

**End of Day Valuation  
Final Audit Report  
Report Nr. 9/11  
September 21, 2011**

**Distribution:**

**To:** President & CEO  
Senior Vice President & Chief Financial Officer  
Vice President & Corporate Controller  
Vice President & Chief Risk Officer  
Director, Market Risk Management  
Director, Corporate Accounting  
Director, Cash Management, Taxation & Corporate Insurance  
Manager, Treasury Accounting

**CC:** Senior Vice President, Legal Services & Secretary  
Senior Vice President, Human Resources & Corporate Services  
Senior Vice President, Business Development  
Senior Vice President, Insurance  
Senior Vice President, Financing Products Group  
Senior Vice President, Business Solutions & Technology  
Director, Planning & Government Relations  
Principal, Office of the Auditor General  
Director, Office of the Auditor General

**Audit Team:**  
Lindsay Schoutsen  
Allison Coons

**Vice President Internal Audit**  
Monica Ryan

## Table of Contents

---

|                                       |   |
|---------------------------------------|---|
| Introduction .....                    | 3 |
| Audit Objectives & Scope.....         | 3 |
| Internal Audit Opinion.....           | 4 |
| Audit Findings & Recommendations..... | 4 |
| Conclusion.....                       | 5 |

## Introduction

---

In accordance with our FY2011 Audit Plan, EDC Internal Audit performed an audit of the End of Day (EOD) Valuation Process. The purpose of the EOD Valuation Process is to retrieve current market data from external sources required to value: investments, debt, and derivatives; calculate related interest and expense accruals; and calculate related realized and unrealized gains and losses. In some cases, valuations for these financial instruments are derived directly from external data sources. In other cases (e.g. structured products), valuations are derived from internally developed models using market data obtained during the EOD process. Valuations from the EOD process are integral to a number of significant balance sheet and income statement accounts including marketable securities, derivative instruments, loans payable, investment revenue and interest expense.

## Audit Objectives & Scope

---

The objective of the audit was to evaluate whether the controls in the EOD Valuation Process were designed effectively and operating as intended. Our audit included an assessment of what Enterprise Risk Management (ERM) risks could materialize, identifying the controls in place to mitigate these risks and performing testing to evaluate their operating effectiveness. The scope of the audit included all activities from the initial import of market data from external sources through to posting journal entries in Peoplesoft Financials (PSFIN). Accordingly, specific areas of examination included:

- ✓ Data validity checks incorporated into the design of complex spreadsheets and the Universal Financial Server (UFS) to ensure the completeness and accuracy of imported market data;
- ✓ Manual changes to market data within the UFS pricing environment;
- ✓ Journalizing mark to market (MTM) adjustments in the correct accounting period;
- ✓ The interface between UFS and PSFIN;
- ✓ Periodic validations performed by Market Risk Management (MRM) of the internal models used to derive market valuations and their output; and
- ✓ Variance analysis performed by Treasury Accounting & Financial Reporting to understand MTM volatilities.

Excluded from the scope of this audit was a review of the controls surrounding access to and maintenance of complex spreadsheets used to import market data. These controls were included in the 2010 Spreadsheet Audit. Audit fieldwork was performed from March to July 2011.

## Internal Audit Opinion

---

In our opinion, the End of Day Valuation process is **Well Controlled**<sup>1</sup>. The process to import daily market data for subsequent upload to UFS involves the use of complex spreadsheets. As a result, it is not feasible to maintain transactions trails of the daily import process including results of data validity checks and actions taken to correct any import errors. Accordingly, while we were able to confirm the effective design of these controls, we were unable to perform detailed testing to ensure they were operating as intended. Our opinion is based on the effective operation of downstream controls within the MRM, Treasury Accounting, and Financial Reporting teams. This includes validations performed by MRM of complex internal models used to derive market valuations and their output, and variance analysis performed by Treasury Accounting & Financial Reporting to understand MTM volatilities. One moderate<sup>2</sup> issue was noted and is described in the following section.

## Audit Findings & Recommendations

---

### Review of End of Day Simple Valuation Models

The End of Day process uses both complex and simple financial models to value instruments. Complex financial models are reviewed on a regular basis against counterparties to ensure accuracy of valuations. Documented procedures exist for simple financial models indicating that they should be reviewed annually, however these procedures are not being performed. It is recommended that Market Risk Management determine the appropriate timing and method to review simple financial models, giving consideration to the potential impact of a failure of simple

---

<sup>1</sup> Our 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.

<sup>2</sup> 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.

models. Market Risk Management documented procedures should be updated to reflect any changes to the process.

Rating of Audit Finding – Moderate

Action Owner – Director, Market Risk Management

Due Dates - All actions to be implemented by Q4 2011

## **Conclusion**

---

The audit findings and recommendations have been communicated to and agreed by management, who has developed action plans that are scheduled for implementation no later than Q4 2011.

We would like to thank management for their support throughout the audit.

