ITAC Brief

IFRS and Spreadsheets: A High-Risk Combination

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IFRS and Spreadsheets: A High-Risk Combination

A. Overview

Spreadsheets are dynamic tools that can provide a wide variety of functionality at minimal cost. Consequently, in an environment of stringent deadlines and temporary data processing needs, they are used to fill the gaps in functionality within the computing environment. This was seen at companies complying with *Sarbanes-Oxley* (SOX) during the European conversion from local GAAP to International Financial Reporting Standards (IFRS), and also currently within Canadian companies that are moving from Canadian GAAP (CGAAP) to IFRS. Some areas in which spreadsheets are highly likely to be used include:

- managing dual reporting requirements in 2010
- recording and tracking note disclosure information
- componentized accounting for assets
- tracking lease information.

Despite the benefits, spreadsheets impose risks upon the organization. As spreadsheets are usually built and used outside the formal IT controls environment, they are more prone to error. Furthermore, they can become quite burdensome to maintain. As discussed in a recent ITAC InfoCast podcast, European IT & IFRS experts noted that organizations that relied on ad hoc tools (e.g., spreadsheets) ultimately were forced to adopt more sustainable solutions.

This ITAC Briefing explores the risks of relying on spreadsheets to convert to IFRS. The Briefing also looks at some strategies and controls that organizations should consider when using spreadsheets in such a manner.

B. IFRS and Spreadsheets: Likelihood and Impact of Risks

Spreadsheets are an invaluable tool in most, if not all, organizations. They are easy to use, flexible and inexpensive. Given these advantages, it is not surprising that companies are relying on spreadsheets to convert from CGAAP to IFRS, but these advantages come at a price. Usually, spreadsheets are not subject to the same level of control that exists in the main computing environment. For example, controls over application systems, such as ERPs, will include formal planning and design, access management controls, segregation of incompatible functions, independent testing of code, documentation, and backup and recovery. Such controls are usually absent from the end-user computing environment of spreadsheets, which exposes the financial information to an increased risk of error or fraud. For example, if a user were to

make an error copying and pasting data from the SAP system into the spreadsheet, they have effectively rendered all the controls over the ERP system null and void. Consequently, when management designs their IFRS conversion process to rely heavily on spreadsheets and similar ad hoc solutions — there is a significant risk of error.

Anything more than a simple spreadsheet has a high likelihood of error and can have a significant impact on the organization as studies conducted on spreadsheet errors have shown. An analysis of seven spreadsheet-error studies (looking at 113 spreadsheets) found an average error rate of 88%.[1] The impact of spreadsheet errors can be severe and high profile incidents can easily be found in the print and electronic press. The *European Spreadsheet Risks Interest Group* has compiled a list of "horror stories" available on its website.[2] Some examples that illustrate the severity of spreadsheet errors include:

- A cut-and-paste error in a spreadsheet cost TransAlta, a Canadian power generation company, $24 million in overpayments for hedging contracts.[3]
- The SEC fined Scott Hirth, former CFO of ProQuest Co, $420,000 for using spreadsheets to falsify financial records. The SEC alleges he hid the information in invisible cells by using white fonts on a white background.[4]
- A $2.6 billion error occurred when a negative sign was omitted, thereby turning a $1.3 billion loss into a $1.3 billion gain.[5]
- Barclays was legally bound to buy millions of dollars of assets from the bankrupt Lehman Brothers due to an error that occurred when a spreadsheet file was converted to PDF. Barclays' attorneys filed a motion that effectively requested the judge to correct the spreadsheet, so they would not be required to purchase the assets.[6]

Based on these statistics and incidents, the use of spreadsheets creates risk of inadvertent or even deliberate errors. When using spreadsheets to comply with IFRS, organizations put themselves in a high-risk situation because the information will be reported to external stakeholders. A high degree of risk also exists where the IFRS process uses spreadsheets to aggregate information from different systems and manual processes, and these spreadsheets are regarded as temporary until the IFRS transition is complete.

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1 R.R. Panko, "What we know about spreadsheet errors", *Journal of End User Computing*, Vol. 10, No. 2 (May 1998), pp. 15-21. Revised May 2008. See http://panko.shidler.hawaii.edu/SSR/Mypapers/whatknow.htm [accessed February 16, 2010].

2 See www.eusprig.org/horror-stories.htm and www.eusprig.org/stories.htm

3 Drew Cullen, "Spreadsheet snafu costs firm $24m", *The Register* (June 19, 2003). See www.theregister.co.uk/content/67/31298.html [accessed February 16, 2010].

4 Tom Groenfeldt, "Excel Abuse Running Rampant-Financial firms look to improve spreadsheet controls" (October 27, 2008). See www.securitiesindustry.com/issues/19_79/22921-1.html [accessed February 16, 2010].

5 Penny Crosman, "Finding Hidden Dangers in Spreadsheets", *Wall Street & Technology*. See www.wallstreetandtech.com/showArticle.jhtml?articleID=221100139 [accessed February 16, 2010].

6 Heather Havenstein, "Excel error leaves Barclays with more Lehman assets than it bargained for", *Computerworld* [accessed February 16, 2010].

C. Managing Risks Associated with IFRS Spreadsheets

Given the significant risks in using spreadsheets to convert to IFRS, careful planning is required to minimize the exposure to these risks. The following suggestions provide a starting point for such planning.

1. Are spreadsheets the best tool for the job?

Before using spreadsheets, management should first assess whether the existing computing environment can handle IFRS conversion issues. For example, SAP ERP 6.0 has a parallel accounting feature.[7] Additionally, management should assess the prerequisite work that is required to enable such functionality. For example, a data migration project is required to effectively use the parallel accounting feature in SAP ERP 6.0.[8] Where such functionality exists and it is feasible to implement in time for the IFRS deadline, they are likely the better option than ad hoc solutions, such as spreadsheets.

2. If spreadsheets are temporary, what is the permanent solution?

If spreadsheets are only temporary, then management should know what the permanent solution will be. Timelines should be identified, including when the cutover will occur and what steps are required to make the move a reality. Continuing with the example in the previous section, if management decides that they want to ultimately implement SAP ERP 6.0, they should determine when they can complete all the project steps (e.g., migrating the data) required to move to SAP ERP 6.0. With the cutover strategy understood, the IFRS conversion process should be designed to facilitate the movement to the permanent solution that ultimately will replace the use of spreadsheets.

3. Minimizing complexity

IFRS-focused spreadsheets should be designed to be as simple as possible. Use of functionality such as macros, pivot tables and cross-linkages between multiple spreadsheets are examples of complex functions that expose the information on the spreadsheet to greater risk of error. Since these features are not easily understood, non-expert users can inadvertently cause errors when using such spreadsheet functionality. Conversely, minimizing such complexity can make it easier for users to identify and correct errors.

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7 PricewaterhouseCoopers, “Are you ready for IFRS? Five Questions CIOs Need to Consider Now”, (Canada: June 2008).

8 *Ibid.*

4. Extending the control environment

Ideally, application and general computer controls applied in the core financial systems environment should be applied to the development, maintenance and operations of spreadsheets. In less than ideal situations, management should identify what controls are required to mitigate the risks of error and fraud. One resource that provides a list of controls is *The Use of Spreadsheets: Considerations for Section 404 of the Sarbanes-Oxley Act,* published by PricewaterhouseCoopers (PWC) in 2004. As the title infers, the document was originally published to help organizations that used spreadsheets in financial processes that were in-scope for SOX audits. Most of the controls from this document were taken, and applied, where required, to the context of IFRS:

- Assigning ownership — IFRS-oriented spreadsheets should be assigned to an owner, who will be accountable for the spreadsheet's information integrity.
- Change control — subject spreadsheets changes to controls, such as reviewing, testing and authorizing the changes.
- Version control — ensure users are working on the current, authorized version of the IFRS spreadsheet.
- Access control — access and ability to make changes should be restricted to authorized users; this can be accomplished by using document management systems, restricting access to folders on servers, etc. Cells within the spreadsheet can be locked to prevent accidental or unauthorized changes.
- Interface controls — input into the spreadsheets and output from the spreadsheet should be reviewed for completeness, accuracy and validity. For example, when the data is input into the spreadsheet, controls should be in place to ensure that the correct amount was obtained from the correct report. It should be possible to reconcile amounts from the GL back to the controlled environment (e.g., the ERP system).
- Development controls — systems development life cycle (SDLC) controls (e.g., segregation of duties, testing, etc.) should be implemented during the development of IFRS-oriented spreadsheets. For example, an independent user should review the logic and flow of information in the spreadsheet.
- Backups and archiving — spreadsheets should be backed up on a regular basis.
- Documentation — spreadsheets should be documented to explain from where the information is obtained and to where the information is ultimately output. For example, this may include process flows that describe how the information flows from the source systems to the CGAAP general ledger (GL) account information and to the IFRS GL account numbers.

5. Audit considerations

Spreadsheets involved in the IFRS conversion process are highly likely to be in-scope for external auditors. Consequently, overly complex, undocumented and untested spreadsheets will be time-consuming to audit. In such instances, external auditors will need to invest extra time to put together audit evidence to ensure that the IFRS financial information is complete, accurate and valid.

Another risk that can potentially impact timely reporting, as well as the external audit, is the turnover of key personnel. As noted in the IT & IFRS podcast, organizations should examine the risk that key individuals may leave the organization to work on IFRS conversions at other companies due to the high demand for such individuals. To mitigate against these risks, spreadsheets should be adequately documented and backup personnel should be trained to “operate” the IFRS-oriented spreadsheets.