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TRANSACTION ANALYSIS

(TESTING INTERNAL CONTROLS)

Advanced Cases in Assurance Services (ACCTG 521)

Class 5 | MPAcc class of 2026

Agenda

Review

Audit Risk Conclusion

- Material Weaknesses
- Memo Deliverable

Transaction Analytics

Lab: P-Card Case

- P-Card set-up and workflow overview

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Audit Risk Model

Audit Risk: risk that the auditor expresses an inappropriate audit opinion when the financial statements are materially misstated

$$AR = \underbrace{IR \times CR}_{RMM} \times DR$$

- **Inherent Risk**: risk that a management assertion is materially misstated (before considering internal controls)
- **Control Risk**: risk that internal controls fail to detect a misstatement
- **Detection Risk**: risk that auditors fail to detect a misstatement

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Market response to restating firm

- Average abnormal returns below negative 9%
- Why might investors perceive a restatement as bad news?

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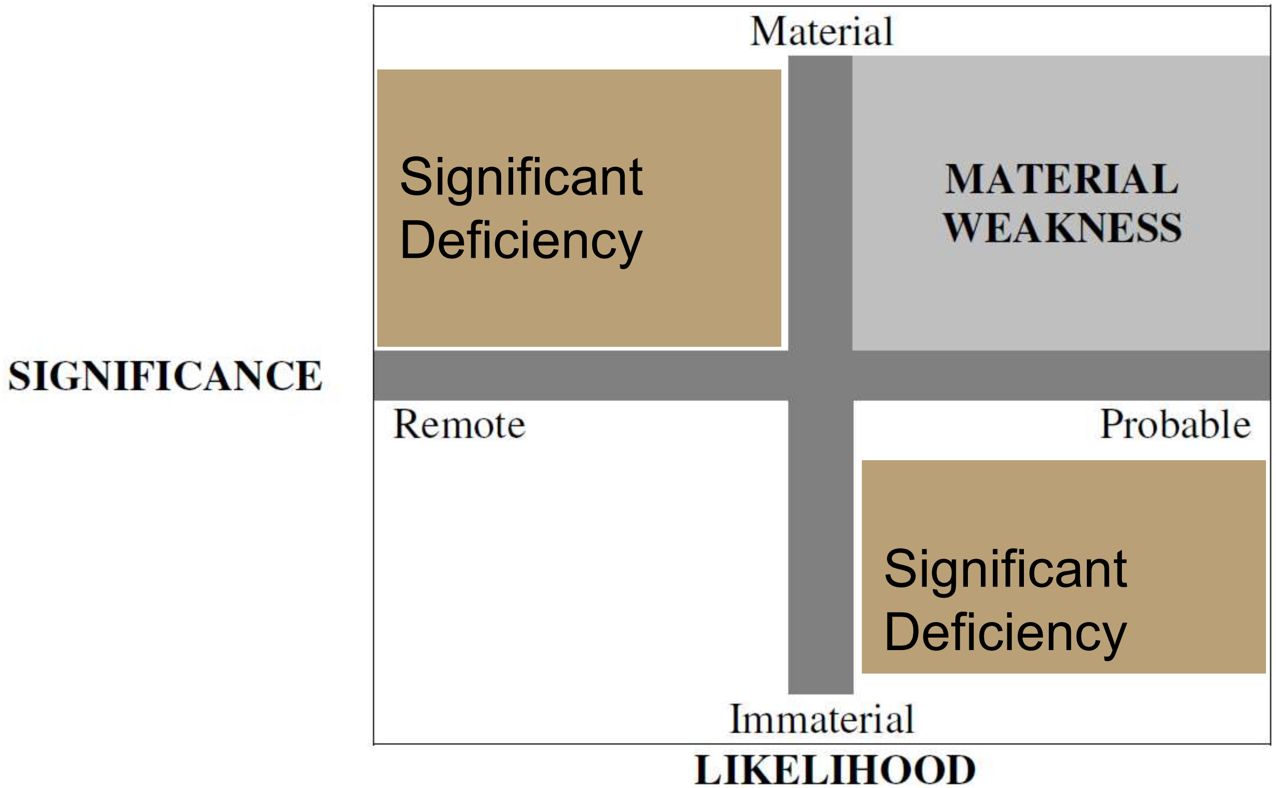
What are material weaknesses and significant deficiencies?



- Material weaknesses need to be disclosed in the 10-K under Section 302 (and 404)
- Significant deficiencies do not need to be publicly disclosed, but must be disclosed to the audit committee

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How does this all work?

- Example: Material weakness over allowance for doubtful accounts.
  - A firm does not have a policy for estimating allowance for doubtful accounts, instead just using last year's percentage as the estimate.
  - If the credit-worthiness of the client base has worsened (e.g., because salespeople are trying to meet quotas, or because there is a systematic shock such as the financial crisis), then the allowance for doubtful accounts will be too low and could result in a misstatement.

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How does this all work?

- Example: Material weakness over inventory tracking.
  - A firm does not have an inventory tracking system.
  - When the inventory is counted at the end of the year, the inventory balance is updated. But if some inventory is not seen, in a warehouse closet, then inventory is misreported and there could be a subsequent misstatement.

Disclosure requirements

Annual report

Required

Section 302

Management Disclosure

Section 404a

Management Document and Test

Section 404b

Auditor Opinion

Material Weaknesses and Financial Reporting Quality

- Are Material Weaknesses Correlated with Restatements?
  - Yes, internal control weaknesses and restatements are positively related
- Why doesn’t substantive testing fix this?
  - It does, sometimes. When the material weaknesses are account specific, they do NOT have more restatements (i.e., substantive testing works)
  - BUT when the problem is more general (e.g., segregation of duties, IT weaknesses), it is hard to know where to apply additional substantive testing. (Ge et al. 2007)

Deliverable

- Objective:
  - Analyze recent **8-K disclosures** for companies that reported **both a financial restatement and a material weakness** in internal control (use the Alteryx packaged workbook, or Tuesday's workflow).
  - Write a short memo assessing the **severity and implications** of the weakness.

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Hints and tips:

- **Select one company** from the provided dataset.
- **Read the 8-K disclosure** describing the restatement and material weakness.
- **Identify key elements:**
  - Nature and scope of the weakness
  - Affected accounts or processes
  - If the restatement is linked to a material weakness, separate (incidental), or broader.
  - Management's response or remediation plan
  - Auditor involvement (if disclosed, hint is it 302-Management, or 404 auditor)
- **Write a short memo (≈300–400 words)** addressing:
  - How severe is the weakness?
  - What evidence supports your assessment? (screenshot attachments can be used if referenced)
  - How might this weakness have contributed to the restatement?
  - What should management and the audit committee do next?

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Transaction analytics

Today we will start analyzing transaction data:

- Central to both the **external audit** function and **internal audit** function.
- Transaction analysis can also be used by **management** to assess operational decisions.

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Transaction analytics

- External auditors provide opinions a company's financial statements are **presented fairly**, in all material respects, in accordance with financial reporting framework (such as GAAP).
  - External auditors can also provide advisory services to help the company become more financially secure/agile, among other areas.
- Internal auditors ensure that company policies and procedures are followed and that the company is financially efficient.

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Transaction analytics

- Internal auditors ensure that company **policies** and **procedures** are followed and that the company is financially efficient.

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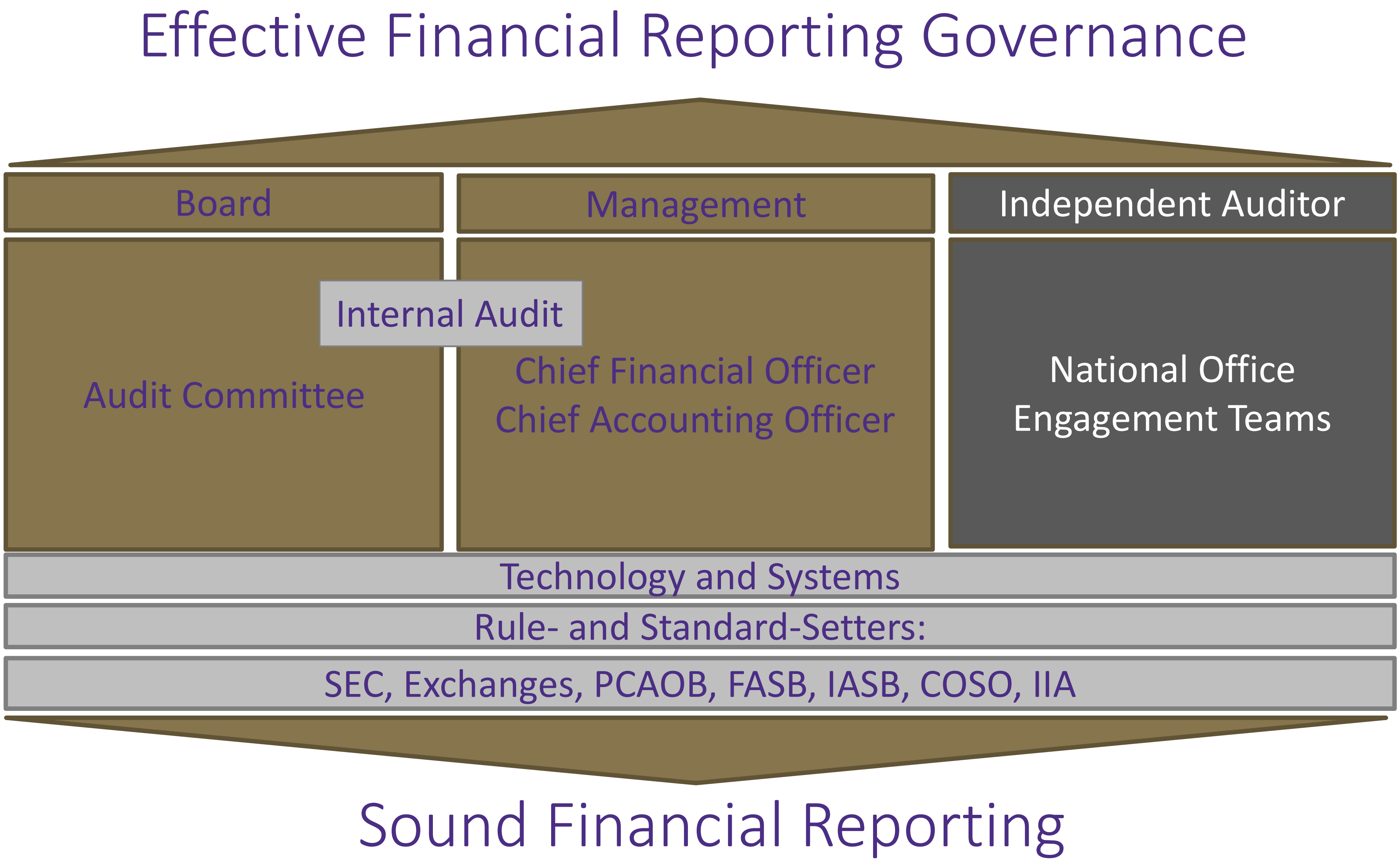
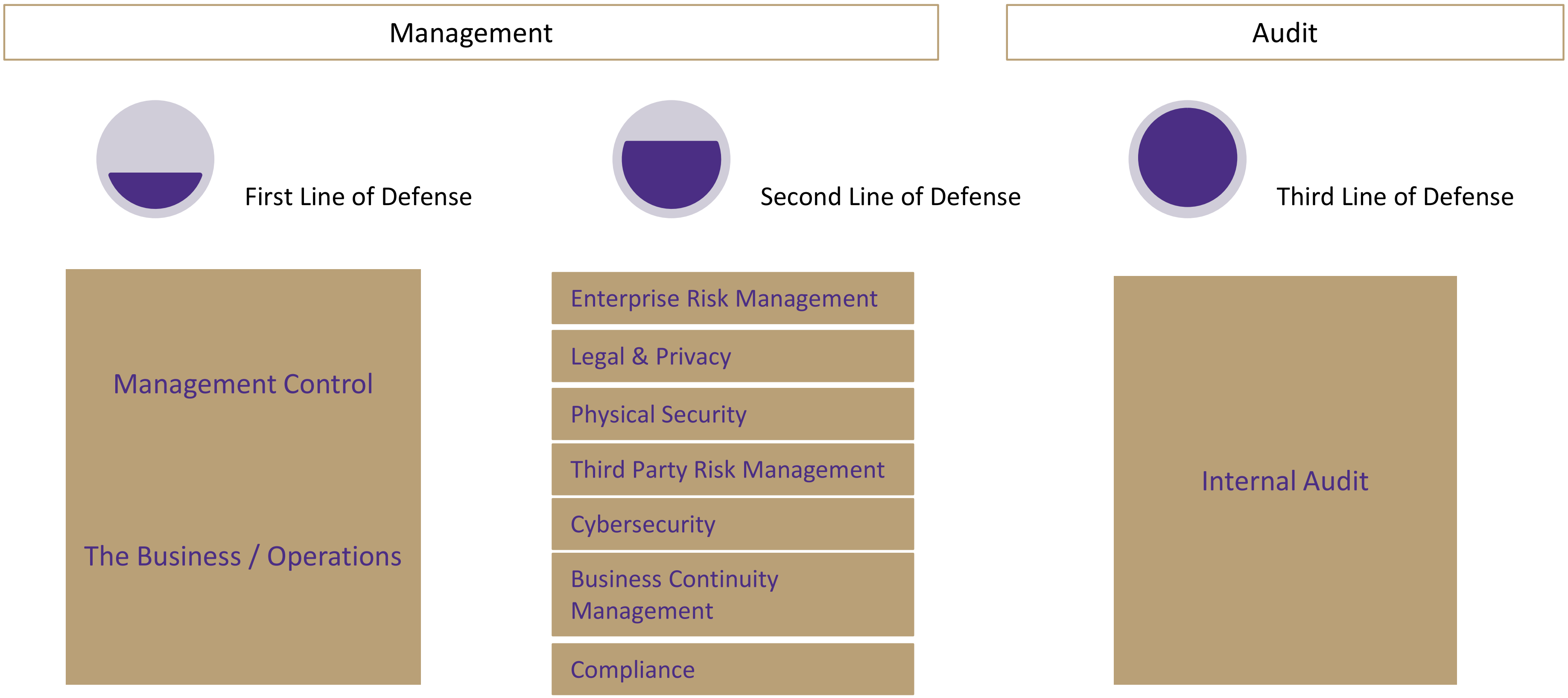
Why is transaction analysis important?


Effective Financial Reporting Governance
Board
Management
Independent Auditor
Internal Audit
Audit Committee
Chief Financial Officer
Chief Accounting Officer
National Office
Engagement Teams
Technology and Systems
Rule- and Standard-Setters:
SEC, Exchanges, PCAOB, FASB, IASB, COSO, IIA
Sound Financial Reporting


Management
Audit
First Line of Defense
Second Line of Defense
Third Line of Defense
Management Control
The Business / Operations
Enterprise Risk Management
Legal & Privacy
Physical Security
Third Party Risk Management
Cybersecurity
Business Continuity Management
Compliance
Internal Audit

Why is transaction analysis important?

- **Better financial reporting governance leads to better quality financial reporting.**
  - One potential avenue is from detecting and preventing fraud.
  - **Transaction analytics** for fraud prevention and detection is seen as a major step **towards efficiently reducing fraud**.

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P-Card Case Overview

Task 1: Overview (Discuss today)

Task 2: Describing Data (Skip – work into Task 4)

Task 3: ETL Process (Skip – done for you)

Task 4: Descriptive Data Analysis (24 Qs Start today)

Task 5: Control tests (7 test, Tuesday)

Task 6: Prohibited Transactions Tests (Tuesday)

Task 7: Forensic Audit (Tuesday)

Memo write-up (Tuesday / outside of class)

(opens Thu Oct 16 for Gen AI)

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Task 1

- Gain a more in-depth understanding of the OSU P-card guidelines and objectives by reviewing the P-card guidelines in the appendix following. As you review the guidelines, consider the risks OSU faces and what controls it has implemented around those risks.
- Prepare a list of questions that you would like to test to see if employees are following OSU P-card guidelines. Your questions should be informed by thinking about the risks OSU faces and the internal controls it has implemented. Make sure you focus on questions that can be answered using data.

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Team	Risk	Control
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Transaction Analysis: P-Card Labs

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P-Card Transaction Analysis Case

Start by reading in the raw data (an Alteryx file) to the RawData Container. Connect the data to the first filter tool (which is not connected) in the ETLProcess Container. Test the workflow for any errors by toggling the ETLProcess to on and running the workflow.

1. RawData

6. Expanded Analyses (Tasks 6 and 7 and extensions)

4. Control Tests (Task 5)

3. Data Analysis (Task 4)

2. ETLProcess

Conclusion

- **Better financial reporting governance leads to better quality financial reporting**.
  - One potential avenue is from detecting and preventing fraud.
  - **Transaction analytics** for fraud prevention and detection is seen as a major step **towards efficiently reducing fraud**.

Thank you!