South African Reserve Bank

From the Office of
the Registrar of Banks

D6/2013

2013-05-21

To: All banks, controlling companies, branches of foreign institutions, eligible institutions and auditors of banks or controlling companies

Directive 6/2013 issued in terms of section 6(6) of the Banks Act, 1990

Matters related to changes to credit risk models used for the calculation of required capital and reserve funds for credit risk

<u>Executive summary</u>

The use of internal models for the calculation of banks' and controlling companies' (hereinafter referred to as 'banks') required capital and reserve funds for credit risk is subject to the prior written approval of the Registrar of Banks (the Registrar). In turn, such approval imposes specific duties on the Office of the Registrar of Banks (this Office), including the duty to:

- **develop a set of review procedures for ensuring that banks' systems and controls are adequate to serve as the basis for the capital calculations; and**
- **focus on compliance with the minimum regulatory requirements as a means of ensuring the overall integrity of a bank's ability to provide prudential inputs to the capital calculator.**

Among other things, the Regulations relating to Banks that were implemented with effect from 1 January 2013 set out the minimum requirements for banks that had adopted the internal ratings-based (IRB) approach (hereinafter referred to as 'IRB banks') for the measurement of their exposure to credit risk, specifically with respect to credit risk models used for the calculation of the minimum required capital and reserve funds.

To enable this Office to discharge its supervisory responsibilities effectively with respect to the aforesaid IRB models, this directive sets out the requirements for the approval of material changes to IRB banks' credit risk models.

PO Box 8432 Pretoria 0001 · 370 Helen Joseph Street Pretoria 0002 · South Africa · Tel +27 12 3133911/0861 12 7272 · Fax +27 12 3133758 · www.reservebank.co.za

1. Introduction

1.1 The approval originally granted to banks for the use of the IRB approaches to calculate the minimum required capital and reserve funds for credit risk relates only to those internal models and rating systems included in the original applications submitted by banks. Any material internal model changes or developments that fall outside the scope of the original approval granted by this Office are subject to a formal approval process prior to being implemented.

1.2 With regard to material changes to banks' model methodologies, material redevelopments and recalibrations that would result in an increase in regulatory capital requirements, this Office previously agreed that banks could continue with the model implementation subject to the following requirements:

1.2.1 the changes were subjected to the formal governance processes of the relevant IRB bank;

1.2.2 any further material model changes to the above-mentioned methodologies, material redevelopments and recalibrations needed to be communicated to this Office, and had to be accompanied by relevant documentation such as model build documentation and independent validation results; and

1.2.3 this Office reserved the right to call for any further information and, if deemed necessary, to initiate a formal review process.

1.3 This Office has decided to revise the requirements with respect to the approval of material model changes in order to enable it to discharge its supervisory responsibilities more effectively regarding the credit risk models used by IRB banks to calculate their minimum required capital and reserve funds relating to credit risk.

1.4 This directive therefore serves to inform banks, branches of foreign institutions, controlling companies and auditors of banks or controlling companies of these revised requirements, specifically with regard to cases where the prior written approval of this Office will be required before a bank may implement changes to a credit risk model.

2. Directive

2.1 IRB banks shall be required to obtain prior written approval from this Office for those model changes that result in a decrease in the bank's regulatory capital requirements in terms of the provisions of paragraphs 2.5 and 2.6 of this directive.

2.2 For all model changes that result in an increase in the IRB bank's regulatory capital requirements in terms of the provisions of paragraphs 2.5 and 2.6 of this directive, conditional approval shall be granted once written notification has been received by this Office. Therefore, the implementation can proceed before prior written approval is granted. However, this Office reserves the right to impose any objections to, or impose conditions on, the implementation of the changes.

2.3 In order to ensure a consistent application of the definition of the materiality of model changes by all IRB banks, banks are required to have in place a duly documented communication policy with this Office, approved by the relevant designated committee.[1] The said communication policy shall, among other things, outline criteria used by each IRB bank for classifying all model changes either as material or non-material.

2.4 To enable this Office to set aside sufficient time to duly consider and review all material changes and any other material aspects related to credit risk models, the aforementioned communication policy shall also contain an explicit requirement for a half-yearly written communication update to be submitted to this Office on all material developments in relation to each IRB bank's credit risk models; however IRB banks shall communicate immediately, in writing, any matters which may require the urgent attention of this Office, prior to the half-yearly communication updates. These communication updates shall include, among other things, planned rating system developments, recalibrations, material model changes, and any other noteworthy events with respect to the IRB bank's credit risk models.

2.5 The assessment of materiality shall consist of a quantitative base, which shall include:

2.5.1 a model change that results in a decrease equal to or greater than 1 per cent of the total risk-weighted assets (RWA), relating to credit risk;

2.5.2 a model change that results in a decrease equal to or greater than 5 per cent of the RWA, relating to credit risk, for the portfolio(s) covered by the relevant credit risk model;

2.5.3 the quantitative measure defined in 2.5.2 above shall exclude all model changes where the nominal RWA change is less than R100 million; and

2.5.4 the quantitative measures stipulated in 2.5.1 to 2.5.3 shall be evaluated based on a comparison between the current model and the proposed model.

2.6 The quantitative measure of materiality shall be adjusted to take into account relevant qualitative factors. Qualitative factors that will increase materiality, shall include, but not be limited to:

2.6.1 new models that are introduced either to replace existing models or to cater for instances where no rating system existed previously;

2.6.2 roll-out to new jurisdictions and portfolios or migration between approaches, for example from the foundation IRB approach to the advanced IRB approach;

2.6.3 the removal of conservative overlays;[2]

---

[1] This refers to the designated committee as defined in regulation 39(7) of the Regulations relating to Banks.

[2] This refers to cases where conservatism had been explicitly incorporated as part of the model development due to a lack of reliable historical default and loss experience or weaknesses identified in the model.

2.6.4 instances where the Regulations relating to Banks require explicit approval, for example the assignment of a higher risk weighting to more recent data in the calculation of the central tendency;

2.6.5 the implementation of a new methodology, for example, the development of a downturn methodology to replace the Federal Reserve formula in the calculation of the downturn loss given default; and

2.6.6 a change in the definition of default.

2.7 Qualitative factors that will not increase the assessment of materiality shall include, but not be limited to, instances where:

2.7.1 standard methodologies are used for the current and proposed models;

2.7.2 the change consists only of a recalibration using additional data, unless the recalibration results in a change in RWA as envisaged in 2.5 above; and

2.7.3 the change addresses a correction or change required by this Office.

2.8 In the event that the IRB bank introduces changes that affect multiple portfolios, for example a change to the definition of default, instead of submitting separate applications for each affected portfolio, the IRB bank shall be required to submit a document outlining the proposed changes as well as any other relevant information related to the proposed changes. The information shall include, but not be limited to, impact on parameter estimates and regulatory capital for each of the proposed changes for all affected portfolios. In the event that this Office approves the proposed changes, the IRB bank shall only be required to submit post-implementation notifications for the affected portfolios.

2.9 All proposed changes shall be communicated in writing to this Office in the format specified in Annexure A, and shall be signed by the chief risk officer of the IRB bank.

2.10 For changes that are deemed to be material, the additional information as specified in item 12 of Table 1 of Annexure A shall be appended to the completed Annexure A and communicated to this Office for its consideration and approval prior to implementation.

2.11 The IRB bank may implement changes deemed to be non-material once the completed Annexure A has been received and acknowledged by this Office. However, in order to afford this Office the opportunity to raise any objections to, or impose any conditions on, the implementation of the proposed non-material changes, IRB banks are required to submit the information outlined in Annexure A at least ten working days prior to the reporting month in which the proposed changes will be implemented for regulatory reporting purposes. In the event that this Office does not raise any objections, following acknowledgement of the proposed changes, the IRB bank may implement the proposed changes.[3]

[3] The ten–day period will only commence after receipt of the notification.

2.12 This Office will assess the changes deemed to be material and notify the IRB bank of any objections or conditions it may have regarding the implementation thereof.

3. Acknowledgment of receipt

3.1 Two additional copies of this directive are enclosed for the use of your institution's independent auditors. The attached acknowledgement of receipt, duly completed and signed by both the chief executive officer of the institution and the said auditors, should be returned to this Office at the earliest convenience of the aforementioned signatories.

René van Wyk
Registrar of Banks

The previous directive issued was Directive 5/2013, dated 26 April 2013.

Encl. 1

Annexure A: Application/Notification of changes to the internal ratings-based approach

Table 1 Summary information

1.	Bank name	
2.	Submission date	
3.	Material or non-material change	
4.	Rating system	Name: Unique number: Type (PD, LGD, EAD):
5.	Reason(s) for (re)development, particularly if the current rating system has a specific deficiency as opposed to refinement	
6.	Brief description of changes	
7.	Portfolio(s)/business units covered by the rating system	
8.	Asset class(es) affected by the change	
9.	Qualitative factors considered in assessment of materiality	
10.	Relevant committee approval	Committee: Date:
11.	Proposed implementation date for immaterial changes	
12.	Supporting documentation for material changes	Development documentation Validation documentation Documentation presented to approval committee Approval committee minutes[4] Other supplementary material

[4] In the event that the approval minutes are not yet available, the IRB bank can submit a summary of the discussions and action items from the meetings. This summary must be signed by at least one permanent members of the relevant committee.

Table 2: Portfolio and capital impact information

	Exposure (R million)	**EAD (R million)**	**RWA (R million)**	**EL (R million)**	**Capital requirement (R million)[5]**
Current					
Current (rated sample[6])					
Proposed rating system (rated sample[6])					
Difference					

Table 3: Significance measures

	Exposure (%)	**EAD (%)**	**RWA (%)**	**EL (%)**	**Capital requirement (%)**
Change as a percentage of banking group					
Change as a percentage of the portfolio(s) covered by the rating system					

[5] For the purpose of this directive, this is to be calculated using ΔRWA x minimum required capital percentage + expected losses.

[6] For rating systems where the capital requirements can only be calculated on a sample of the portfolio covered by the model.