

## **Operational Effectiveness of Continuous Monitoring Approaches**

*A Guide to CM Assessment  
Based on the COSO Guidance  
on Monitoring, 2009*

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The Committee of Sponsoring Organizations of the Treadway Commission (COSO) announced on February 4, 2009, the release of its Guidance on Monitoring Internal Control Systems. Developed by COSO and led by a team from Grant Thornton LLP, “the guidance is designed to help organizations to better monitor the effectiveness of their internal control systems and to take timely corrective actions if needed.”

COSO defines internal control as “a process, effected by an entity’s board of directors, management and other personnel. This process is designed to provide reasonable assurance regarding the achievement of objectives in effectiveness and efficiency of operations, reliability of financial reporting, and compliance with applicable laws and regulations.”

#### **About COSO**

Originally formed in 1985 to sponsor the National Commission on Fraudulent Financial Reporting, COSO is a voluntary private sector organization dedicated to improving the quality of financial reporting through business ethics, effective internal controls, and corporate governance. COSO comprises the American Accounting Association (AAA), the American Institute of Certified Public Accountants (AICPA), Financial Executives International (FEI), the Institute of Management Accountants (IMA), and The Institute of Internal Auditors (IIA).

1. Internal control is a process. It is a means to an end, not an end in itself.
2. Internal control is not merely documented by policy manuals and forms. Rather, it is put in by people at every level of an organization.
3. Internal control can provide only reasonable assurance, not absolute assurance, to an entity’s management and board.
4. Internal control is geared to the achievement of objectives in one or more separate but overlapping categories.

The following excerpts from the newly-released Guidance on Monitoring speak directly to the need for and value of continuous monitoring of transactions to “ensure that internal control continues to operate effectively.” The key differentiation between control (or configuration) monitoring and transaction monitoring, as substantiated by the COSO Guidance, is the measurement of the operational effectiveness of controls.

#### **Continuous Monitoring ensures:**

- **Operational effectiveness & efficiency**
- **Reliability of financial reporting**
- **Regulatory compliance**

#### ***Excerpt from COSO Guidance***

##### **Monitoring as a Component of Internal Control Systems**

3. The primary factor leading to the development of this guidance was the observation by COSO that many organizations were not effectively utilizing the monitoring component... Instead, they were adding redundant, often unnecessary, internal control evaluation procedures designed to test controls for which management — through its existing monitoring efforts — already had sufficient support. In other cases, organizations were not making the best use of ongoing monitoring procedures, or lacked necessary monitoring procedures altogether, which forced them to implement inefficient year-end evaluations to support their conclusions as of the end of the fiscal year.
5. This guidance is designed to apply to all three objectives addressed in the COSO Framework: the effectiveness and efficiency of operations, the reliability of financial reporting, and compliance with applicable laws and regulations.

Ongoing, near real-time monitoring of transactions not only ensures that internal controls are operating effectively, it also serves as both a preventive and corrective control itself, serving to establish “tone at the top”, providing a deterrent presence, and enabling upstream identification and remediation of control shortcomings and the resulting issues before they can have material impact. This latter point exposes a key weakness in the quarterly reviews that characterize the typical Internal Audit approach to controls monitoring.

**Continuous Monitoring itself serves as both a *preventive* and a *corrective* control.**

***Excerpt from COSO Guidance***

**Role of Monitoring**

6. When people who are responsible for internal control know their work is subject to oversight through monitoring, they are more likely to perform their duties properly over time.
7. Monitoring leads to the identification and correction of control deficiencies before they materially affect the achievement of the organization’s objectives.

A solid foundation for monitoring the effectiveness of controls depends on both the objectivity (consistency) of the monitoring and the persuasiveness of results. Automated transaction monitoring reviews, on a completely objective basis, all transactions carried out under a given control or set of controls. This monitoring surfaces exceptions that may signal a control failure or weakness, irrespective of operation or configuration. Such monitoring will identify unintended consequences and impact of changes to controls, and will continuously validate, through actual observed results, that controls are functioning properly.

**Objective monitoring of direct results ensures controls are operating as intended.**

***Excerpt from COSO Guidance***

***II. Establishing a Foundation for Monitoring***

**Organizational Structure**

*Characteristics of Evaluators*

32. The most objective form of monitoring is performed by evaluators who are impartial with respect to the operation of the control.

**Baseline Understanding of Internal Control Effectiveness**

34. ...unrecognized and/or improperly managed changes in the operation of existing controls — such as new people, processes, and technology — could render the internal control system ineffective.

35. – 4. Control Revalidation — When ongoing monitoring procedures use highly persuasive information, they can routinely revalidate the conclusion that controls are effective, thus maintaining a continuous control baseline.

The most persuasive information will be the most direct: transactional data that results directly from the operation of the control, verifying whether or not it is working as designed. Process control configuration analysis can easily miss the use of a new application, or a newly-integrated sub-process, such as an e-procurement application like e-invoicing or automated payments. Such changes will, however, be reflected in the transaction data – the direct results of the operation of the control – and can immediately signal potential issues with the control arising from the introduction of new elements.

**The most persuasive information is:**

- Relevant (direct information)
- Reliable (consistent and objective)
- Timely (ongoing, real-time)

*Excerpt from COSO Guidance*

### **III. Designing and Executing Monitoring Procedures**

#### **Identify Persuasive Information**

60. Suitable information is a broad concept that implies that information is useful within the context for which it is intended. In order to be suitable, information must be relevant, reliable, and timely. Sufficiency is a measure of the quantity of information (i.e., whether the evaluator has enough suitable information).

#### **Suitable Information**

65. Information that directly confirms the operation of controls is more relevant than information that merely allows the evaluator to infer whether the controls are working.

66. ...Generally, direct information is highly relevant because it provides an unobstructed view of control operation.

67. Indirect information... either relates to, or is produced by, the process in which the controls reside.

68. ...there is a limit to the level of support (i.e., persuasiveness) that indirect information can provide on its own, especially over a long period of time.

This is especially critical in the case of those controls where a failure carries the greatest exposure for the business; the greater the exposure, the more crucial it is to use direct, objective and timely information to determine that controls are working as designed. These are key benefits of monitoring transactions on an ongoing basis. In addition, monitoring 100 percent of transactions ensures early, proactive notification of control weaknesses, including those controls where the failure impact would be greatest—even when the potential of that impact is not recognized in advance of a failure. For example, monitoring general ledger transactions to ensure against revenue manipulations that could impact the integrity of financial reporting.

**The need to monitor direct information increases in relation to the potential impact of a control failure.**

***Excerpt from COSO Guidance***

72. ...As the potential impact of a control failure increases, the need to monitor using direct information increases.
75. ...The objectivity of the information source is the degree to which that source can be expected to provide unbiased information for evaluation. The more objective the information source, the more likely the information will be reliable.
76. Timeliness of information — To be suitable, information must be produced and used in a time frame that makes it possible to prevent control deficiencies or detect and correct them before they become material to the organization.

**Sufficient Information**

78. Evaluators must gather sufficient suitable information to support a reasonable conclusion about control effectiveness.

The key differentiator between after-the-fact control evaluations and ongoing monitoring is the operational integration of ongoing monitoring. Real-time, dynamic ongoing monitoring is more effective and objective, and monitoring the most persuasive information (i.e. transaction details) may eliminate altogether the need for subsequent separate evaluations of a specific control to determine that it is working. From the perspective of operational efficiency, the real-time nature of ongoing monitoring makes it possible to identify and correct errors earlier in the process, where they are easier and less expensive to correct. For example, in the procure-to-pay process, finding a duplicate vendor record or identifying duplicate invoices before they can lead to the creation of duplicate vouchers; or eliminating a duplicate voucher before it can lead to a duplicate payment, thereby avoiding the resulting impact on cash availability and the high costs of recovery. In addition, identifying problems through ongoing direct monitoring of transaction data may inform root-cause analysis that can be used to improve and streamline processes for greater operational efficiency.

**Ongoing, real-time monitoring is more effective than separate, after-the-fact evaluations.**

***Excerpt from COSO Guidance***

**Implement Monitoring Procedures**

***Ongoing Monitoring and Separate Evaluations***

81. Ongoing monitoring procedures using both direct and indirect information are built into the normal, recurring operating activities of an organization...<sup>21</sup>

Footnote: <sup>21</sup> The COSO Framework states the following in Chapter 6. "Because [ongoing monitoring procedures] are performed on a real-time basis, reacting dynamically to changing conditions, and are ingrained in the entity, they are more effective than procedures performed in

connection with separate evaluations. Since separate evaluations take place after the fact, problems will often be identified more quickly by the ongoing monitoring routines. Some entities with sound ongoing monitoring activities will nonetheless conduct a separate evaluation of their internal control system, or portions thereof, every few years. An entity that perceives a need for frequent separate evaluations should focus on ways to enhance its ongoing monitoring activities and, thereby, to emphasize “building in” versus “adding on” controls.”

85. ...helpful attributes of [ongoing] monitoring:

- Integrates with operations...
- Provides objective assessments...
- Uses knowledgeable personnel...

88. ...Ongoing monitoring that evaluates more-persuasive information in a given risk scenario might provide all the support necessary to conclude on the effectiveness of the internal control system in that area.

Continuous monitoring technology that automates the detailed review of transaction data and results serves both to monitor the effectiveness of internal controls, and as a key control, itself. Such technology also provides many of the benefits of a process management tool, especially if it provides documentation of exceptions identified, investigation and remediation actions. Dashboard-level views of trends, patterns and anomalies further support the process management and performance improvement benefits of continuous transaction monitoring technology.

**Continuous monitoring technology should:**

- Operate as a control itself
- Provide info on the operations of other controls
- Serve as a process management tool
- Be able to detect an error before it becomes material

***Excerpt from COSO Guidance***

**Using Technology for Monitoring**

92. Control monitoring tools... Many operate as controls and, simultaneously, provide monitoring information on the continued operations of other controls...

- Transaction data...
- Conditions...
- Changes...
- Processing integrity...
- Error management...

93. Process management tools...

- Coordinate the risk assessment process at both the entity and transaction flow levels;
- Provide a repository for process, control, and monitoring documentation;
- Enhance the communication process as it relates to the identification, evaluation, and resolution of internal control deficiencies, including their severity and any remediation activities;
- Support the “roll-up” of information about risks and controls at various levels and points within an organization; and
- Provide simplified dashboards showing relevant control performance indicators and the current status of differing aspects of management’s control evaluation process.

94. Some control monitoring tools perform what is often referred to as “continuous controls monitoring.” These tools complement normal transaction processing by checking every transaction, or selected transactions, for the presence of certain anomalies (e.g., identifying transactions that exceed certain thresholds, analyzing data against predefined criteria to detect potential controls issues such as duplicate payments, electronically identifying segregation of duties issues, etc.). Many of these tools serve more as highly effective control activities (detecting individual errors and targeting them for correction before they become material) than they do as internal control monitoring activities. Regardless, if they operate with enough precision to detect an error before it becomes material, they can enhance the efficiency and effectiveness of the whole internal control system and may be key controls whose operation should be monitored.

Continuous monitoring that meets the foregoing requirements will also provide the strongest support for external reporting. Specifically, continuous transaction monitoring will offer the most persuasive information; based on the definition in the COSO Guidance, this is direct information that is the most “relevant, reliable and timely”. A monitoring program that delivers highly persuasive results will help support external assertions. The program itself should be sufficiently well-designed and executed to ensure external parties of the reliability of the information as well as the effectiveness of the internal control system; and the best designed programs will facilitate the work of external parties. Monitoring programs that provide the most objective measurement of controls effectiveness (driven by direct information) and comprehensive documentation (evidence of assertions) increase the likelihood that external auditors will be able to use the monitoring results to provide support for their audit conclusions. (This is in line with Auditing Standard 5, issued by the SEC’s Public Company Accounting Oversight Board.) The result is a more efficient external audit process, with the potential elimination of separate testing and a reduction in audit costs. For example, one global media company implemented continuous monitoring in a high transaction-volume General Ledger environment, to detect and correct errors and anomalies in manual journal entries on an ongoing basis. The direct and objective results and self-documentation of the monitoring implementation resulted in the company’s external auditors reducing the projected scope of their GL audit by 400 to 800 hours.

**The documentation provided by a well designed and executed continuous monitoring program helps support external assertions and reduce external audit scope.**

*Excerpt from COSO Guidance*

#### **IV. Assessing and Reporting Results**

95. ...Principle 20 of COSO’s 2006 Guidance (“Reporting Deficiencies”) identified three helpful attributes that specifically address the role of monitoring when deficiencies are identified:
- Report findings...
  - Report deficiencies...
  - Correct problems on a timely basis...

#### **Reporting Internally**

101. In any case (except, perhaps, where fraud is suspected), control deficiencies should be reported to the person directly responsible for the control’s operation...

### **Reporting Externally**

103. A properly designed and executed monitoring program helps support external assertions...
105. External reports that assert as to the effectiveness of an internal control system may need to withstand scrutiny by outsiders who... require enough persuasive information to form their own opinions about the effectiveness of internal control... In addition, the organization might be able to enhance the efficiency of external parties' work by directing them to portions of its monitoring procedures that they might use, or by making modifications to its monitoring program to better facilitate external parties' work.

### **Potential Modifications to Monitoring**

107. ...The most cost-effective option may be implementing a more objective monitoring process, thereby making the external party's work more efficient.
108. ...If the organization uses direct information in monitoring those controls, independent auditors might use the results of that monitoring to provide support for their audit conclusions. Conversely, if the organization uses indirect information in monitoring the controls, independent auditors may need to perform their own separate tests of direct information — possibly increasing the cost of the audit. Thus, when designing its monitoring procedures, the organization might consider the overall costs involved both in monitoring and in the independent audit.

## ***V. Scalability of Monitoring***

### **Formality of Monitoring and Level of Documentation**

118. ...Applying the Concepts: When external reporting requirements exist, management may design ongoing monitoring such that it provides the majority of evidence management needs to support its assertions, possibly reducing the extent of year-end, separate evaluations whose sole purpose is to support the external assertions.

## **Summary**

Based on the COSO Guidance on Monitoring, the optimal solution will monitor direct information on the performance of internal controls in order to deliver the most persuasive feedback regarding the internal control system's operational effectiveness. The best solution for identifying and communicating internal control deficiencies in a timely manner will be an ongoing, real-time monitoring solution, with features that facilitate and speed investigation and correction of control deficiencies before they can materially affect financial results or organizational objectives. Such a solution will itself serve as a key control, improving operational performance through both detective and preventive functionality, and enhancing external confidence in reporting and results.