Article from:

CompAct

October 2008 – Issue No. 29

Effectively Mitigating Spreadsheet Risk in Insurance

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[Editor's Note: This article originally appeared in the July 2008 edition of CompAct.]

The power and flexibility of Microsoft Office Excel have made it the ubiquitous analysis tool of choice for insurance companies in determining premiums and the risk value of clients. Complex spreadsheet models are often developed by actuaries and then run thousands of times to determine risk under thousands of scenarios for each insurance policy. According to a 2006 study led by Louise Pryor, a well known actuarial consultant, 732 respondents across the global insurance market concluded that: "Excel appears to be almost universally used, with 98 percent of all respondents saying they use it."

However, despite their ubiquity, stand alone spreadsheets have proven difficult to control. They are often stored on employee desktops and corporate file shares; an uncontrolled environment that is absent many of the IT controls expected from enterprise class software. In addition, the complexity of actuarial spreadsheets makes them error prone. Even one small mistake in an actuarial spreadsheet model—incorrect input data, a formula error, a bug in a macro, or a false assumption—can produce the wrong results and eventually affect an entire business.

Compliance Mandates and Auditor Guidance

In addition, actuarial spreadsheet models have to comply with ever-changing regulatory mandates such as FAIS, ERISA, PBGC, FAS 87, FAS 106/158, and IAS 19. Leading tax and audit firms have begun to scrutinize the use and dependency on actuarial spreadsheets, and are recommending the application of spreadsheet controls to help insurance firms effectively mitigate risk and improve compliance.

Establishing Effective Spreadsheet Controls

Applying a lifecycle approach to establishing spreadsheet controls has proven to be effective while satisfying the latest guidance from leading tax and audit firms.

First, organizations should discover and inventory all critical actuarial (and financial) spreadsheets across all corporate data sources, including corporate file shares, employee desktops, and document repositories.

Second, assess each spreadsheet for risk, complexity and impact on key financial account balances.

Next, remediate all critical spreadsheets to correct errors, apply best practices, and improve performance.

Then, establish a controlled environment to manage critical spreadsheets that incorporate

key IT controls recommended by auditors, including: version control, access control, change control, documentation, input control, security and data integrity, documentation, backup and archival, software development lifecycle, logic inspection, segregation of duties/roles/procedures, and overall analytics. In most cases, a controlled environment should be established with appropriate spreadsheet management software.

Finally, automate the controlled environment and monitor the process from end-to-end. For example, review and approval of critical spreadsheets can be automated via workflow, proactive alerts can be sent to users about key spreadsheet changes to formulas and macros, and management reports can be sent via e-mail to highlight potential risk and compliance gaps. Management reports can include a review of user access levels to critical spreadsheets, approval status, or cell level change reports.

Driving Business Value

By managing critical actuarial spreadsheets like enterprise software applications, insurance firms can improve visibility and control, improve compliance with regulatory mandates, mitigate the risk of errors, and improve productivity for actuaries. Leveraging the new emerging breed of enterprise spreadsheet management software tools and applications can be a catalyst to helping firms accomplish these goals by automating the spreadsheet risk and compliance management lifecycle. ◾

Prodiance provides spreadsheet governance software and is the winner of the Microsoft 2007 Innovator of the Year award. Further information can be found at *www.prodiance.com.*

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