

Status update on TRIM

Overview of outcome of general topics review
and credit risk on-site investigations

European Central Bank (ECB)

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Introduction

In June 2018, the ECB published some aggregated information on the first outcomes of its targeted review of internal models (TRIM) investigations including an overview of outcome of general topics review and the preliminary results of credit risk on-site investigations

Introduction

In February 2017, the ECB issued a **Guide to the TRIM** addressed to the management of significant institutions, which sets out its view on the appropriate supervisory practices and spells out how the ECB intends to interpret the relevant EU law on internal models and on general model governance topics. The Guide to the TRIM covers four main chapters: general topics, credit risk, market risk, and counterparty credit risk.

According to this Guide, the ECB launched a **SSM-wide multi-year project (2016-2019)** which aims to assess whether the internal models currently used by significant institutions to calculate their Pillar 1 own fund requirements comply with the applicable regulation, and whether the risk estimates they produce are reliable and comparable.

To that end, a sequential approach was implemented: i) a **review** of how the institutions implemented the **non-model-specific provisions** contained in the CRR was completed by the end of 2017; and ii) **on-site investigations** are being performed to review the compliance of selected models with the CRR requirements (all internal models used for market risk and counterparty credit risk, as well as the most material and critical models for credit risk). In 2017, 92 on-site investigations were launched and by the end of June 2018, a total of 115 TRIM investigations across 12 countries had taken.

- In this context, the ECB published in June 2018 a **Letter on the status update on TRIM**, addressed to banks, which covered an overview of the outcome of general topics review and interim update on preliminary results of credit risk on-site investigations. In particular, the status includes:
 - **Outcome of the general topics review**, including the corresponding decisions and follow-up letters sent to the institutions concerned.
 - **Outcome of credit risk investigations**, which is a preliminary update on the outcomes that have emerged so far from the TRIM on-site investigations.

This **Technical Note** summarises the outcomes included in the ECB Status update on TRIM.

Executive summary

This ECB Letter on the status update on TRIM provides an overview of the outcome of the general topics review as well as a preliminary update on the outcomes that have emerged so far from the TRIM on-site investigations on credit risk

Executive summary

Scope of application

- **Banks**

Regulatory context

- Directive 2013/36/EU on Capital Requirements (CRD IV) – Jun.13
- Regulation (EU) No 575/2013 on Capital Requirements (CRR) – Jun.13
- EBA Guidelines on estimation of IRB parameters – Nov.17

Next steps

- TRIM on-site investigations on low-default portfolios models are currently planned to start by the **end of the 3Q18** and to run **through 2019**.

Main content

General topics review

- **Scope:** review of principles overarching different risk types and internal models framework.
- **Calendar:** review carried out between 4Q16-1Q17.
- **Outcomes:**
 - Certain shortcomings in its general topics' review on, for example, the absence of a model change policy at the institution, or the lack of evidence of annual back-testing for some rating systems.
 - Additional potential misalignments regarding the implementation of a model risk management framework, applications of the IRB approach and monitoring of PPU¹ provisions, scope, etc.

Credit risk investigations

- **Scope:** credit risk models related to the exposure classes Retail and Corporate – SME.
- **Calendar:** a total of 115 TRIM investigations across 12 countries were realised by the end of June 2018.
- **Outcomes:**
 - Findings identified for PD, mainly related with the long-run average and risk differentiation.
 - Findings identified for LGD, mainly related with the calculation of realised LGD and the estimation of long-run average LGD.

Detail

General topics

The ECB found certain shortcomings in its general topics' review on, for example, the absence of a model change policy at the institution, or lack of evidence of annual back-testing for some rating systems

Outcome of the general topics review (1/3)



Scope of the review

- The **general topics** include the principles overarching the different risk types, implementation of the IRB approach, internal models governance, internal validation, internal audit, model use, model change management and the involvement of third-parties.



Calendar

- In the **summer of 2016**, the ECB launched the review of these topics, with a standard request for information.
- Between **4Q16-1Q17**, the off-site analysis of the information received was refined by short supervisory visits.



Outcome

- The supervisory follow-up to the general topics review was two-fold:
 - **Table 1:** cases of outright non-compliance with the applicable regulation were addressed through supervisory decisions that imposed obligations on the affected institutions to remediate the shortcomings within certain deadlines.

Table 1- General topics review: examples of non-compliance cases (non-exhaustive)

Nº	Description of shortcomings	% of institutions with obligations ¹
1	• Absence of a model change policy at the institution or absence of notification of material model changes to the competent authority	29%
2	• Lack of evidence of annual back-testing for some rating systems	24%
3	• Use of the standardised approach without formal authorisation of a PPU	19%
4	• No strict separation of staff performing validation activities and staff involved in tasks of the credit risk control function (e.g. model development and monitoring)	19%
5	• Current resources allocated to the internal validation function preventing a robust validation process	14%

1. Out of the 21 institutions that received a dedicated supervisory decision on general topics. © Management Solutions 2017. All rights reserved | Page 5

Detail

General topics

Further, the ECB found additional potential misalignments regarding the implementation of a model risk management framework, applications of the IRB approach and monitoring of PPU provisions,...

Outcome of the general topics review (2/3)



- The supervisory follow-up to the general topics review was two-fold (continue):
 - **Table 2:** additional potential misalignments with further aspects of the regulatory framework were communicated to the institutions via follow-up letters. Institutions were asked to respond to these letters by providing the Joint Supervisory Teams (JSTs) with written feedback on the current status of each issue.

Table 2- General topics review: examples of issues communicated in the follow-up letters (non-exhaustive)

N°	Description of issues	% of institutions affected ¹
1	Implementation of a model risk management framework <ul style="list-style-type: none">• Despite some measurement of model risk and partial controls in place, practices not formalised/documentated• Absence of model risk management (steering and mitigation)• Model risk not identified as a material risk by the institution (lack of awareness)	31%
	Application of the IRB approach and monitoring of PPU provisions <ul style="list-style-type: none">• Absence of monitoring of the PPU conditions• Absence of clear criteria for the decision of the application of the IRB approach	58%
		31%
	Decision-making responsibilities and internal reporting <ul style="list-style-type: none">• Level of detail in the reporting is not appropriate• Management body (or a designated committee thereof) does not approve all risk management policies	36%
25%		
4	Organisation of the internal validation function <ul style="list-style-type: none">• Deficiencies in the validation policy and procedures	7%

1. Out of the 55 institutions that received a follow-up letter on general topics.

Detail

General topics

...scope and frequency of the audit review of the rating systems, non-rated exposures and outdated ratings, and change policy and re-rating process

Outcome of the general topics review (3/3)



- The supervisory follow-up to the general topics review was two-fold (continue):
 - **Table 2:** additional potential misalignments with further aspects of the regulatory framework were communicated to the institutions via follow-up letters. Institutions were asked to respond to these letters by providing the Joint Supervisory Teams (JSTs) with written feedback on the current status of each issue.

Table 2- General topics review: examples of issues communicated in the follow-up letters (non-exhaustive)

N°	Description of issues	% of institutions affected ¹
5	Scope and frequency of the audit review of the rating systems	
	• Lack of resources to allow a relevant assessment of the IRB requirements	36%
	• Some of the rating systems not reviewed by internal audit	31%
	• Certain aspects of the rating systems not reviewed regularly	22%
6	Non-rated exposures and outdated ratings	
	• Non-rated exposures or exposures with outdated ratings not monitored by the institution	25%
	• No specific prudential treatment for non-rated exposures, or exposures with outdated ratings, or such exposures treated under the standardised approach	20%
7	Change policy and re-rating process	
	• Process for the re-rating and implementation of the new model not formalised	62%
	• Model change policy missing key elements such as responsibilities, impact assessment procedures or process for the classification of the changes	15%

1. Out of the 55 institutions that received a follow-up letter on general topics.

Detail

Credit risk

Regarding the outcomes from the TRIM on-site investigations focusing on credit risk, the ECB provides an overview of the findings identified for PD, such as those related to the long-run average and risk differentiation...

Outcome of credit risk investigations (1/2)

Scope of the review

- The TRIM investigations on credit risk focused on credit risk models related to the **exposure classes Retail and Corporate – SME** (i.e. retail and SME models).

Calendar

- In **2017**, on-site investigations were performed to review the compliance of selected models with the CRR.
- By the end of **June 2018**, a total of 115 TRIM investigations across 12 countries had been realised.

Results

- The ECB provides an overview of the findings identified for **PD** and **LGD¹** in about 60 credit risk investigations. Common to both PD and LGD, a significant number of findings relate to the frameworks for determining **margins of conservatism (MoC)** and the **reviews of estimates** were identified.

PD parameter

- A significant number of findings are related to the **long-run average** (typically related to the calculation of default rates and to the definition of the period representative of the long-run average).
- A comparable number of findings are also related to **risk differentiation**, which was one of the areas in which assessment teams performed extensive analyses challenging the institution's PD models (typically related to a lack of consideration of relevant risk drivers or lack of an appropriate definition of the grades).

Parameter	Topic	Distribution of findings by severity	% investigations with findings
PD	Risk differentiation		83%
	Long-run average default rate		87%
	MoC		85%
	Framework for review of estimates		77%
Total PD		(5) (2)	

1. Investigations considered so far have focused mainly on exposures to residential real estate and therefore the credit conversion factor-related findings are not representative enough for a horizontal analysis at this stage.

Less severe findings More severe findings

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Credit risk

...and of the findings identified for LGD, such as those related to the calculation of realised LGD and the estimation of long-run average LGD

Outcome of credit risk investigations (2/2)

LGD parameter

- The highest number of findings related to the **calculation of realised LGD**, which typically involve one or more of the following potential issues:
 - The **use of an inappropriate discount rate** (e.g. risk-free rate, or contractual interest rate) and the **treatment of multiple defaults** (e.g. lack of an appropriate treatment to account for possible dependency among multiple defaults).
 - Specific aspects of the **calculation** (e.g. lack of an appropriate treatment of restructuring cases, or insufficient consideration of indirect costs) were identified during the intensive walk-throughs performed by the assessment teams during the on-site investigations.
- In addition, a significant share of findings was related to the **estimation of long-run average LGD**, in particular the treatment of incomplete work-outs, the downturn adjustment and the treatment of defaulted assets (i.e. models for expected loss best estimate and LGD in default)

Parameter	Topic	Distribution of findings by severity	% investigations with findings
LGD	Calculation of realised LGD		100%
	Risk differentiation		87%
	Long-run average LGD		96%
	Downturn adjustment		91%
	MoC		75%
	EL _{BE} and LGD in-default		85%
	Framework for review of estimates		80%
	Total LGD		

Less severe findings More severe findings

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Next steps

TRIM on-site investigations on low-default portfolio models are currently planned to start by the end of 3Q18 and to run through 2019

Next steps



- With respect to TRIM on-site investigations, the next information letter will provide an update on the upcoming investigations of **low-default portfolios models**. In this regard, TRIM on-site investigations on these models are currently planned to start by the **end of the third quarter of 2018** and to run **through 2019**.