

Louisville ISACA Chapter

Testing Automated Application Controls & Reports

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Introductions

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Automated Application Controls

Application controls are:

- Manual or Automated
- At a detailed business process (cycle or transaction) level and are designed to ensure the integrity of the accounting records
- Preventative or Detective
- Directly support the control objectives of completeness, accuracy, validity, and restricted access (CAVR)

Automated application controls are more efficient to test and less prone to breakdown.

Examples of Automated Application Controls

Examples of automated controls include:

- Edit checks to verify data input
- Automated three-way matches
- Application security that enforces segregation of duties
- Automated accounting processes (e.g., automated calculations, classifications, estimates and postings)

Testing Automated Application Controls

Depending on the nature, timing and extent of testing, a specific control could be tested through:

- Inspection of system configurations
- Inspection of user acceptance testing (if conducted in current year)
- Inspection or re-performance of reconciliations with supporting details
- Re-performance of the control activity using system data
- Inspection of user access listings
- Re-performance of the control activity in a test environment (using same programmed procedures as production) with robust test scripts

Key Reports

Key reports:

- Are used by management to perform key manual financial reporting controls (e.g., analyze all receivables over 60 days past due and create a reserve)
- Used by external auditors (e.g., list of warehouse inventory used to perform a physical inventory)
- May be automated or ad-hoc (i.e., a system query to extract warehouse receipts for which invoices have not been received)

Testing Key Reports

Depending on the nature, timing and extent of testing, a specific report could be tested through:

- Inspection of system configurations (especially for “canned” reports)
- Inspection of user acceptance testing (if conducted in current year)
- Re-performance of the calculation using test or production data
- Re-performance of the control activity in a test environment (using same programmed procedures as production) with robust test scripts

Dependency on ITGCs

Effective operation of automated application controls and reports requires:

- Effective program change controls
- Effective user access provisioning
- Effective controls surrounding data changes

Failure of these ITGCs may require additional testing of automated application controls and key reports after remediation of the ITGC.

Test Exercise

Control Objective	Test of Automated Control Example
A new in-house developed payroll system calculates individual tax of employees' salary and wages	
The purchasing module of a moderately customized ERP system generates electronic approval requisition to the appropriate personnel based on the preset approval limits	
A recently modified in-house developed accounting system generates accounts receivable aging reports automatically based on invoice dates and outstanding balances	

Test Exercise

Control Objective	Test of Automated Control Example
A new in-house developed payroll system calculates individual tax of employees' salary and wages	Use CAATs to recalculate payroll tax using tax rates required by local law.
The purchasing module of a moderately customized ERP system generates electronic approval requisition to the appropriate personnel based on the preset approval limits	Observe the client personnel input <u>at least one purchase order, for each approval limit</u> , into the system and examine each instance of system generated approval requests to the designated personnel. This is known as Data Tracing technique
A recently modified in-house developed accounting system generates accounts receivable aging reports automatically based on invoice dates and outstanding balances	Apply all relevant scenarios using fictitious data, i.e., various invoice dates in different preset outstanding balance number of day ranges, to a replica of the system in a testing (not production) environment. Compare the result with the expected values, which may be recalculated in parallel. This is known as the Integrated Test Facility technique

Test Exercise

Control Objective	Test of Automated Control Example
<p>The 3-way match feature, i.e., the matching data among vendor invoice, receiving document and purchase order prior to cash disbursement, is used in a popular standard ERP system. Management has no modification capability of the ERP system.</p>	
<p>Management uses database query to pull inventory acquisition dates, quantities and unit costs data that are readily available from the standard unmodified ERP system to prepare a monthly inventory obsolescence reserve analysis for top management review.</p>	

Test Exercise

Control Objective	Test of Automated Control Example
<p>The 3-way match feature, i.e., the matching data among vendor invoice, receiving document and purchase order prior to cash disbursement, is used in a popular standard ERP system. Management has no modification capability of the ERP system.</p>	<p>Review the 3-way match system parameters of the ERP system and walkthrough one transaction. This is known as the System Configurations Review technique.</p>
<p>Management uses database query to pull inventory acquisition dates, quantities and unit costs data that are readily available from the standard unmodified ERP system to prepare a monthly inventory obsolescence reserve analysis for top management review.</p>	<p>Review the query underlying programming code for the appropriateness of the logic of the inventory obsolescence report generation process. Additionally, auditors should observe a rerun of the query to compare the report to the one that management generated. This is known as the System Configurations (Source Code) Review technique.</p>

Benchmarking

PCAOB FAQ 45 provides significant guidance regarding benchmarking:

- Automated application controls...will continue to perform a given control... in exactly the same manner until the program is changed.
- If general controls... are effective and continue to be tested, and if the auditor verifies that the automated application control has not changed since the auditor last tested the application control, the auditor may conclude that the automated application control continues to be effective without repeating the prior year's specific tests of the operation of the automated application control.

Benchmarking

A benchmarking strategy:

- Should be used whenever it is more effective or efficient for evaluating the effectiveness of automated controls
- Won't always be the most efficient or effective approach. For example:
- Could include observing configuration settings (e.g., 3-way match settings) that can be a lower cost testing alternative
- Should retest some critical controls every year, simply because they are so important

Benchmarking

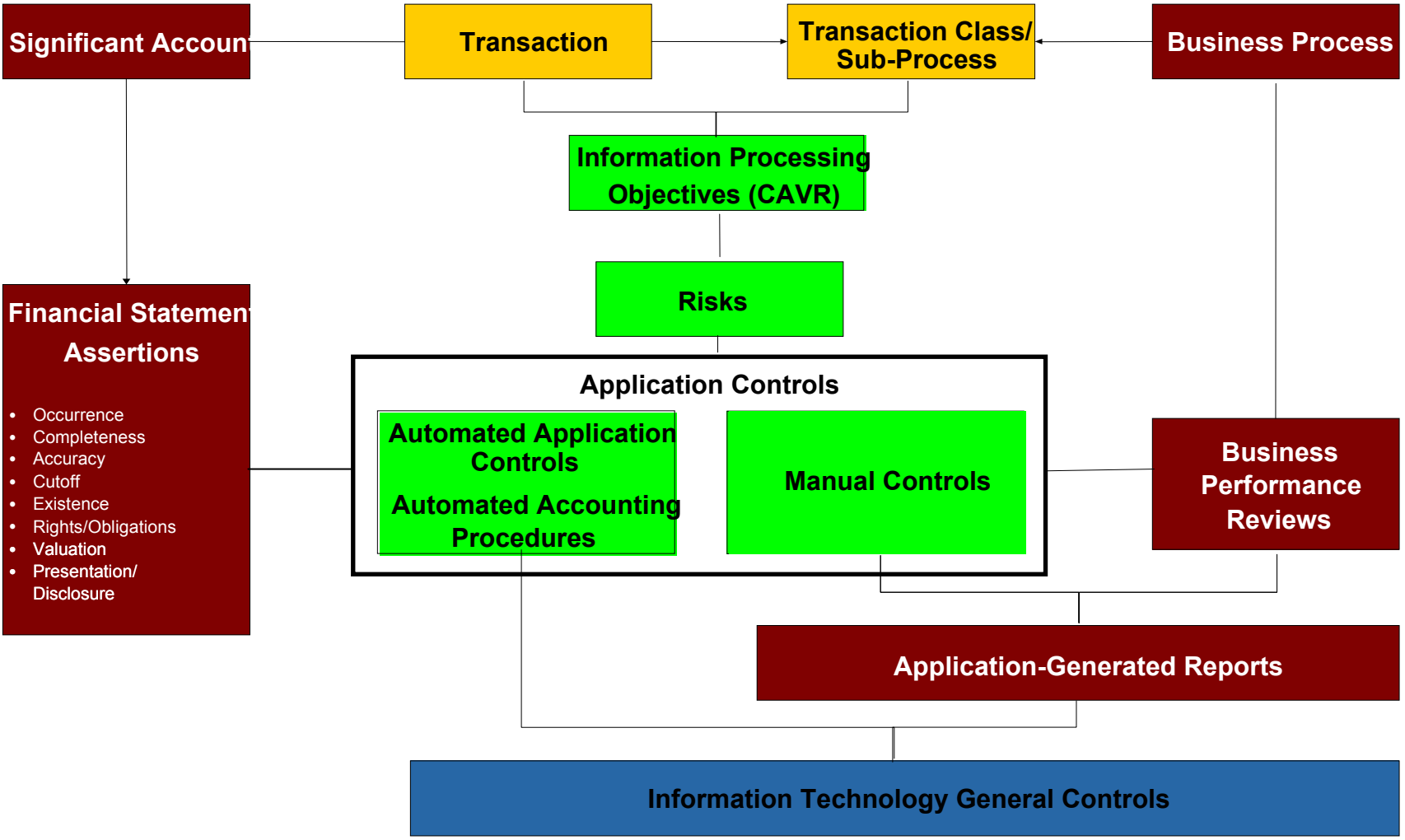
Remember:

- A benchmarking strategy requires that the auditor is able to verify that an automated control has not changed
- The approach to verifying that an automated control has not changed can vary, but will depend on:
 - the availability of reliable data about the full population of program changes, and
 - the strength of the related program change controls

A Strategy for Benchmarking

	Baselined in Prior Year	Baselined in Current Year
Changes in Current Year	1 - Review change tickets for significant changes and move to box 3.	3 - Review last significant change ticket for test documentation. If testing is sufficient, use the test results as 404 testing. Otherwise move to Box 4.
No Changes in Current Year	2 - Document and provide evidence that no changes were made in current year.	4 - Develop alternative test procedures (i.e. test application control).

Automated Application Controls, Reports and SOX



Questions?