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Maximized Monitoring

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Continuous audit technology can help identify changing conditions and reduce organizational risk.

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DURING THE LAST FEW YEARS, GLOBAL FINANCIAL COMPANIES AND investment banks have taken billions of dollars in write-downs owing to exposure in the subprime lending market. Lack of risk function visibility, insufficient communication of risks to top management, and siloed risk approaches have been cited as reasons for these failures. New York University finance professor Nouriel Roubini, one of the few who predicted the crisis, famously observed at the World Economic Forum's 2009 Davos Summit that risk cannot be priced correctly "when the opacity and lack of transparency of financial firms and new instruments lead to unpriceable uncertainty rather than priceable risk." These organizations apparently had risk management functions, but they did not recognize the changing market conditions and adapt their organizational strategy and processes appropriately.

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Thus, while many factors contributed to the write-downs, inadequate risk monitoring undoubtedly played a large role. ■ According to The Committee of Sponsoring Organizations of the Treadway Commission's (COSO's) 2009 *Guidance on Monitoring Internal Control Systems*, the process of monitoring includes determining "whether the internal control system continues to be relevant and able to address new risks." One significant tool that internal auditors can use to help their organizations manage and monitor new risks is continuous

auditing. The IIA's *GTAG 3: Continuous Auditing: Implications for Assurance, Monitoring, and Risk Assessment* defines *continuous auditing* as "a method used to perform control and risk assessments automatically on a more frequent basis." Continuous auditing can provide timely information on changing market conditions and risks so that necessary adjustments to internal controls and policies can be made. If continuous auditing had been implemented at the distressed financial firms several years ago, it may have enabled them to identify and address imminent risks before they reached catastrophic proportions.

In 1999, the Canadian Institute of Chartered Accountants (CICA) and the American Institute of Certified Public Accountants published a research report titled Continuous Auditing to encourage the use of the technology on information provided to external users. The report concluded that continuous auditing was viable assuming a reliable information system with high levels of automation in processes, controls, and audit procedures. It also highlighted the importance of internal auditors' role in continuous auditing.

Despite the passage of more than a decade since the CICA report, and some very compelling reasons for using continuous audit tools, many internal auditors have not adopted the technology. In an ongoing benchmarking survey by The IIA's Global Audit Information Network (GAIN), 57 percent of 386 participating internal auditors have indicated in the past year or so that they do not perform continuous auditing. Moreover, nearly half say they are not using the technology for real-time testing. Evidence suggests that continuous auditing could be embraced much more extensively and, even where implemented, may not be used to its full potential. Internal auditors can play an integral role in continuous audit processes, helping the organization expand its use of the technology and maximize its effectiveness.

MONITORING PRACTICES

The reasons for implementing continuous auditing become clear upon an examination of practical applications. In a 2007 continuous audit survey of 45 internal auditors conducted by the authors in Houston, most respondents said their organization's audit function used the technology to test business processes, controls, and management's monitoring processes. However, the survey also found continuous auditing was almost twice as likely to be used by internal auditors for testing purposes as it was by management to monitor business processes and associated control systems, indicating that continuous audit tools were not being used to their full potential to help manage risk.

Internal auditors can help expand the use of continuous auditing and assist management in defining continuous audit systems that monitor the organization's risks and controls effectively. For risk monitoring, eXtensible Business Reporting Language (XBRL), the global standard for communicating electronic business and financial data, can be leveraged in conjunction with other Internet resources to automatically collect and analyze data from an abundance of sources, including rating agencies, regulatory bodies, markets, financial analysts, news agencies, customers, and vendors. These technologies have the potential to make risk assessment not only more accurate and timely, but also more comprehensive and consistent. By combining this capability with continuous audit systems that monitor changes in risks, internal auditors could create a battery of leading indicator metrics — a powerful, early warning system for the organization. In addition, an effective risk assessment and continuous audit system may produce information that can be relied upon by external auditors. Both scenarios present opportunities for internal auditors to enhance their perceived value while helping the organization achieve cost savings.

Continuous auditing can also help monitor the effectiveness of internal controls over time. If controls are automated, a continuous auditing application can ensure the control is continuously functioning. For example, continuous auditing can help verify that segregation of duties is enforced and that only authorized users enter transactions into a specific application. Unfortunately, according to KPMG's 2009 Fifth Annual Benchmark Study: Maintaining Your Control Environment in Turbulent Times, only 16 percent of respondents stated that they had fully integrated enterprise resource planning system modules, and just 20 percent stated that their key controls were at least 50 percent automated. A combination of both manual and automated controls, then, appear to play a role in organizations' processes. Moreover, the lack of system integration and continued reliance on people-based controls appear to be limiting the ability of continuous auditing to monitor controls.

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AREAS AND FREQUENCY OF APPLICATION

In the Houston survey, respondents indicated that their organization applied continuous auditing mainly in the accounts payable (72 percent) and accounts receivable (64 percent) functions; general ledger (48 percent) and payroll (36 percent) were the next most-cited areas of application. Thus, among the participants, continuous audit usage was focused largely on traditional transactional applications. To achieve the technology's full potential, however, continuous auditing should be used in other nontransactional but risky activities such as analysis of changing market conditions and areas that involve extensive judgment by personnel.

Frequency of continuous audit activity is also an important consideration for those seeking to leverage the technology

effectively. More frequent usage helps quickly identify and address any potential risks or control lapses before their adverse impact increases and becomes catastrophic. In PricewaterhouseCoopers' 2006 State of the Internal Audit Profession Study, approximately 34 percent of respondents reported using continuous auditing just monthly. Similarly, the GAIN benchmarking study shows that most (90 percent) participants use continuous auditing for "periodic" testing, whereas just 44 percent use it for "real time" testing. These results suggest that progress is still needed in moving from intermittent to truly continuous usage.

Regulations around the world on internal control monitoring and real-time reporting requirements have been an impetus for continuous auditing adoption. Moreover, recent advances in technology and the availability of sophisticated software have reduced the time and costs associated with implementing continuous audit systems. As legislation is introduced in other countries and software availability increases, continuous auditing will likely move into other jurisdictions in the form of real-time applications. Internal auditors can facilitate the adoption of real-time continuous auditing by developing skills and knowledge related to the technology, helping their organization automate processes and controls, and assisting the organization in understanding the value of continuous auditing.

Given the imperative for strong control and risk monitoring, auditors should help develop their organization's ability to address risks before they become insurmountable obstacles.

TAKING THE LEAD

Results from the Houston survey indicate that the participating internal auditors have the potential to take a leadership role in continuous auditing implementation and use, and that some have already done so. In organizations that have not yet adopted continuous auditing, internal auditors can take the lead on strengthening key controls by facilitating the transition from people-based controls to automated controls and by providing continuous audit information, guidance, and implementation assistance. In organizations that have already implemented continuous auditing, auditors can work to expand the technology's coverage to additional areas of higher risk exposure and help establish a mechanism for communicating continuous audit results to senior management and the board of directors.

Many tools can aid internal auditors in this effort. For example, embedded audit module software and other tools for monitoring key risk areas — such as those involving cash disbursements and cash receipts — are already available. Moreover, data extraction software offers data mining capabilities for the analysis of trends in transactions, providing additional means of performing continuous auditing and achieving timely reporting. Auditors can also use a combination of static and mobile digital agents, or software that carries out pre-programmed commands, to filter information from one part of a system or to search entire databases for, and then react to, specified conditions. In addition, they can use expert systems and neural network technology to assess different risk conditions using domain knowledge and pattern recognition capabilities. Expert systems consist of a domain-specific knowledge base and subject matter expert-suggested rules to help form conclusions about data, while neural networks mathematically learn from data to determine underlying patterns and dynamically update forecasts and predictions. Internal auditors can use these artificial intelligence technologies as part of a continuous audit system to better understand risks and to develop an adequate risk mitigation response.

Lastly, enterprise resource planning and other software tools offer integrated, seamless solutions that continuously monitor access, processes, and application controls. Internal auditors should be able to apply continuous auditing to high-risk exposure areas by leveraging these tools, enabling them to provide reporting by exception, on-demand reporting, or continuous monitoring of transactions.

AN OUNCE OF PREVENTION

The groundswell of worldwide internal control legislation — such as the Financial Instruments and Exchange Law in Japan and the Budget Measures Act in Canada — provides strong motivation for organizations to maintain and monitor internal controls over financial reporting. Powerful, standardized data tagging technologies, such as XBRL, present additional opportunities to expand the information set used for continuous audit-based risk assessment. Research studies in publications such as the *Journal of Accounting and Public Policy* and *Journal of Accounting Research* have shown that firms reporting material internal control weaknesses in their financial statements experience adverse consequences, including higher external audit fees and greater cost of capital. Moreover, recent market events indicate that risk management mechanisms are either failing in catching risks too late or simply failing to recognize, assess, measure, and manage key risks. Thus, organizations need sound, timely mechanisms to monitor their risks and associated controls to deal with risks before they become material in impact.

Continuous auditing provides one significant, automated method of reducing risk and identifying changing conditions timely. Given the imperative for strong control and risk monitoring, now is the time for internal auditors to help develop their organization's capabilities to address risks before they mature into insurmountable obstacles.

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