Country Risk Ratings
Audit Report
Report # 7/15
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Distribution:

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Deputy Chief Economist & Director, EPIC

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Introduction

There are seven risk ratings that EDC uses to evaluate country risks across its Financing and Insurance portfolios. The calculation of these risk ratings is governed by the Risk Rating Policy within the Risk and Capital Management Policy. Consistent with the Risk Rating Policy, the Economic and Political Intelligence Center (EPIC) within the President's Group is responsible for methodologies and calculation of country risk ratings (i.e. Sovereign Probability of Default, Commercial Country Ceiling, Short-Term Country Rating (STCR), Wrongful Call, Expropriation (EXPRO), Political Violence (PV), and Transfer and Convertibility (T&C).

Audit Objectives & Scope

The objective of our audit was to evaluate the design and operating effectiveness of the controls surrounding the calculation of country risk ratings (CRR). The audit scope included an examination of the related policies and procedures and their approval, CRR models and their application and approvals, spreadsheet risk, and the delivery of CRR to the applicable downstream business applications. The Wrongful Call Rating was excluded from the audit, as its use is limited to support pricing for the Performance Security Insurance product.

Internal Audit Opinion

In our opinion, ***"Opportunities Exist to Improve Controls*[1]**"** surrounding country risk ratings. Overall, we found that controls exist to ensure the on-going integrity of the data used to calculate risk ratings and to ensure model methodologies are correctly applied when determining ratings. However, the process to calculate risk ratings involves a number of manual steps and is heavily reliant on excel spreadsheets. Improvements are needed to access controls, version controls and change management relating to these spreadsheets in order to mitigate the risk of errors. In addition, the policy framework and supporting procedures need updating. For example, accountability for determining STCR and the Country Loss Given Default needs to be clarified, the mandate of the Country Risk Rating Committee needs to be documented including the approval and reporting of rating exceptions, and the need for periodic and independent model validation needs to be addressed. Management has already begun to take action to address the audit findings.

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[1] Our standard audit opinions are as follows:

- **Strong Controls**: Key controls are effectively designed and operating as intended. Best in class internal controls exist. Objectives of the audited process are most likely to be achieved.
- **Well Controlled**: Key controls are effectively designed and operating as intended. Objectives of the audited process are likely to be achieved.
- **Opportunities Exist to Improve Controls**: One or more key controls do not exist, are not designed properly or are not operating as intended. Objectives of the process may not be achieved. The financial and/or reputation impact to the audited process is more than inconsequential. Timely action is required.
- **Not Controlled**: Multiple key controls do not exist, are not designed properly or are not operating as intended. Objectives of the process are unlikely to be achieved. The financial and/or reputation impact to the audited process is material. Action must follow immediately.

Audit Findings & Action Plans

1. Policies, Procedures and Guidelines

The Risk Rating Policy mandates the Economics department for the establishment and monitoring of the seven CRRs. Policies, procedures and guidelines provide the framework within which an organization and its business units operate. Clear policies, guidelines and procedures support effective decision making and delegation by providing guidance on what people can do, what decisions they can make and what activities are appropriate.

During the audit, Internal Audit found that the Risk Rating Policy is incomplete in terms of the identification and description of the resources used within the CRR process, including models and data utilization. The Risk Rating Policy does not identify and define the roles and responsibilities of management designated as responsible for CRR. In addition, the Risk Rating Policy does not define the requirements for an independent validation and cadence of review of the models created and utilized within EPIC. The Risk Rating Policy is also silent in respect of the ownership of Country Loss Given Default. We also noted that the current procedures and methodologies were informally approved by the Director, EPIC, but the documentation of said approval and the delegation of such authority by the President, who has overall responsibility, is not in place.

Procedure manuals serve to provide guidance on the implementation and adherence to policies. We noted that the EPIC "Procedure Manual" is incomplete in respect of defining the EPIC Risk Rating Committee's mandate, requirements for quorum, meeting minutes and the approach to monitoring country risk ratings. The monitoring practices should also provide direction to determine the basis to identify and define possible events which may trigger a review of the CRR prior to the regular annual review. Currently, the onus is left to the individual analysts to determine what constitutes a material change within a country, leading to potential variability from one analyst to another.

While the Economics team has been delegated responsibility for country risk ratings, we noted that the process of finalizing the STCR is currently carried out by Credit Standards and Scoring and is therefore not in compliance with Risk Rating Policy. Resolution and clarity of this matter is required to ensure compliance with the Risk Rating Policy.

Management has developed a detailed action plan to improve the Risk Rating Policy and provide clarity to address inconsistencies, such as ownership of STCR, and where else as required. Management has also agreed to revise the Procedure Manual to include complete terms of reference of the EPIC Country Risk Rating Committee, as well as improve guidance, such as the definition of material events to aid the analysts in their monitoring activities.

Rating of Audit Finding - Major[2]
Action Owner – VP & Chief Economist and Deputy Chief Economist & Director, EPIC
Due Date – Q1, 2016

2. CRR Methodology, Application and Approval

During the audit, we noted there is no model validation framework in place to ensure the credibility, applicability and acceptance of EDC's Country Risk Rating models. It is important for EPIC to establish a regular process to validate their rating systems; ensure the validation process is independent of the design and consequences of the rating system; document the validation of rating systems to ensure that parties reviewing the material can understand the objectives, scope, and conclusions of the rating systems; and, consider all data that may be material and relevant to the validation of their rating systems.

We also noted there is a lack of model documentation for the in-house built models. Model documentation is crucial to ensure that parties reviewing the models can understand the objectives of the models, the scope and analysis performed to create the models. The CRR methodology followed by EPIC does not provide sufficient guidance to analysts for assigning scores in assessing various components within the PV, T&C and EXPRO models. The ratings methodology also does not list all the possible risk multipliers which can be assigned to a country - as in practice, analysts are assigning multipliers which are different than the ones stated in the methodology.

EPIC makes use of a "Third Party Application" to receive and manipulate external data for use in the CRR models. We found that there is insufficient documentation on data governance related to additional coding to this "Third Party Application", such as instruction and aggregation rules for organizing the data. Additional controls are required by an independent person to review any changes to the coding to ensure only appropriate changes are made, and to retain evidence of that review.

During our testing of the model and the related factors and components of the rating, we noted that in 17 out of 25 cases sampled the analysts did not provide any rationale where their expert judgment was applied to score a rating component different than what was recommended by the model (the "anchor" score).

Management has developed detailed action plans to address these matters. The action plans will consider the need to independently validate all CRR models, develop documentation for all in-house built models, including review and approval by a delegated person. Management also plans to update the CRR methodology to fully document the process and address the noted gaps such as incomplete scoring

[2] The ratings of our audit findings are as follows:

- **Major**: a key control does not exist, is poorly designed or is not operating as intended and the financial and/or reputation risk is more than inconsequential. The process objective to which the control relates is unlikely to be achieved. Corrective action is needed to ensure controls are cost effective and/or process objectives are achieved.
- **Moderate**: a key control does not exist, is poorly designed or is not operating as intended and the financial and/or reputation risk to the process is more than inconsequential. However, a compensating control exists. Corrective action is needed to avoid sole reliance on compensating controls and/or ensure controls are cost-effective.
- **Minor**: a weakness in the design and/or operation of a non-key process control. Ability to achieve process objectives is unlikely to be impacted. Corrective action is suggested to ensure controls are cost-effective.

categories and rationales for exceptions, as well as providing formal documentation regarding the “Third Party Application” coding file.

Rating of Audit Finding - Major
Action Owner - Deputy Chief Economist & Director, EPIC
Due Date – Q2, 2016

3. End User Computing and Manual Input Risks

End user computing activities refer to programs and tools that are generated by business users such as personal productivity tools and spreadsheets. This includes, but is not limited to, Microsoft Excel. Extensive use of end user applications introduces an element of risk as these activities are outside the control environments which support formally developed IT applications. During the audit, we noted there are no access controls to restrict modifications to the Excel-based CRR application by the authorized personnel. Such controls would include the maintenance and review of an application version, historical log of changes and an access list to the CRR application.

EDC business applications and spreadsheet based tools receive country ratings through either an automated feed, manual input or spreadsheets links. We noted that there are no regular reconciliations to ensure the developed ratings are accurately fed to the downstream business applications by the Centralized Market Database on a timely basis. The risk of error is heightened by Excel formulas that link to an Excel data sheet and by manual input methods.

The manual input process to update ratings increases the risk of error and mistakes. It’s therefore important to have detection controls in place, such as reconciliations to ensure accurate updates. However, we noted there is no reconciliation process between EPIC’s internal book of record (ratings change tracker) and the country ratings in Centralized Market Database to ensure that correct information is recorded in the database.

Management has agreed to document and introduce the controls to address spreadsheet risk, and introduce the reconciliation process to ensure that ratings are properly input into the CMD and correctly delivered to the EDC’s downstream business application and spreadsheet based tools on a timely basis.

Rating of Audit Finding - Moderate
Action Owner - VP & Chief Economist and Deputy Chief Economist & Director, EPIC
Due Date – Q4, 2015

Conclusion

The audit findings have been communicated to and agreed by management, who has developed appropriate action plans. We would like to thank management for their support throughout the audit.