

C31 - Concepts and Current Practice in Continuous Monitoring and Auditing

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September 21, 2009 – September 23, 2009

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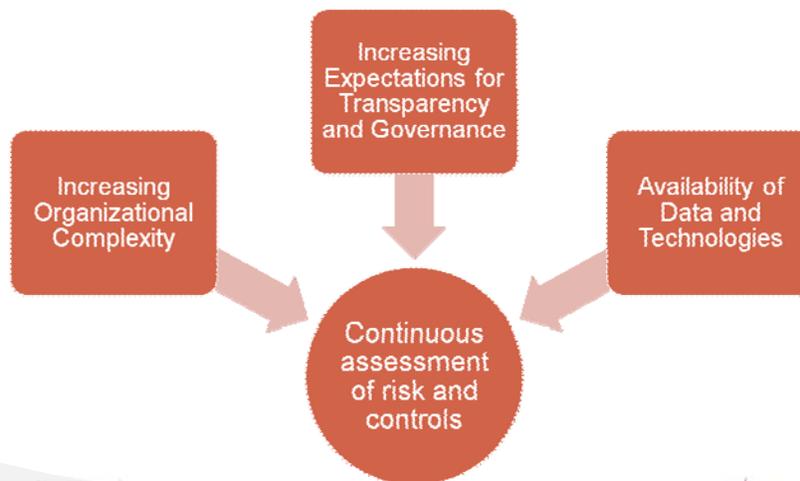
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Calls for continuous audit work stem from technical, organizational and cultural changes



Agenda

- Definitions and Conceptual Framework
- Role of Continuous Auditing in the Audit Environment
 - Examples of Continuous Risk Assessments
 - Examples of Continuous Controls Testing
- Implementation Strategy
- Case Study
- Benefits of Continuous Auditing/Concluding Remarks



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A Definition from the Ivory Tower

- Continuous auditing is “a type of auditing that produces results simultaneously with, or a short period of time after, the occurrence of relevant events...implemented as
 - (1) a fully automated process and
 - (2) a process with instant access to relevant events and their outcomes.
- The only way to satisfy these requirements is to implement continuous auditing on an online system.”

--Alexander Kogan
Professor of accounting and information systems
Rutgers University



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Continuous auditing is an integral part of today's audit process

- Over 80% implementing continuous auditing compared to 35% in 2005
- 60% programs executed quarterly; 34% executed monthly; less than 10% executed daily
- Over 50% involve both manual and automated aspects; less than 3% are fully automated

Based on 2006 professional survey of 444 chief audit executives and internal audit managers performed by PricewaterhouseCoopers



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Definitions from the Profession

- Continuous auditing is any method used by auditors to perform audit-related activities on a more continuous or continual basis.

-- IIA, *Continuous Auditing: Implications for Assurance, Monitoring and Risk Assessment*, 2006



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A Definition from a Practitioner

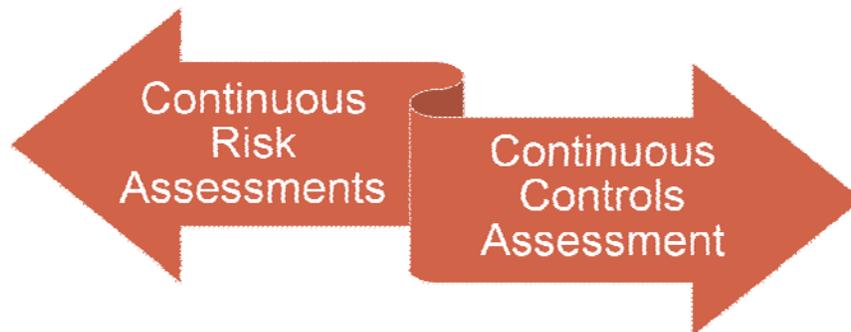
- Audit procedures performed more frequently than are planned by audit cycles
- Audit procedures focused on changes to the risk management environment
- Continuous auditing complements other traditional audit procedures
- Leverage computer-assisted audit techniques, analytical procedures and data mining but are not defined by these audit strategies



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Continuous auditing has two potential objectives



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Characteristics of Continuous Risk Assessments

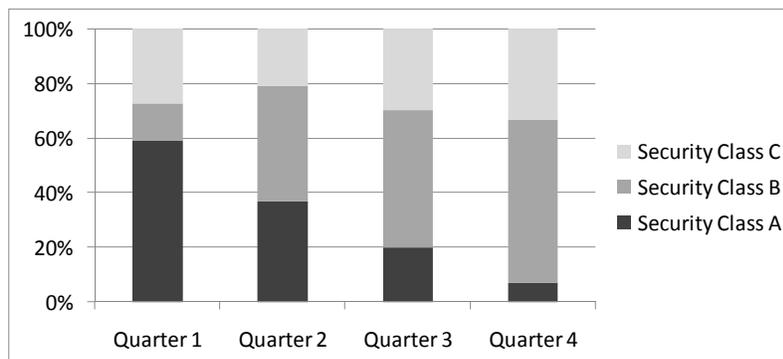
- Focus on changes to internal operations or external environment which impact the risks to the business
- Report changes in inherent risk
- Support existing conclusions about risk management and control effectiveness
- Prompt decisions about whether additional audit work is required



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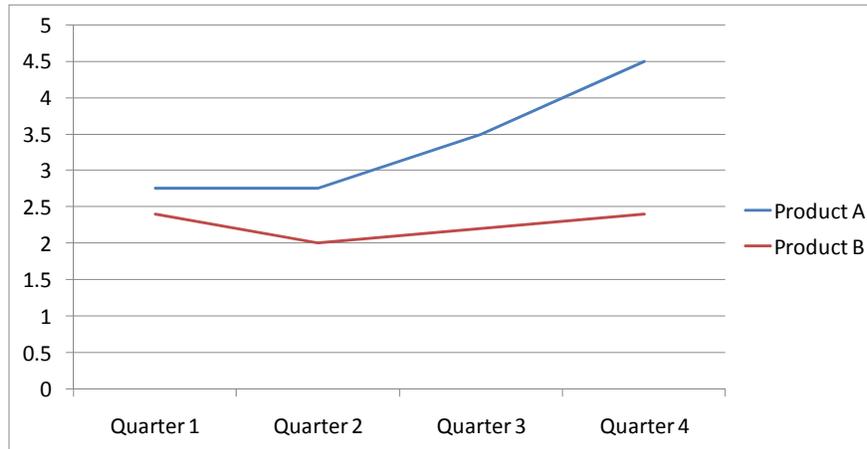
Risk Assessment Example Related to Financial Trades



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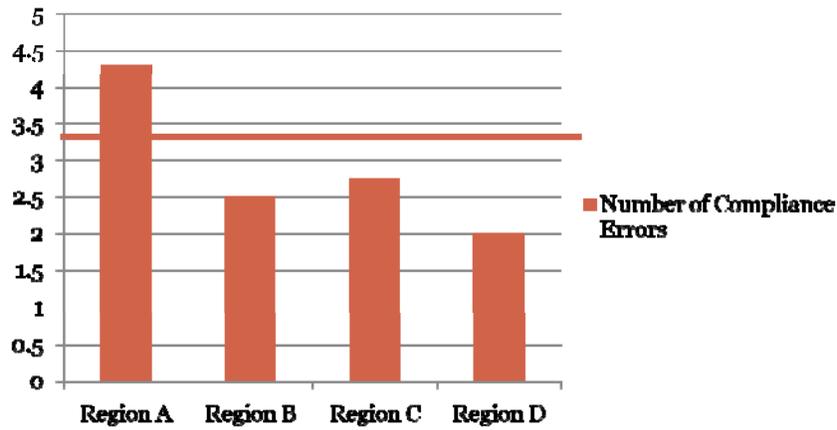
Risk Assessment Example Related to Manufacturing Output



Characteristics of Continuous Control Assessments

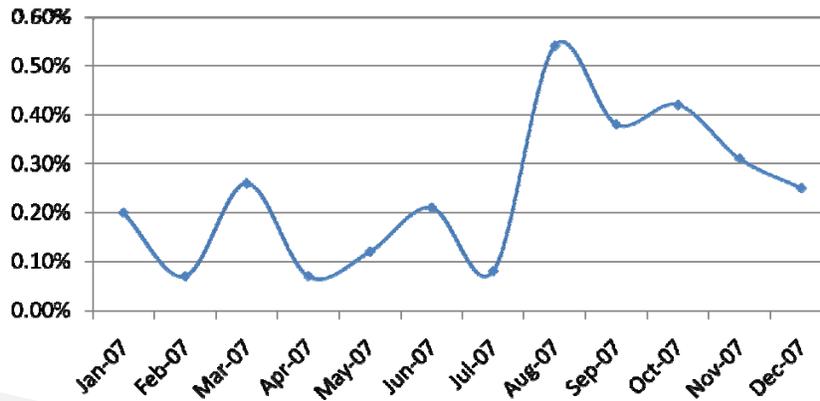
- Focus on control effectiveness
- Identify a suite of controls explicitly mitigating a specific risk
- Identify an acceptable threshold that reflects a tolerance level
- Provide information about control effectiveness directly or indirectly and help auditors design control tests

Example of errors by region



Example of Technology Change Controls

Unauthorized Changes



Continuous Control Assessment vs. Continuous Risk Assessment

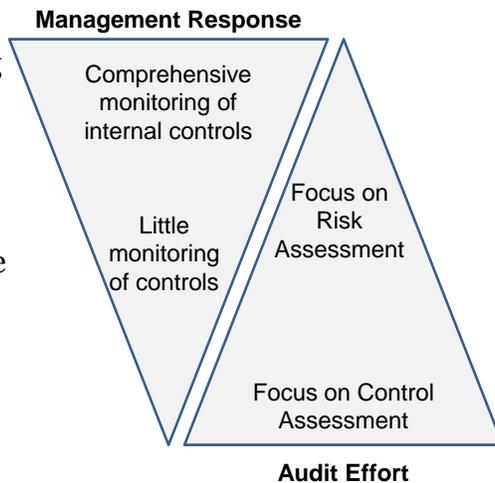
← Continuous Auditing →						
Continuous Control Assessments			Continuous Risk Assessments			Approach
Control-based Assurance controls known to be working			Risk Based Identification/assessment of risk			Focus
Real-time detailed transaction testing of financial & operational data			Trend and comparisons of financial & operational data			Analysis Techniques
Control Assurance	Financial Attestations	Fraud/Waste /Abuse	Audit Scope and Objectives	Follow-up on Audit Issues	Annual Audit Planning	Related Audit Activities
Control Monitoring	Performance Monitoring		Balanced Scorecards	Total Quality Programs	Enterprise Risk Management	Related Management Activities

Source: Global Technology Audit Guide: Continuous Auditing: Implications for Assurance, Monitoring and Risk Assessment

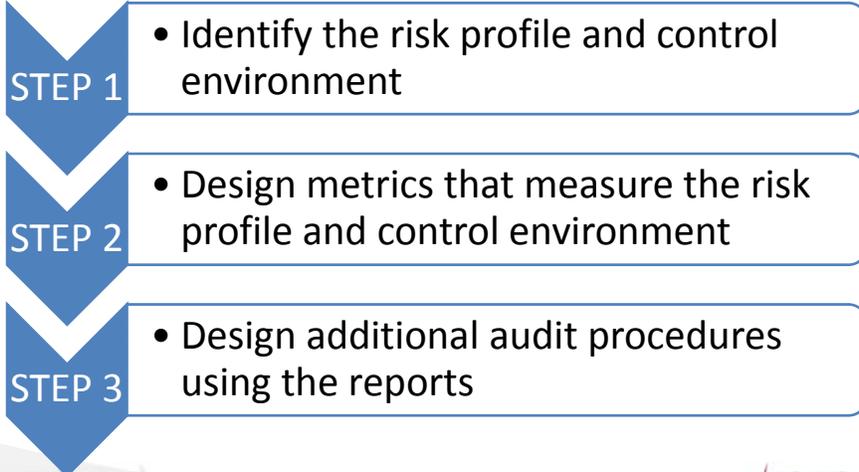


Continuous Auditing vs. Continuous Monitoring

- Continuous monitoring refers to activities performed by management
- Characteristics of continuous auditing are determined by management's continuous monitoring procedures



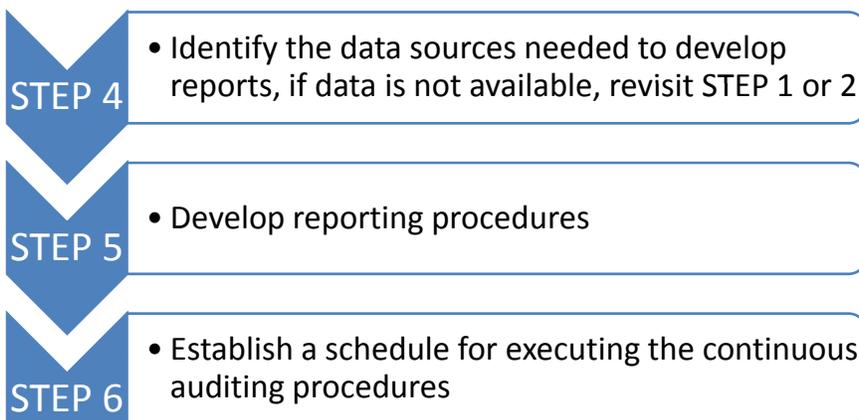
Implementation Strategy: The Business Requirements Phase



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Implementation Strategy: The Technical Design Phase and Implementation



Execute Program

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Implementation Considerations

- Demonstrate value in a specific program quickly builds management confidence in the audit organization and business domain
- Secure reporting tools from unauthorized changes and tampering
- Ensure data is reliable and consider the effectiveness of data integrity controls
- Understand impact on business operations and systems



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Future Techniques – Advanced Concepts

- Analysis of Transaction Patterns
- Real-time Alarms



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Case Study

- Financial institution example of continuous monitoring (separate hand-out in session)
- Examines software installations and production problems
- Present data
- Looking for false positives or real issues
- Draw actionable conclusions



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Questions?



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Benefits of Continuous Auditing/ Concluding Remarks

- Frequent risk assessments help auditors focus on changes to the risk management environment
- Costs to remediate control failures or control deficiencies increase with time
- Conclusions based on comprehensive assessments are built into the process

Data-Driven Auditing Leads to Wisdom

