraph 61 requires the definition of thresholds for a number of analyses, including analyses of representativeness. While it may be possible to define thresholds for the comparison of the distribution of obligor characteristics over time, the analyses of representativeness as described in paragraph 57(d)(iii) include dimensions for which the definition of thresholds appears unrealistic: what kind of threshold could be defined for example for changes in the definition of default or for changes to lending standards? As a consequence we recommend clarifying what kind of analyses of representativeness is meant by this requirement.

Under paragraph 68 (p. 21), institutions must always notify the competent authority in advance of any changes to the validation methods or processes. This is not backed up by the legal framework, i.e. the Delegated Regulation cited, to the same extent. To the extent that paragraph 68 is merely intended to repeat the requirements of the Delegated Regulation, this requirement is at a minimum ambiguously worded and needs clarification.

### Re chapter 7 (Model use)

Chapter 7 is also restricted to the IRBA requirements, although of course there are also model use requirements for the IMA and IMM.

Under paragraph 69, many of the new PD and LGD requirements are inappropriate for the internal credit processes of an institution. For example, the downturn factor, the indirect costs, the new "margin of conservatism" and the new discount factor are not in line with IFRS 9. Due to the new requirements, institutions cannot simply adjust or transform their PD and LGD models. Many PD and LGD models have to be redesigned and recalibrated in order to get appropriate models for the internal credit processes (see: Credit Risk, Chapter 7, paragraph 69). As a consequence institutions cannot use the regulatory parameters in their internal credit processes anymore. It should therefore be allowed that institutions use separate models for regulatory purposes (CRR) and for their internal credit processes.

Under paragraph 72(a)(i), ratings and risk parameters are expected to 'play a role' in the pricing process. We believe that this wording is problematic. As in the past, it should be sufficient here if ratings and risk parameters are considered when pricing the offer, but do not have to be reflected in the prices/interest rates actually achieved. Business policy considerations – e.g. regarding cross-selling – would otherwise be made more difficult, and it would represent an inappropriate intrusion into the institution's lending decision-making powers.

Another factor is that, in accordance with the 'Minimum Requirements for Risk Management' (MaRisk) in force in Germany, IRBA institutions too do not have to perform a rating process for 'non-risk-relevant credit transactions', but rather a 'simplified implementation' (BTO 1.1. no. 4) that is not suitable for IRBA authorisation. Because of the methodology used for this simplified implementation, it may not be possible to consider its outcomes in the pricing process. The requirement should therefore be modified to reflect this.

Under paragraph 72(c), 'banks are expected to have in place recovery processes which are triggered in advance of the exposure's default'. We concur that it is desirable to have such processes in place in order to reduce losses. However, processes like this can be costly, so it should be up to the individual institution to decide whether it makes sense to implement these processes. This requirement should not be obligatory, but more in the nature of an encouragement. Additionally, we do not believe that an obligatory requirement would be CRR-compliant.

Under paragraph 72(d), credit risk adjustments should be based on IRB parameters. We also believe that this requirement is problematic as it is currently worded. The requirement here should be based primarily on the applicable accounting standards.

Paragraph 72(d)(ii) (p. 24) expects expert judgement outcomes regarding specific provisioning to be consistent with the results of a model using internal rating parameters (best estimate of expected loss, ELBE). As a rule, expert judgements regarding the recognition of specific loan loss provisions reflect isolated cases. It means that aspects flow into the judgement that cannot normally be covered in full by a model, especially in the retail business. A deviation can be assumed in this respect. We do not regard this requirement as reasonable.

Under paragraph 72(e), banks are expected to use IRB parameters to calculate their internal capital under the ICAAP framework (Pillar II). We do not believe that this requirement makes sense because it may be necessary to adjust the Pillar I parameters for Pillar II from an internal perspective.

We also believe that the requirement set out in paragraph 27(c)(ii) (p. 27) is inappropriate in most cases because of the quantities involved. Additionally, the question arises of whether such evaluations make sense for each method used for dealing with outdated or missing ratings. At a minimum, an opening clause 'where necessary' should be added.

According to paragraph 79 the 'term "overrides" refers here to instances where human judgement results in deviation from the inputs or outputs of rating systems'. We do understand what is meant by overriding model outputs: manually changing the PD suggested by a model. However, the notion of 'overriding model inputs' is unclear: usually the model inputs are clearly defined in the documentation of the rating system, including, for example, the requirements regarding up-to-date information. Data may need to be adjusted to meet these requirements depending on their source, but we would not consider that 'overriding', since adjustments are only made to ensure that the inputs are unbiased and suitable for the model. On the other hand, any deviation from the input requirements could, indeed, be interpreted as an 'override of model inputs' that should be tracked. We therefore recommend clarifying what changes to inputs are referred to.

## Re chapter 8 (Management of model changes)

Chapter 8 also only addresses the IRBA requirements, although there are also model change requirements for the IMA (IMM: ECB EGMA Guide).

Sub-chapter 8.2 (p. 30) sets out documentation requirements that go beyond what is described in Delegated Regulation No. 529/2014 as regards model changes. In particular, there is no mention of any relief in this respect for model changes with a lower classification. In this context, the unclear legal status of the TRIM Guide must also be clarified in respect of conflicts with existing legal requirements. The question arises of whether findings made in the course of TRIM investigations will be framed for all previously prepared model change reports because the (previously unknown) documentation requirements were not satisfied in this respect.

Paragraph 84 provides additional provisions regarding the classification of changes. Article 3(3) of Delegated Regulation (EU) No 529/2014 requires that 'One material extension or change shall not be split into several changes or extensions of lower materiality'. Paragraph 84 of the TRIM Guide adds the requirement that 'The opposite also applies: several changes/extensions should not be combined to produce one change of lower materiality. Similarly, an extension or change that requires notification before its implementation (ex ante) should not be split into several changes/extensions or combined into one that is notified after implementation (ex post)'. While it appears prudent to extend the provision not to split one change into several changes of lower materiality to ex ante changes, it remains totally unclear which procedure is expected for 'the opposite'. It is not clear how the combination of several changes could potentially lead to an overall change of lower materiality in the first place. If certain qualitative criteria for higher materiality apply to the contents of a change, they will still apply if the change is combined with other aspects to a larger overall change. So what could be the purpose of this requirement? Regarding the RWA triggers and the thresholds for determining the significance of changes of rank order and/or rating distribution for changes of the rating criteria, compensating effects between different change components are of course possible. On the other hand, the question arises as to what kind of risk will be avoided by analysing the RWA impact of different change components separately, since the change will ultimately be implemented as a whole, including all its components. So the 'real' RWA impact and the 'real' changes in rank order and rating distribution will match those that were calculated for the whole change. Apart from that, there are a lot of questions concerning practical feasibility. What level of detail is expected concerning the breakdown into different model components? In which sequence should the different model components be analysed, and what is the expected point of comparison for each model component?

The requirement of paragraph 86 (p. 31) addressing confirmation by an independent unit regarding model change classifications is not described in either the paper on IRBA minimum requirements or the Delegated Regulation referred to above. The same applies to paragraph 90 (p. 31) with regard to the quantitative assessments in the case of model changes. In this case, too, the legal status of the TRIM Guide and the policy for dealing with conflicts with existing legal requirements as well as possible findings must be clarified.

According to paragraph 86 a minimum requirement is that the classification of a model change is confirmed by a unit that is independent of the one responsible for the assessment and the classification. We would like to point out that we assume this requirement to be fulfilled if, according to the Final Draft 'RTS on assessment methodology for IRB' (Article 11(2)(d)), the unit responsible for the activities of the independent validation function verifies all changes related to internal ratings and risk parameters and their materiality in accordance with the relevant provisions of Delegated Regulation (EU) No 529/2014.

Under paragraph 98(a) (p. 33), in the case of material changes the ratings of the model change impact assessments must be transferred to the production environment at the date of approval, unless new information is available. We believe that these requirements are unreasonable for timing reasons, and wish to illustrate this using the following example: model change report in May 2017 with simulated ratings as at December 2016, on-site investigation in September 2017, authorisation in January 2018 and transfer of the December 2016 ratings. In addition, the standard process and accompanying checks (including four-eyes principle or the recording of the responsible person) for ratings generation in the systems would be eroded.

For material model changes, paragraph 98(a) stipulates the requirement that 'the ratings of the sample used for the impact assessment are transferred to the production environment at the date of approval of the model change/extension, unless new material information is available for those exposures'. However the rating process of all rating systems (perhaps with the exception of fully automatic scoring systems) is based on the manual performance and approval of each rating, including a four-eyes principle. The assessment of the RWA impact on the other hand does not require the manual re-rating of each case, but can in many cases be performed by applying a changed statistical algorithm to existing approved ratings ex post. However, this is not a method of adding new ratings to the productive environment according to the requirements of the rating process (e.g. approval via the four-eyes principle). As a consequence, it is not possible to simply transfer the results from the assessment of the RWA impact to the production environment. Instead, after approval by competent authorities, manual re-ratings will have to be performed and approved for each case in order to apply the material change to the production environment. Depending on the impact of the change this re-rating process may of course have to be performed in a timely manner. However the performance of all re-ratings in a single day is completely unrealistic for many rating systems.

For this reason it should be clarified that the procedure as described in paragraph 98(a) is expected only if direct transfer to the production environment is consistent with the process requirements for updating ratings, and that in other cases the procedure described in paragraph 98(b) applies.

Under paragraph 98(b) in sub-chapter 8.5.2, the re-rating process is expected to be completed within six months. We regard this as almost impossible to implement in practice, so the minimum period should be at least one year.

### Re chapter 9 (Data quality)

BCBS 239 „Principles for effective risk data aggregation and risk reporting“ is also cited as a relevant regulatory reference. However, the requirements of BCBS 239 only have to be applied in fully by G-SIBs. This means that other systematically important banks are not yet required to comply with these requirements. We therefore reject any earlier implementation of the requirements by the ECB on the basis of the Guide.

### Re chapter 10 (Third party involvement)

In paragraph 129 it is not clear what is meant by "The parameters used should be adjusted to internal information". Institutions have often decided to use external credit risk parameters as a component of their rating systems, because their individual data is limited. In this case the external credit risk parameters (e.g. recovery rate) are much more robust. Therefore, it does not make sense if the institution has to adjust every single parameter to internal information. It should be sufficient if the institution adjusts the final PD, LGD or CCF parameter to their internal information.

Concerning the in-house knowledge in paragraph 134, we would like to mention that, due to regulatory requirements (e.g. data protection laws) it's not possible that an institutions gets access to all relevant information or all relevant data from an external vendor. The development of internal models is the intellectual property of the external vendor. Therefore, it is inappropriate if the external vendor has to provide "all relevant information" to their customers. It should be sufficient if the institutions gets access to "all necessary information".

## **b. Comments on Credit Risk – IRBA**

In many cases, the Draft TRIM Guide merely copies individual passages from the relevant draft RTS or Guideline. We believe that this represents a problem, because it is not clear what this is supposed to achieve. Can the institutions assume that merely the cited passages from the EBA requirements are being analysed?

### Re chapter 2 (Data requirements)

In terms of chapter 2 paragraph 9(a), institutions should use "all defaults identified during the historical observation" for the purpose of LGD estimation. We expect that institutions are allowed to choose between the following two Options:

- Option A: "All facilities defaults in a given default period"

Institutions should use all defaulted facilities from a given default period (e.g. default event between 01/01/2007 and 31/12/2016). Each year will consist of cured cases and liquidated cases. Due to the length of the recovery process, the most recent years will include a high percentage of incomplete recovery cases. On the other hand, recovery cases with a short length of the recovery process are over weighted in the loss database. Therefore, institutions have to estimate the recoveries for their incomplete recovery cases and include those cases in the loss estimation. Institution which choose Option A have to include incomplete recovery cases in their LGD estimation.

- Option B: "All facilities recovered, restructured or liquidated in a given recovery period"

Institutions should use all defaulted facilities from a given recovery period (e.g. recovery date, restructuring date or liquidation date between 01/01/2007 and 31/12/2016, no incomplete recovery cases necessary). Each year will consist of cured, restructured and liquidated cases. All recovery years will include nearly the same amount of cured, restructured and liquidated cases. All recovery years will include nearly the same amount of cases with a short length of the recovery process and cases with a long length of the recovery process. The composition of the loss data may vary due to the economic situation (e.g. more cured cases in recent years). Due to the balanced composition of the loss data, information about incomplete recovery cases does not add value to the LGD estimation. Therefore, institution can show that the exclusion of incomplete workouts does not lead to an underestimation of LGD and has no material impact on LGD estimates (see: CEBS Guideline "GL10", Article 272). Institutions that choose Option B should be allowed to exclude incomplete recovery cases from their LGD estimation.

### Re chapter 3 (Probability of default (PD))

According to paragraph 14, 'validation of the pool model, including testing of discriminatory power and predictive power, should be applied by each institution on its own portfolio'. It is indisputable that the annual validation performed by each institution has to deal with the institution's own portfolio. However, since for institutions that participate in a pool model the amount of each institution's own data is limited when compared to the data pool, the institutions will always have to rely on the comparison of their own portfolio to the behaviour of the data pool to some degree. Since, by definition, review and development of the pool model is performed based on the data pool, it appears natural to include pool-based analyses in the model's validation as well. As a consequence, for pool models the validation analyses based on the whole data pool

are an important part of each institution's validation. We suggest clarifying the provisions in the TRIM Guide regarding this aspect in such a way that the term 'on its own portfolio' does not mean 'on its own portfolio only'.

Under paragraph 11(c) (p. 49), the validation requirements for external credit bureau scores used as risk drivers are identical to the requirements applied to internal ratings. This requirement cannot be met and should therefore be dropped.

Paragraph 17 in sub-chapter 3.1.1 expects that the PD ratings model will 'also perform adequately (...) on economically significant (...) sub-ranges of application'. At a minimum, this requirement is ambiguous. It should be clarified that no model is able to perform as well on sub-ranges as it does at the top application level.

Paragraph 17(a) requires institutions to perform analyses for models covering SME portfolios regarding certain sub-ranges of application. One of these sub-ranges is defined as 'past delinquency (e.g. obligors with delinquency events, i.e. days past due, in the last 12 months)'. It should be clarified which kind of analysis is intended. In addition, the high granularity of the proposed analysis based on individual countries or industry sectors will only produce meaningful results if enough data are available. While this may always be the case for models covering retail segments, the amount of available data for models covering small and medium-sized enterprises may be different depending on the institution's business focus. For example, if an institution uses a model for a portfolio that focuses on large corporates, but includes some customers that fall under the definition of SMEs, it appears excessive to require analyses of the same granularity for this model as for a model that focuses explicitly on SMEs. We recommend clarifying that the analyses provided for in paragraph 17(a) apply to models that focus on SMEs rather than to all models that may cover SME customers to some degree.

Paragraph 17 in sub-chapter 3.1.1 also describes certain risk drivers that are expected to be taken into consideration as risk factors. The wording of this sub-chapter is problematic. It should be clarified that the investigation will merely determine whether the factors described have discriminatory power for the institution's portfolio. On no account may there be an expectation that the factors described will also be used in the relevant rating function. This would be inappropriate and would seriously and unreasonably interfere with the development of ratings. The result would be a deterioration in the quality of the rating processes.

Under paragraph 17 (p. 51), the discriminatory power and predictive power must also be demonstrated at the level of sub-samples. To achieve this, minimum requirements with respect to the sub-samples to be partitioned are given that do not necessarily have to match an institution's business model and that may already impact discriminatory power as scorecard criteria. It should therefore be clarified that these are suggestions rather than minimum requirements.

Under paragraph 23 (p. 52), comprehensive evidence of the adequacy of the process must be provided for rating classes that only have a few exposures or obligors. We do not think that this approach makes sense because it is not clear why there should be a quality problem if certain rating classes contain only a few borrowers, in particular because appropriate calibration may specifically require this. We are therefore calling for this requirement to be deleted.

In paragraph 29, the ECB refers to paragraphs 68 to 74 of the EBA CP on GLs. The concept of an obligor rating that constitutes an overall assessment of the obligor's creditworthiness implies that all assets and liabilities of the obligor are taken into account. This includes any significant obligations to third parties. We feel that the current wording of the EBA CP on GLs, paragraph 74 ('The possible support of one obligor to another should be seen as diminishing the free financial strength of the supporting obligor') is not clear

enough because it does not include any reference to an actual increase in credit risk. It should be clarified by the EBA that only the significant commitments that actually affect credit risk need to be examined rather than every single commitment that might exist (even if negligible in relation to the obligor's size).

In paragraph 31, the ECB refers to paragraphs 48 to 52 of the EBA CP on GLs. We find the requirements on the calculation of the default rate that are provided by the EBA CP on GLs in paragraphs 48 to 52 to be problematic because they are neither expedient nor consistent with other requirements of the Guidelines:

a) Unspecified population for calculation of default rate

The limitation to 'obligors observed at the beginning of the one-year observation period with any credit obligation' set out in paragraph 48 (a) needs to be explained. The elements listed in the next sentence, 'credit obligation refers to any amount of principal, interest and fees as well as to any off-balance sheet items including guarantees' may be understood to mean that all customers to which there is an exposure must be taken into account, but not those cases where a rating is needed only for assessing a third party (e.g. support provider). On the other hand, paragraph 41 contains very restrictive instructions on the exclusion of obligors from the calculation of the default rate: only cases where defaults were wrongly recorded and obligors falling outside the scope of application may be excluded. Is it possible that paragraph 48 requires a complete part of the dataset to be excluded although nothing calls into question the quality of this data? To put it differently, what problem should be solved by excluding customers without any 'credit obligation'? Apart from the motivation, excluding customers based on this criterion would raise the problem of the relevant reference date: a customer could be included in the calculation of the default rate for some reference dates and excluded for others. The information whether or not there was a credit obligation at the reference date is not available in the rating system (since it is not yet available at the time the customer is rated). It would have to be retrieved from a different system when compiling the necessary data for development or validation. In our view, the resulting organisational complexity and difficulties regarding the traceability of the underlying data is by no means justified by any benefit that may or may not be gained. At least in wholesale banking, counterparties to which there is currently no exposure, but which are rated, for example because there are guarantors for other customers, are subject to the same monitoring and default identification processes as all other rated customers. They can also default like all other obligors. It would therefore not make any sense to exclude them from the calculation of the default rate when for all other purposes all suitable data are taken into account.

In our view the exact meaning of the provision of paragraph 48 needs to be clarified by the EBA. If the actual intention is that institutions should exclude those customers that are not monitored for the purpose of identifying defaults and for whom, so no defaults can be observed, then this should be clearly stated. We recommend that the EBA does so by specifying which cases should be excluded and by avoiding the unspecific and possibly even confusing wording 'with any credit obligation'.

b) Required calculation method results in systematic bias of default rate

Apart from the uncertainty about the relevant population, the calculation instructions set out in paragraphs 48 and 51 are based on unrealistic assumptions: we interpret the instructions to mean that the denominator of the default rate is the number of all customers that were identified as non-defaulted at the start of the observation period (paragraph 48). According to paragraph 51 it would appear that the numerator must even include the defaults of customers of this group who are no longer rated under the model at the time of the default. This implies that the institution knows whether or not these customers are in default even if they are no longer rated in the same system and there are thus no longer any valid ratings on them. This general assumption is certainly not realistic, especially in the cases cited in paragraph 51, where the bank has sold the claim against the obligor. After the sale, a bank usually has no comprehensive information on



the customer's status any longer, especially if the business relationship with the customer was terminated at the time of the sale.

This results in a discrepancy which leads to a systematic bias: including all obligors that were rated non-defaulted at the beginning of the observation period in the denominator of the default rate will only produce an unbiased estimate if in fact the default statuses of all these obligors can be monitored until the end of the observation period. As discussed above, this is unrealistic for practical reasons. The numerator can be systematically expected to be too small in relation to the denominator in this situation. Certainly, an adjustment can be made for the difference based on an appropriate estimate as suggested in paragraph 51. However, this would only correct a value that is biased by definition. This is all the more serious as there is a method for calculating an unbiased default rate which takes into account the potential lack of default information described above:

a) Denominator of the default rate: all obligors for whom a valid non-default rating was available at the beginning of the observation period and whose default status has been monitored throughout the entire observation period; in addition, all obligors that have ceased to be tracked by the rating system during the observation period pro rata temporis (factor = days until deactivation ÷ 365)

b) Numerator of the default rate: all obligors referred to in a) for whom a default was observed during the observation period

If this method is used, no adjustment is necessary because the result obtained exactly matches the economic expectation. Only a MoC might be required if a substantial part of the portfolio has in fact ceased to be tracked during the observation period.

We therefore suggest that the EBA amends the instructions for the standard calculation of the default rate such that the calculation results in a value that is not systematically biased and matches the economic expectation.

In the first sentence of paragraph 51, the reference to 'if relevant' is confusing. Even in combination with the content of paragraph 48, the meaning of this condition is not clear. As a result, whereas in paragraphs 59 to 63 the consultation paper specifies in some detail what 'if relevant' means in Article 180(1)(h) and Article 180(2)(e) of the CRR, in paragraph 51 it introduces new, vague requirements. It should be clarified by EBA whether in fact this clause refers to an additional condition.

In paragraph 32 the ECB refers to paragraphs 58 to 63 of the EBA CP on GLs. In our view, two aspects must be distinguished regarding the provisions in paragraphs 59 to 63 of the EBA CP on GLs on the calculation of the long-term default rate: it is generally reasonable to assume that the condition 'If [...] this data is relevant' included in Article 180(1)(h) and Article 180(2)(e) of the CRR refers to the representativeness of the default rates since, ideally, the default rates deriving from the available historical data should be representative of the range of default rates of the segment or portfolio in question (see paragraphs 59 et seq.). The criteria defined in paragraph 61 for the representativeness of the default rates are also generally plausible.

However, we disagree with the interpretation of the above-mentioned condition in the overall context of Article 180 of the CRR as suggested in paragraphs 59 and 63: the five-year period defined in that Article is treated as if it were a separate standard, a kind of general benchmark. This is manipulative and contrary to the actual meaning of the original provision: pursuant to Article 180(1)(h) and Article 180(2)(e) of the CRR, a five-year time series is a minimum requirement for the IRBA and not the standard case.

Article 180(1)(a) of the CRR already states the actual intention: 'institutions shall estimate PDs by obligor grade from long run averages of one-year default rates'. In other words, it goes without saying that, as a rule, longer time series should be used if available. But even if individual years of a series turn out to be not relevant' and therefore unsuitable for the calculation of the default rate, this cannot mean that only the data of the most recent five-year period should be used instead. Rather, all relevant data will have to be used to determine a meaningful, economically appropriate target value for long-term calibration which meets the requirement of Article 180(1)(a) of the CRR.

Apart from that, the comparison set out in paragraphs 59 and 63 is unsuitable for assessing matters relating to calibration for methodological reasons as well because the result is completely dependent on the sensitivity of the segment in question and the model used to cyclical influences and on the current status of the business cycle and is therefore arbitrary: if the rated portfolio is sensitive to macroeconomic changes to a certain extent, the default rate of the past five years will necessarily be lower than the expected long-term default rate after a prolonged expansion and exceed it after a prolonged recession. If the rating system were to be calibrated based on the past five years, the ratings would inevitably be biased with regard to the objective of long-term appropriateness (see paragraph 82). In any case it would be impossible under this approach to set up through-the-cycle models appropriately since the internal central tendencies of these models fluctuate much less than the default rate.

The final paragraph 63 presents the same structural problem as various other provisions of the Guidelines; institutions are to calculate different variants without any noticeable benefit: the calibration target ('adjusted long-run average default rate'), which has already been determined according to the provisions of paragraphs 59 to 62, is to be compared with the average of the default rates of the past five years and the average of the default rates of all years of the available time series. If the calibration target is below the maximum of these two values, this must be explained. For the reasons given above, the comparison with the five-year period makes no sense at any stage, and certainly not at this late one. Likewise, the second comparison required in paragraph 63, i.e. with the mean default rate of all available years, does not provide any additional insight: if all available years are actually relevant, the question does not even arise. If, however, certain years were excluded for being unrepresentative and therefore irrelevant, the comparison with the average of the default rates of all years, including the irrelevant ones, is a comparison with a value that is certain to be biased and thus useless. It is completely unclear what conclusions might be drawn from such a comparison.

All things considered, we recommend that the EBA dispenses with the comparisons with the five-year period and with the provisions of paragraph 63 altogether as the analyses required in this context, to the extent that they are useful, are in fact already included in the previous steps and none of the additional requirements provide any further insight.

#### Re chapter 4 (Loss Given Default)

With respect to the downturn LGD (sub-chapter 4.3.4), we wish to note that aspects are specified here for which there is now an RTS consultation paper (CP/EBA/2017/02). Overall, it is therefore difficult to assess and implement the requirements, including in respect of other legal requirements – in particular because the various requirements are not identical.

Regarding chapter 4.1.4 paragraph 42, the business segments of an institution (e.g. loans for consumption, lending for house purchase and revolving loans and overdrafts) have different risk costs due to different default rates and collateral agreements. The discount rates used by institutions to incorporate material discount effects into economic loss may vary depending on the respective market, the kind of facility, or the

institution's workout practices for defaulted facilities (see: CEBS Guideline "GL10", Article 247). The risk cost also differ by country. In addition, the discount rate "Euribor+5%" is not in line with IFRS 9 and the new default definition (see: Article 51 of EBA/GL/2016/07). Institutions need to redesign and recalibrate their LGD models in order to get an appropriate LGD model for the internal credit processes. Consequently, institutions will not use the regulatory LGD parameters anymore. With that said "Euribor+5%" is not an adequate Add-On for all respective markets, all kind of facilities and all institution's workout practices.

If an exposure is cured with no material, direct or indirect costs associated with collecting on the instrument and no loss is caused by material discount effects (for example, if the default was caused solely by the 90 day past due criterion, and payment obligations were subsequently completely fulfilled), no loss might occur (see: CEBS Guideline "GL10", Article 272). Example: A customer, who default solely by the 90 day past due criterion, has paid back all of his overdue payments and returns to a non-defaulted status. If one discounts the payments with the original effective interest rate the economic loss is zero. If one uses the new requirements, the "regulatory loss" is slightly above 0%. Therefore, institutions should be allowed to assume that the economic loss for cured cases is zero.

Referring to paragraph 58, in many institutions incomplete recovery cases are not used in the LGD estimation. If institutions can show that the exclusion of incomplete workouts does not lead to underestimation of LGD and has no material impact on LGD estimations, they should be allowed to exclude incomplete recovery cases (see: CEBS Guideline "GL10", Article 272). Example: LGD models for RRE loans are mainly based on the recovery estimation of the collateral values. There is no benefit if you include the recovery estimation on both sides of the LGD model equation ("Estimated LGD model results" and "Estimated realized LGD"). With that said, this requirement will not improve the internal LGD model. Therefore, institution should be allowed to exclude incomplete recovery cases, if they can show that the exclusion of incomplete workouts does not lead to underestimation of LGD and that it has no material impact on LGD estimations. Otherwise, institutions should be allowed to include an adequate margin of conservatism if they exclude incomplete recovery cases from their LGD estimation.

The requirement in the last sentence of paragraph 97 (p. 77) is not clear. The two approaches cannot be mixed, so it is not possible in this respect to choose a reference date at the level of the risk drivers. We are seeking clarification.

#### Re chapter 6 (Model-related margin of conservatism)

In paragraph 100, the margin of conservatism is confusing for institutions and auditors. Please keep in mind that conservative adjustments are not in line with the IFRS requirements. We expect that institutions should adjust their models in an adequate way to cover the expected range of estimation errors. Therefore, adjustment are applied to fix data errors, adjust incomplete datasets or uncertainties in the datasets. These adjustments should make the internal models more realistic and not more conservative. We expect that the adjustment should result in a more accurate estimate of the risk parameter and not in more conservative estimates. Therefore, it would be extremely helpful, if a different wording for the same requirement will be used, e.g. "Adjustment of estimation errors (AEE)".

Also in paragraph 100, the ECB refers to paragraphs 23 to 35 of the EBA CP on GLs. We would like to provide the following remarks on the provisions regarding the margin of conservatism that are laid down in EBA CP on GLs:

a) Categorisation of the margin of conservatism

We generally agree with the definition of four categories as set out in the EBA CP on GLs in paragraphs 24 and 25, in particular because it specifies the term 'margin of conservatism' much more clearly than Article 179(1)(f) and Article 180(1)(e) of the CRR, which are open to extensive interpretation. However, this particular categorisation may prove problematic for some purposes, especially because it results in certain overlaps. The data flaw 'missing or materially changed default triggers in historical observations' listed in paragraph 25 (a)(i) will necessarily apply in most cases where (b)(i), 'diminished representativeness of the historical observations due to the changes in the definition of default' also applies. For the aspects mentioned in (d)(iii), 'estimation error in the long-run averages due to necessary adjustments to comply with Article 179(1)(d), Article 49(3) to (5) and Article 53 of Commission Delegated Regulation xxx/xxxx [RTS on IRB assessment methodology]', we also fail to see how these are not already necessarily covered by the criteria listed in (a)(i) to (iii) and (b)(i).

The fundamental problem associated with the term 'representativeness' (see subchapter 2.2 above) becomes apparent in paragraph 25(b)(iv): the formulation 'diminished representativeness of the historical observations to the current portfolio in terms of the distribution of risk drivers' identifies representativeness with the similarity of risk drivers, which – as discussed above – constitutes an inappropriate restriction of the meaning of 'representativeness'.

The distinction made under the heading 'General estimation errors including errors stemming from methodological deficiencies' in paragraph 25(c) raises the question of what the actual difference between the rank order estimation error' and the 'estimation error in the calibration' is. The former would appear to refer to an error regarding the rank order of obligors established by the model. It does not make clear, however, how the error can be measured. One possible interpretation is poor accuracy of the model resulting in unsatisfactory discriminatory power. In any case the term 'rank order estimation error' needs to be defined more clearly by the EBA.

#### b) Unrealistic assumption that margins can be quantified exactly

We find it generally problematic to assume that components of the MoC can be quantified exactly. This applies in particular to the text of the 'Explanatory Box' on page 42: 'It is therefore clarified in the draft Guidelines that institutions should be able to calculate and report the exact impact of the MoC at the level of risk parameters...'. The requirement regarding calibration set out in paragraph 81 ('Institutions should conduct the calibration before the application of MoC') also suggests that an exact value can be calculated for the MoC. This may lead to the conclusion that the requirement stated in paragraph 30 means that every identified deficiency must translate into a specific quantified component of the MoC: 'Institutions should quantify the estimation error that results from the identified deficiency in order to justify the level of MoC'.

There are of course examples of specific data flaws or model deficiencies which can in fact be quantified in a reasonable way, e.g. uncertainties regarding the determination of the long-term calibration target. For many of the potential reasons for applying a margin of conservatism mentioned in paragraph 25, however, for example 'diminished representativeness', 'missing data points', 'inaccurate or outdated information' or 'changed underwriting standards', a quantitative 'measurement' of the corresponding MoC is unrealistic: often the corresponding 'neutral', i.e. non-conservative, value needed for establishing conservativeness cannot be determined. For example, when a model is modified and the changed model is to be applied to past cases, a typical challenge is to deal with ratings that were changed manually. The most reasonable solution from an economic perspective (taking the overrides into account, but only up to the original changed grade) is conservative because it causes the recalculated grades of the historical ratings to be rather too good. However, the exact level of conservativeness achieved in this way cannot be quantified because there simply is no 'neutral' solution that could be used for comparison. As a result, conservativeness can only be exercised implicitly.

Making quantitative estimates where possible is certainly reasonable. However, to require exact quantification in situations where this is impossible by definition would appear exaggerated and is in any case impracticable. This is also shown by the example of relevant changes to underwriting standards: where such a change substantially affects the performance of the model, it can certainly not always be applied to past cases in a 'neutral' way. It will therefore often be difficult to exactly quantify the margin of conservatism for this type of problem.

In cases of missing data for historical ratings it may be generally possible to quantify the resulting uncertainty assuming that, for example, the mean of the available values is a reasonable 'neutral' best estimate for the missing data points. However, in rating systems with many input variables that have been in use for a long time this may result in a large number, possibly hundreds, of small margin components. It would appear questionable whether by insisting on the inclusion of such minor aspects regulators really set the right priorities for the institutions' modelling activities. In our view such a requirement would place a disproportionate focus on a host of details which individually are completely irrelevant to any model.

For this reason, we believe that the approach to deriving the margin of conservatism stipulated in the Guidelines needs to be fundamentally revised by the EBA: it should be stated explicitly that the solution to each individual problem must be consistent with the specific characteristics of that problem and that this may result in margins of conservatism that are based on expert judgement or that are implicitly applied in the model. In addition, the relevant provisions should focus on the key issues rather than divert attention to the most minute details in a vain attempt to achieve exact quantification.

#### c) Inconsistencies with other requirements for internal models:

Based on the assumption that the margin of conservatism will be fully and explicitly quantified, the EBA Guidelines stipulate that a rating system should be calibrated first and the margin of conservatism should be applied afterwards (paragraph 81). Accordingly the MoC should be reported at the level of the relevant risk parameter estimate (paragraph 29).

We believe that quantifying each component of the MoC is neither expedient nor practicable. The concept of calibrating the system first and applying a margin of conservatism afterwards also raises other issues because it results in different requirements for the purposes of Pillars I and II and is especially inconsistent with the requirements of IFRS 9. IFRS 9 explicitly requires an unbiased forecast that corresponds to economic expectations (see EBA/CP/2016/10, Article 15: 'Credit institutions should however, take into consideration if using practical expedients that the objective of IFRS 9 is to estimate ECL to reflect an unbiased and probability-weighted amount that is determined by evaluating a range of possible outcomes (IFRS 9, paragraph 5.5.17)'). By contrast, the requirements of the Guidelines imply a clearly conservative approach, which at some point will necessarily fail to meet the objective of providing economically reasonable assessment. The resulting inconsistencies between prudential regulation and the economic perspective lead to substantial and ultimately unmanageable complexity and heterogeneity with regard to models and internal processes. This is also problematic with regard to the stricter use test requirements set out in the 'RTS on Assessment Methodology for IRB': 'In order to ensure a minimum level of harmonisation in relation to the scope of use of the rating systems (the so-called 'use test'), competent authorities should verify that the rating systems are incorporated in the relevant processes of the institution within the broader processes of risk management, credit approval and decision-making processes, internal capital allocation, and corporate governance functions. These are basic areas where internal processes require the use of risk parameters, therefore if there are differences between the risk parameters used in those areas and those used for the purpose of the calculation of own funds requirements, they have to be well justified.' ('RTS on Assessment Methodology for IRB', Article 12, see also Articles 18 to 21). This can only be achieved if the requirements defined, for example under Pillars I and II for model results, are not fundamentally contradictory.

For this reason, the Guidelines should also be revised by the EBA in this respect to improve consistency with the economic requirements that internal models need to meet.

In paragraph 103 the ECB refers to paragraphs 200 to 205 of the EBA CP on GLs. We would like to make the following remarks on the requirements regarding the review of estimates that are laid down there:

We generally consider the procedure set out in the EBA CP on GLs in paragraphs 200 to 202 to be reasonable, but some of the requirements of these paragraphs are unclear.

In any case we appreciate the distinction between an annual review fulfilling certain minimum criteria and a less frequent comprehensive review, which we consider a pragmatic and risk-centred approach. Pre-defined analyses and criteria enable reviewers to identify and address potential deficiencies of a model. However, some provisions are not clear enough yet, in particular those of paragraph 202(b) regarding the analyses on the performance and stability of the model:

- The last part of the last sentence of subparagraph (i) is confusing: what are the subsets 'with and without delinquency days'? The analysis required here should be stated more clearly by the EBA.
- The purpose of subparagraph (ii) is unclear: what exactly does 'whole application portfolio, without any data adjustments or exclusions' mean? Should the cases excluded with good reason pursuant to paragraph 21 (c) et seq. really not be excluded at this point? After all, these cases are excluded because they present serious deficiencies or are extreme outliers and would cause systematic bias in model development and validation. We fail to see the point in including these cases precisely for those analyses that are intended to show the performance of a model. The exact meaning of this provision should be clarified by the EBA.

Paragraph 135 provides a list of practices that are expected to be observed when outsourcing IRB-related tasks. According to paragraph 135(b), 'transparency' is expected to be 'a legal requirement'. We recommend clarifying the meaning of this requirement since we find it difficult to understand what exactly is expected: what kind of 'transparency' regarding what kind of issues is being referred to? Should the term 'legal requirement' be interpreted as 'contractual requirement'? This should be clarified, too.

### **c. Comments on Market Risk – IMA**

The data required are, in part, closely related to the implementation of the new FRTB requirements. There are currently no corresponding CRR requirements for this, and the revision of the CRR is currently ongoing. In this case, too, we wish to note that – as with the IRB models – investigations may only test against existing CRR requirements, and that the findings may only refer to these requirements. It is also essential to ensure here that the effective date of supervisory requirements is not brought forward, with the result that they apply to the assessment of banks with internal models (example: paragraphs 11 and 12: classification of financial instruments in the trading book in line with Article 104 of the draft CRR II).

In part, the Draft TRIM Guide merely copies individual passages from the relevant draft RTS or Guideline. We believe that this represents a problem, because it is not clear what this is supposed to achieve. The institutions cannot assume that merely the cited passages from the EBA requirements are being analysed.

Under point 2.4 "aggregation requirements" for the IMA are laid down. Paragraph 48 allows the usage of empirical correlations only if the institution's approach for measuring correlations is based on observable data. This requirement may be in conflict with the current supervisory permission for the IMA. This might be the case, if the permitted model uses a full correlation for example. Moreover, if it cannot be ensured, that correlations are measured based on observable data, an institution should use the simple sum aggregation of stand-alone risk numbers for certain risks or risk categories. The named breakdown of VaR does not correspond to the risk categories of the CRR. We would suggest to change the risk categories accordingly.

Point 5.4 "risk factors in the model" states that banks should be able to provide an inventory of all the market data inputs of the economic P&L and the risk factors used in the models. To establish such an inventory and to keep it updated in a proper way is an enormous and immensely time-consuming effort. Please propose a more efficient way.

Moreover, paragraph 132 expects banks to be able to provide the results of certain tests. Depending on the start of the on-site visit, this may be challenging as this analysis is currently not part of the requirement catalogue of neither internal nor external auditors. Especially as not only the level of the whole portfolio is expected, but also sub-portfolio levels. Additionally, the tests may have other side effects as two complex systems (PL system and risk system) and two complex market data setups are being mixed. This may lead to relative small insights (compared with the effort to produce it). Furthermore, market data (changes) of the risk system and pricing methods of the PL system are mixed up. As market data and pricing methods depend on each other (for example: IR market data set up as market quotes or as zero rates, different pricing algorithms) this is not straight forward and may result in different results only depending on the choice of the test setup. Therefore, we suggest deleting the tests.

#### **d. Comments on Counterparty Credit Risk – IMM**

In many cases, the Draft TRIM Guide merely copies individual passages from the relevant draft RTS or Guideline. We believe that this represents a problem, because it is not clear what this is supposed to achieve. The institutions cannot assume that merely the cited passages from the EBA requirements are being analysed.

We wish to propose the following addition to paragraph 17 (page 131):

To highlight that both criteria (a) and (b) have to be fulfilled to exclude a transaction from the IMM based on evaluation deviations between the IMM and front office or accounting systems, we propose adding the following statement. This will keep at-the-money trades with relatively low market values that may deviate by more than 10% from the front office or accounting value out of the mandatory carve-out.

17. Institutions compare the values of pricing functions used for revaluation in the IMM with values from front office or accounting systems on a regular basis. A mandatory carve-out to one of the methods described in Part 3, Title II, Chapter 6, Sections 3, 4 or 5 of the CRR and the creation of synthetic netting sets is expected for transactions which fulfil both of the following criteria (a) and (b):

- (a) where the difference between the IMM values and the respective front office or accounting values exceeds [10%] of the front office or accounting value;
- (b) where the absolute value of the price is above [10%] of the notional amount.

Comments by the German Banking Industry Committee on the current version of the European Central Bank's Guide to the Targeted Review of Internal Models (TRIM)

For all transactions that are not carved out from the IMM, institutions are expected to take price differences into account in the modelling of the expected exposure (EE) time-profile, i.e. at  $t_0$  and at all future grid points, provided the IMM value at  $t_0$  is below the front office or accounting system value.