



**CIRCULAR TO BANKING INSTITUTIONS: No. 5-2009/BSD:**

**ADDENDUM TO THE RISK-BASED SUPERVISION  
POLICY FRAMEWORK**

**18 MAY 2009**

# ADDENDUM TO THE RISK-BASED SUPERVISION POLICY FRAMEWORK

## Introduction

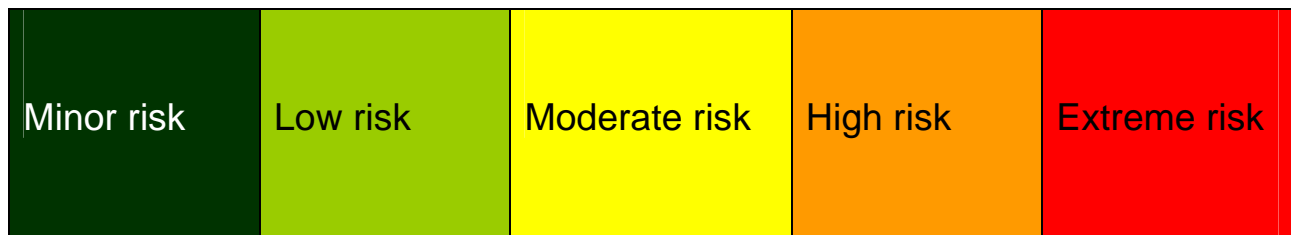
- 1 This note amends the Reserve Bank's **Risk Assessment System (RAS)** as documented in *Guideline No. 2 - 2006/BSD: Risk-Based Supervision Policy Framework*, with particular reference to Chapter 9, Assessing the Institution's Risk, paragraphs 9.11 to 9.32 as well as Chapter 7, paragraphs 7.12 to 7.14 and Chapter 11, paragraph 11.4.
- 2 The amendments to the Reserve Bank's RAS methodologies have been motivated by significant developments in the international and domestic macroeconomic environment, as well as in the financial sector, which developments have a bearing on financial stability.

## Granularity Issues

- 3 Notwithstanding the revered improvements in risk management following the adoption of Basel II, most well-known and widely used risk assessment systems have inadequate granularity.
- 4 The US Federal Reserve Bank **Risk Assessment System**, for instance, is a three tier assessment system wherein risk is rated as either low, moderate or high. The UK Financial Services Authority's (2006, p10) **Advanced, Risk-Responsive Operating Framework (ARROW II)** employs a four-point rating system wherein risk is low, medium low, medium high, or high.

## GLYOR Colour Coding System

- 5 We hereby adopt a recently developed five-tier **GLYOR colour coding system** in order to enhance the granularity of the Risk Assessment System.
- 6 The acronym GLYOR stands for **Green, Lime, Yellow, Orange and Red** wherein Green denotes Minor or Insignificant risk, Lime – Low risk, Yellow – Moderate risk, Orange – High risk, and Red – Extreme risk.
- 7 Schematically, the GLYOR colour coding system may be portrayed as follows:



- 8 The revised Risk Assessment System employs a five-tier rating scale wherein the quantity of risk, or **level of inherent risk**, for **each risk element** is determined by the **combination of impact / effect** (the potential harm that could be caused) and **probability** (the likelihood of the particular event [vulnerability] occurring [crystallising]), as illustrated below.
- 9 For avoidance of doubt, the generic *Risk Categories and Definitions* presented in Chapter 5 of the Risk-Based Supervision Framework, the general structure of the Risk Matrix and other key documents of the framework remain the same.

## Rating of Risks to Financial Stability



Source: Financial Services Authority (2006, p10)

- 10 Various impact and probability factors are aggregated to give the **level of inherent risk** posed to the safety and soundness of the banking institution.

### Risk Rating Scales

IMPACT / EFFECT		PROBABILITY / LIKELIHOOD	
Colour Code	Score & Rating	Colour Code	Score & Rating
Green	1 = No impact	Green	1 = Remote / Unlikely
Lime	2 = Low impact	Lime	2 = Low
Yellow	3 = Moderate impact	Yellow	3 = Moderate
Orange	4 = High Impact	Orange	4 = High
Red	5 = Catastrophic	Red	5 = Imminent

LEVEL OF INHERENT RISK [Impact X Likelihood]		
Colour Code	Score / Rating / Points	
Green	1 = Minor risk	[01 to 02] <sup>1</sup>
Lime	2 = Low risk	[03 to 05]
Yellow	3 = Moderate risk	[06 to 10]
Orange	4 = High risk	[11 to 16]
Red	5 = Extreme risk	[17 to 25]

Source: author's own calibrations

<sup>1</sup> Inequalities may be used in place of discrete scales

## Adequacy of Risk Management

- 11 As in the pervious RAS, the adequacy of risk management systems is still determined by balancing the respective risk management sub-ratings for the following key elements:
  - a. board and senior management oversight;
  - b. adequate policies, procedures and limits for managing business activities;
  - c. adequate risk management, monitoring and management reporting systems; and
  - d. comprehensive internal controls including an effective internal audit function.
- 12 The quality and adequacy of risk management systems may be rated as “**very strong**”, “**strong**”, “**acceptable**”, “**weak**”, and “**poor**”, depending on the availability, completeness, suitability, and compliance with/of the risk management systems implemented in the banking institution.
- 13 The five tier GLYOR colour coding system in also employed.
- 14 As usual practice the Risk Assessment System, the **Overall Composite Risk** profile per each inherent risk is determined by balancing the observed quantity of **Aggregate Inherent Risk rating** with the perceived strength of the related **Aggregate Risk Management Systems** rating for each inherent risk.
- 15 The Overall Composite Risk may also be characterized as Minor, Low, Moderate, High, or Extreme risk.

## Overall Composite Risk

AGGREGATE INHERENT RISK [Impact X Likelihood]		
Colour Code	Score & Rating	
Green	1 = Minor risk	[01 to 02] <sup>2</sup>
Lime	2 = Low risk	[03 to 05]
Yellow	3 = Moderate risk	[06 to 10]
Orange	4 = High risk	[11 to 16]
Red	5 = Extreme risk	[17 to 25]

AGGREGATE RISK MANAGEMENT SYSTEMS	
Colour Code	Score & Rating
Green	1 = Very Strong
Lime	2 = Strong
Yellow	3 = Acceptable
Orange	4 = Weak
Red	5 = Poor

OVERALL COMPOSITE RISK		
Colour Code	Score / Rating / Points	
Green	1 = Minor risk	[01 to 04]
Lime	2 = Low risk	[05 to 12]
Yellow	3 = Moderate risk	[13 to 33]
Orange	4 = High risk	[34 to 64]
Red	5 = Extreme risk	[65 to 125]

Source: author's own calibrations

<sup>2</sup> Inequalities may be used in place of discrete scales

**Illustrative Summary Risk Assessment Matrix as at  
31 December 20XX**

<b>Type of Risk / Vulnerability<sup>i</sup></b>	<b>Indicator <sup>ii</sup> / Risk Element</b>	<b>Impact / Effect <sup>iii</sup></b>	<b>Probability / Likelihood<sup>iv</sup></b>	<b>Level of Inherent Risk <sup>v</sup></b>	<b>Adequacy of Risk Mgt Systems <sup>vi</sup></b>	<b>Overall Composite Risk</b>
• Credit Risk						
• Liquidity Risk						
• Interest Risk						
• Foreign Exchange						
• Operational Risk						
• Legal & Compliance						
• Strategic Risk						
• Reputation Risk						

**Key**

- i. Current major risks or threats to safety and soundness of banking institutions
- ii. The indicators are expressed in different formats such as absolute value, ratio, change a year, trend, deviation from trend, model generated parameters, etc
- iii. Assessed expected impact on safety and soundness of banking institution if a vulnerability or risk factor is triggered.
- iv. Assessed likelihood of a vulnerability crystallization at some point over the next year.
- v. A product of assessed impact and probability
- vi. Risk mitigation / adequacy of risk management systems in place

**RESERVE BANK OF ZIMBABWE  
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