SUNGARD® ASSET MANAGEMENT

WHITE PAPER SPREADSHEET SEPARATION: KNOWING WHEN TO

EXIT EXCEL

Is your buy-side firm still using Excel to handle such complex and mission-critical duties as position keeping, portfolio management, trading as well as calculating daily P&L?

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Knowing when to exit Excel

Is your buy-side firm still using Excel to handle such labor-intensive duties as tracking portfolio positions and trading results as well as calculating daily P&L? Do you use Excel to store confidential data and perform mission-critical tasks?

If the answer is "yes," you're not alone: last year, research group Deloitte estimated that some 70 percent of asset management companies relied on spreadsheets to handle these increasingly intricate tasks.

It's easy to understand why Excel remains a popular portfolio management product. Spreadsheets are easy to deploy and allow users to plug in numbers and pull off basic calculations at the touch of a button. Excel can be useful when setting up a new report or functionality. Additionally, the ability for firms to customize spreadsheets to suit their individual needs is undeniably valuable.

But when attempting to manage large quantities of complex and sensitive portfolio data, spreadsheets can quickly become impractical – and potentially costly as well.

Given the rigorous nature of today's reporting and data management requirements, spreadsheets are most likely to be used for data gathering and manipulation purposes by smaller buy-side firms with comparatively lower AUM, or those in their nascent phase. And yet to date many larger and fast growing businesses continue to rely on Excel for risk management, accounting and portfolio management functions. For the vast majority of investment managers with substantial positions to monitor, the time has come to implement more reliable solutions in order to ensure sufficient transparency into a fund's networked operations.

Spreadsheet data recovery: Where's my spreadsheet?

Despite its longstanding relevance as an asset management tool, Excel is not without its drawbacks. Recovery issues – including the inability to retrieve important spreadsheet data at a moment's notice – is a common problem. This issue typically arises if the spreadsheets is corrupted, renamed, its retrieval path is changed, or when a spreadsheet's creator has moved on, taking with them all knowledge of the spreadsheet's whereabouts, as well as how to retrieve the "missing" document. Even when a creator is still on the premises, individually named spreadsheets often become "information islands" that are only accessible to its originator - despite the fact that the information was intended to improve the decision-making processes for all involved!

Spreadsheet information silos: When spreadsheets become islands

Another nagging issue is the tendency for spreadsheets to reinforce silo-based activity (i.e., separate spreadsheets for different departments/business units, as well as for different activities such as risk assessment, control testing and loss capture). This makes consolidated reporting virtually impossible, and prevents management from achieving a consistent and comprehensive view of risk.

The imposition of newer, more restrictive regulatory measures further underscores the vulnerabilities associated with Excel usage. In the US, the Dodd-Frank mandated Volcker Rule seeks to prohibit commercial banks from using their own capital to invest in hedge funds and private equity funds unless such activity is deemed "systemically important" and is limited to a three-percent ownership stake. As noted by Deloitte in its recent report "The Volcker Rule's Impact on Infrastructure," in its current form the Volcker Rule would, among other things, "add urgency for firms to reduce the use of spreadsheets and end-user developed applications" while also bolstering front-office systems and processes in an effort to boost P&L and risk attribution.

Spreadsheet mishaps: Examples of financial and regulatory fallout

While automation isn't always the be-all-end-all, the fact remains that manual processes like Excel rely on the successful completion of a series of daily communication links. So what exactly could wrong should a breach in the chain occur?

The following are some examples of notable spreadsheet mishaps, as well as the subsequent financial and regulatory fallout that occurred in their wake:

- > (B)Reaching your spreadsheet limits: In 2005, the UK's Financial Services Authority (FSA) levied a £13.9/\$22.2 million fine against Citigroup, charging that, among other things, the company had placed undue risk management and trade execution emphasis on spreadsheets. Citi's spreadsheet testing methods were not fully capable of ascertaining a reasonable or statistically meaningful analysis of what might occur should a large quantity of orders be submitted simultaneously, said the FSA. As Citi's trading strategy was based on presumptions about the spreadsheet's capabilities that were not actually supported by scientific analysis (including the assessment of the likely failure rate with respect to trades submitted), Citi was forced to liquidate a higher number of cash bonds than was actually needed in order to return to a flat position.
- > Spreadsheet dependency: In 2008, the FSA imposed a penalty of £5.6/\$8.9 million on the UK operations of Credit Suisse with respect to a breach of Principles 2 and 3 of the FSA's Principles for Business. According to the FSA, the booking structure for the firm's credit-default obligations (CDO) trading business was overly dependent on large spreadsheets using multiple entries, resulting in a lack of transparency and insufficient supervision, risk management and control of the company's Structured Credit Group (SCG). By allowing highly complex CDO trading activity to be carried out without adequate risk management systems in place, Credit Suisse "had failed to take reasonable care to organize and control their affairs responsibly and effectively," charged the FSA.
- > Spreadsheet Islands: In late 2008-early 2009, Goldman Sachs was fined \$225,000 by the United States Securities and Exchange Commission (SEC) after the company was unable to close out certain fail-to-deliver positions resulting from spreadsheet mismanagement. At the time, Goldman's operations department staff was charged with updating information contained in two different spreadsheets, one governing T+4 obligations (due in the morning), the other containing T+6 obligations. Failure to carry out the T+6 update caused Goldman to purchase shares for which it had no T+6 obligation, while also closing out certain actual T+6 fail positions. Although Goldman discovered its error early on, the firm and some of its broker-dealer customers were nonetheless subject to pre-borrow penalties.

Spreadsheet corruption and complexity: Moving beyond the confines of Excel

As evidenced by the examples above, using spreadsheets for demanding operational purposes only increases the likelihood of serious processing errors (and subsequent regulatory consequences). Simply put, spreadsheets cannot be reasonably expected to sufficiently tackle modern portfolio reporting requirements without a marked increase in risk and/ or reduction in performance. Given the increasingly meticulous demands for reporting transparency and accuracy by investors and regulators alike, it is imperative that the buy-side move beyond the confines of Excel.

So what has prevented asset managers from making the automation transition thus far? For one, many firms have been reluctant to invest the time, energy and money in a dedicated system; still others believe that spreadsheet replacement requires the retention of numerous vendors and software installations to handle the myriad tasks covering risk, portfolio accounting, simulation and data management, as well as position keeping and other essential duties.

But with the global markets continuing to grow in complexity, asset managers will increasingly require solutions that are robust enough to perform well under any circumstance, including stressed, high volume conditions. Accordingly, it is paramount that firms reduce their exposure to Excel once they reach critical volume. Given the correlation between level of complexity and size of the fund, the bigger the AUM, the greater the potential for spreadsheet-based slip-ups. As such, all but the smallest buy-side investment firms should consider replacing spreadsheets with purpose-built software solutions covering tasks ranging from portfolio and risk management to position keeping and accounting when transparency and efficiency are required.

Spreadsheet data and due diligence: Investors demand an alternative to spreadsheets

The incessant quest for alpha has led many investors and fund managers to seek greater diversification through investments in niche, boutique and emerging market investment firms. In turn, these investors are demanding that these smaller managers provide them with the same degree of reporting transparency normally associated with the institutional investment world. This institutionalization has had a profound impact on due diligence requirements for boutique investment managers. With investors continuing to flock to them for higher returns and exposure to specialized investment strategies, the reporting complexity and mounting regulatory requirements compel fund managers to seek more prudent methods for storing and manipulating data.

And yet despite these pressures, too many investment firms still rely heavily on spreadsheets and other manual methodologies for the reporting of trade data. While Excel remains a beneficial tool when tackling less onerous operational duties, using spreadsheets for compiling complex portfolio data can be tremendously inefficient and time consuming, resulting in the re-inputting of data and recalculation of ratios/valuations. When left unchecked, spreadsheet-based errors can lead to substantial capital losses, erosion of investor confidence, and can have serious regulatory repercussions as well.

Conclusion: Knowing when to exit Excel

Once your business and operations become so complex that data can no longer be easily aggregated and normalized in spreadsheets and errors could occur due to over-handling of data, you may want to consider exiting Excel. Front- and middle-office automation gives buy-side firms the means to achieve a much higher level of integral data management and fund reporting functionality, using tools that provide increased granularity into portfolio positions, performance and risk exposures.

Of course, you don't have to abandon Excel completely. The best software tools make it easy to export a snapshot of your data into an Excel file, where you can manipulate it extensively or use it as a reporting tool. Many platforms are also designed with an application-programming interface (API) that enables different applications to interact easily. With the support of APIs, power/super users with the appropriate permissions can upload raw or transformed information into your database from Excel, facilitating smoother workflows while maintaining a full audit trail.

With SunGard's fully hosted or locally-installed solutions for asset management, investment managers can reduce the emphasis on spreadsheets by moving mission critical frontand middle-office functionality onto robust, scalable and auditable platforms - while still benefiting from the flexibility and ease of use that spreadsheets provide. Those who choose to automate at least a portion of these processes will be less susceptible to the inefficiencies and rising costs that can result from attempting to hold down the fort using the same old spreadsheet methodologies.

SPREADSHEET RISK – TAKE-AWAYS Common spreadsheet issues: > Prone to communication errors > Reinforce silo-based activity > Not built to handle highly complex data demands > Can become a source of operational risk By transitioning to an automated environment, funds benefit from: > Reduced operational risk > The ability to closely monitor portfolio positions > Shared data between investors and other counterparties > More practical spreadsheet usage on a smaller scale

SunGard solutions for asset managers: Knowing how to exit Excel

If you are using spreadsheets for		You may be interested in learning more about	
Market risk management	•	SunGard APT – Asset Arena Risk	
Portfolio construction	W	www.sungard.com/apt/learnmore	
Portfolio optimization			
Portfolio management	•	SunGard Asset Arena 360	
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Performance			
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CRM			
NAV estimation and reconciliation with back office)		
Investment Accounting		SunGard Asset Arena Investment Accounting www.sungard.com/assetarena	

If you have any questions about solutions for asset managers, please contact us at am.solutions@sungard.com.

About Asset Management

SunGard's asset management solutions help institutional investors, hedge funds, private equity firms, fund administrators, and securities transfer agents improve both investment decision-making and operational efficiency, while managing risk and increasing transparency. SunGard's solutions support every stage of the investment process, from research and portfolio management, to valuation, risk, compliance, investment accounting, transfer agency and client reporting.



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