Data analytics and continuous auditing (CA) are not new concepts, but their appeal appears to be rising. According to interviews with KPMG clients, the desire to effectively leverage data analytics and achieve CA within an internal audit function remains strong. And amid today’s complex business environment, it is easy to see why.

If implemented properly, data analytics and CA have long been viewed as processes that can help Internal Audit departments simplify and improve the audit process through increasing operational efficiencies, reducing costs, and detecting potential fraud, errors, and abuse earlier—all while providing a higher quality audit. It is also increasingly becoming a way for organizations to create value.

The use of data analysis tools and techniques is helping to fundamentally transform and improve audit approaches. Consider the traditional audit approach, which is based on a cyclical process that involves manually identifying control objectives, assessing and testing controls, performing tests, and sampling only a small population to measure control effectiveness. Fast forward to a CA approach using repeatable and sustainable data analytics and the approach becomes much more comprehensive.

With data analytics, organizations have the ability to review every transaction—not just a sampling—which enables a more efficient analysis on a grander scale. In addition, leveraging data analytics also accommodates the growing risk-based focus on fraud detection and regulatory compliance.

A Foundation in Data Analytics
Most internal audit organizations recognize the value and benefits of CA. However, they may lack the resources, both financial and human, or capabilities to design and implement CA processes initially. As a result, many of these organizations are beginning to lay the foundation by effectively using data analytics to begin a path toward more mature repeatable and sustainable CA processes (see Figure 1 Next Page).

**Definition of Data Analytics**
A process by which insights are extracted from operational, financial and other forms of electronic data internal or external to the organization. These insights can be historical, real-time or predictive and can also be risk-focused (e.g., controls effectiveness, fraud, waste, abuse, policy/regulatory non-compliance) or performance-focused (e.g., increased sales, decreased costs, improved profitability, etc.) and frequently provide the “how?” and “why?” answers to the initial “what?” questions often found in the information initially extracted from the data.
Leading internal audit organizations are realizing value by leveraging business intelligence-based tools and techniques to perform “macro-level” analytics to identify broader patterns and trends of risk and, if necessary, apply more traditional “micro-level” analytics to evaluate the magnitude and scope of items or issues identified through the “macro-level” analytics.

Essentially, a mature data analytics process benefits the internal audit function by automating the collection, formatting, and mapping of key organizational data, and applying various tools to analyze and interpret the data in a more meaningful and effective way.
How KPMG Can Help
KPMG’s Continuous Auditing/Continuous Monitoring (CA/CM) Services are delivered by multidisciplinary teams to help clients assess, design, implement, and evaluate CA/CM systems and processes focusing on control effectiveness, fraud and misconduct prevention and detection, policy and regulatory compliance, and performance improvement. KPMG professionals can help you ask insightful questions (see diagram) and assist you with all phases of the CA/CM implementation process, including among others:

Strategy development
- Developing a strategic plan for CA/CM
- Building an effective business case for CA/CM
- Identifying key stakeholders and assisting with the definition of success criteria and related measurements

Developing, enhancing and managing existing data analytics and continuous auditing activities
- Performing risk assessments and data analytics to identify valuable areas of focus for continuous auditing including evaluating antifraud and regulatory compliance programs and controls as part of a continuous auditing approach
- Designing data analytics and continuous auditing implementation plans, providing project management oversight assistance, and assisting with related organizational change management issues
- Assisting with data analytics and continuous auditing tool evaluation and selection
- Designing data analytics and continuous auditing analysis and reporting mechanisms including risk-based analytics, dashboards, scorecards, reports, and alerts
- Assisting with designing quantitative-enhanced, continuous risk assessment processes to enable ‘dynamic’ audit planning
- Providing data analytics-based, process assessments, controls effectiveness assessments, fraud risk assessments, and other related training to enhance data analytics and continuous auditing effectiveness
- Providing data analytics and continuous auditing co-sourcing or outsourced services
- Assisting with integration of continuous auditing systems and processes with existing governance, risk, and compliance; enterprise risk management; and business intelligence initiatives
- Assisting with the extension of continuous auditing processes into business areas to establish or enhance continuous monitoring processes

This results in more focused audits that have the ability to zero in on specific areas of risk, conduct more dynamic audit planning, and seek a greater balance of controls vs. transaction monitoring based on underlying risk. If deployed appropriately, the use of data analytic tools within a CA process may provide a greater degree of assurance regarding effectiveness of the controls and the accuracy of transactions, while significantly reducing audit costs, resources, and time.

Once organizations have established a solid foundation in the effective use of data analytics integrated into the audit work plan, it becomes a natural progression to begin to implement repeatable and sustainable data analytics processes and, when ready, move toward CA processes and techniques.

The following is an example of the data analytics process for leveraging data analytics within an internal audit project:

- Define audit objective
- Determine what types of analytics are relevant in achieving the audit objective(s)
- Determine data-relevant IT systems for audit subject (process)
- Assess availability and quality of data
- Acquire data (extract, transform, load process)
- Design and develop (e.g., script, program, etc.) analytics
- Determine definition of “exception”
- Run analytics and perform initial validation
- Revise and re-run analytics as necessary
- Validate results of analytics with business owners
- Research, follow-up and determine root cause of identified exceptions
- Report findings and recommendations to business owners and management
- Evaluate analytics for potentially repetitive processes

LEVERAGING DATA ANALYTICS AND CONTINUOUS AUDITING WITHIN INTERNAL AUDIT

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Continuous Auditing Process – Sample Leading Practice Questions

If you’re thinking about developing a new CA program or evaluating a program you already have in place, ask yourself these key questions. The answers will help gauge your readiness to execute your plans, or if you already have a program, it will shed light on whether your program is utilizing leading practices.

- Is your process defined?
- Do your activities assess the relationships between key economic indicators?
- Do you regularly meet with senior management and critically review management and risk information?
- Do you take into account regulatory and market developments timely?
- Is your process linked to your risk assessment and audit planning process?
- Does your process utilize technology effectively?
- Does your process lead to more efficient and effective auditing?
- Does your process assist in focusing auditing efforts on higher risk areas?
- Does your process help identify trends, patterns, and other pervasive issues?
- Are your activities documented appropriately?
- Do your activities assist in expanding coverage more efficiently?
- Do your activities assist in identifying emerging issues more quickly than traditional activities?
- Do your activities increase the detection and prevention of fraud, misconduct and regulatory non-compliance and reduce the number of incidents?
- Does your process assist in focusing auditing efforts on higher risk areas?
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Contact us

For more information about how KPMG can help your internal audit organization leverage data analytics or continuous auditing, please contact:

Jim Littley
Principal
Global and Americas leader for Continuous Auditing/Continuous Monitoring services
T: 267-256-1833
E: jlittley@kpmg.com

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