

## Performing Analytical Procedures for Audit and Review Engagements

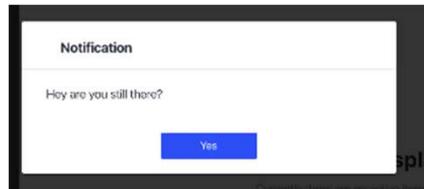
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2

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## Learning Objectives

When you have completed this course, you will be able to:

- Perform effective preliminary analytical procedures in the risk assessment process
- Perform a final overall analysis to assess the conclusions reached during the audit and evaluate the overall financial statement presentation.
- Plan, perform and conclude on substantive analytical procedures
- Perform the appropriate level of analytical procedures in a review

## Unit: 1

Performing Analytical Procedures in an Audit Engagement



## Overview of Analytical Procedures in an Audit

Preliminary analytical procedures- <b>required</b>	AU-C 315, <i>Understanding the Entity and its Environment and Assessing the Risk of Material Misstatement</i>	Analytical procedures are used as one component in the risk assessment process. The auditor develops expectations, which are generally at a high level and compare to reported results to assist in planning the nature, timing, and extent of auditing procedures that will be used to obtain audit evidence for specific account balances or classes of transactions.
Final analytical procedures- <b>required</b>	AU-C 520, <i>Analytical Procedures</i>	In the overall review stage, the objective of analytical procedures is to assist the auditor in assessing the conclusions reached and in evaluating the overall financial statement presentation.
Substantive analytical procedures- <b>not required</b>	AU-C 520, <i>Analytical Procedures</i> and AU-C 330, <i>Performing Audit Procedures in Response to Assessed Risk and Evaluating the Results Obtained</i>	As a substantive test, the purpose of analytical procedures is to obtain evidence, sometimes in combination with other substantive procedures, to identify misstatements in account balances, and thus to reduce the risk that misstatements will remain undetected.



## Key Concepts- Definition

- **Analytical procedures** – “evaluations of financial information through analysis of plausible relationships among both financial and nonfinancial data.
- Analytical procedures also encompass such investigation, as is necessary, of identified fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount.”



## Key Concepts

### Key concepts:

- **Evaluations of financial information** - analytical procedures will be used to understand or test financial statement relationships or balances.
- **Investigation...of identified fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount**- understanding of what can reasonably be expected and involves a comparison of the recorded balances with an auditor's expectations and an understanding of those differences.
- **Relationships among both financial and nonfinancial data** - both types of data can be useful in understanding the relationships of the financial information and are helpful when used in forming an expectation.



## Objective of Analytical Procedures

- **Preliminary analytical procedures**- the objective is to identify and assess the risks of material misstatement, whether due to fraud or error, at the financial statement, account balance and relevant assertion levels through understanding the entity and its environment. procedures are a technique used in gaining that understanding.
- **Substantive analytical procedures**- the objective is to obtain relevant and reliable audit evidence.
- **Final analytical procedures**- the objective is to design and perform analytical procedures near the end of the audit that assist the auditor when forming an overall conclusion about whether the financial statements are consistent with the auditor's understanding of the entity.



## Types of Analytical Procedures

Method	How it Works	Precision
Trend analysis – Implicit expectation	<ul style="list-style-type: none"> <li>Compare current year to prior year(s)</li> </ul>	<ul style="list-style-type: none"> <li>Less precise than other forms – more appropriate for preliminary analytical procedures</li> <li>Using one year can lead to bias unless it can be substantiated that the environment is that stable.</li> <li>Can only factor in one variable</li> </ul>
Ratio analysis – Implicit expectation	<ul style="list-style-type: none"> <li>Comparison of relationships between financial statement accounts between two periods or over time. This can be the comparison of an account with nonfinancial data (contributions per donor) or comparison of relationships between financial data and industry statistics such as return on investments compared to market statistics for a portfolio</li> </ul>	<ul style="list-style-type: none"> <li>This method only works when the relationships are stable. It is important to disaggregate data. Can only factor in one variable</li> </ul>



## Types of Analytical Procedures

Method	How it Works	Precision
Reasonableness or predictive expectation – explicit expectation	<ul style="list-style-type: none"> <li>Take into account the auditor's knowledge of the business and industry</li> </ul>	<ul style="list-style-type: none"> <li>More precise because the auditor can factor in more than one variable</li> </ul>
Expectation using regression analysis – explicit expectation	<ul style="list-style-type: none"> <li>Input data into a computer program (excel will perform regression analysis as will ACL, IDEA, and other products). It provides the auditor with areas to investigate.</li> </ul>	<ul style="list-style-type: none"> <li>Most precise because it takes two or more predictors and numerous periods of data to statistically develop the expectation</li> </ul>



## Preliminary Analytical Procedures

- Analytical procedures are performed as risk assessment procedures to identify aspects of the entity that appear unusual.
- AU-C 240, *Consideration of Fraud in a Financial Statement Audit*, requires the auditor to perform analytical procedures on revenue.
- APs assist the auditor in understanding of the client's business and the significant transactions and events that have occurred since the prior audit.



## Preliminary Analytical Procedures

- Preliminary analytical procedures generally use data that is aggregated at a high level so they can only present a broad initial assessment.
- Currently the audit guide instructs the auditor to form expectations prior to performing the procedure
- SAS 145 modifies that requirement and states that although it is helpful to do this, that the procedures relative to setting expectations discussed in AU-C 520 are not required for risk assessment procedures



## Preliminary Analytical Procedures

- Analytical procedures can be comparison of the entity against industry benchmarks or similar entities
  - Fuel costs for a shipping company
  - Commission rates for a real estate brokerage firm
  - Sales per square foot of retail space
  - Expenses per patient day for a hospital

### Example

**And auditor believed that gross margin for a product with significant volume would be between 8%-10% based on industry stats. The actual margin was 12%. The auditor wanted to understand if this was a risk of fraud. The client said that they were able to get a favorable price on a significant input raise the margin 1%. The other reason was a strategic price increase. Customers were willing to pay more that product.**

13

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## Preliminary Analytical Procedures

- Auditors can use preliminary procedures as substantive procedures if the AU-C 520 requirements are followed.
- Trend analysis can include comparing the balance to:
  - Prior period balances (e.g., year, quarter, or month), two years or more
  - Related general ledger accounts such as a change in sales to a change in accounts receivable
  - Comparison of budget to actual
  - Nonfinancial data ratios (e.g., revenues per member, payroll per employee)

**Best Practice: Perform a fluctuation analysis supplemented by the largest operating statement balances, disaggregating revenue and analyzing the most significant operating expenses such as payroll, cost of sales and gross margin, etc.**

14

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## Preliminary Analytical Procedure- Example

	20X9	20X8	\$ Change 20X9-20X8	% Change 20X9-20X8
<u>Assets</u>				
Current assets:				
Cash and cash equivalents	\$ 312,833	\$ 469,633	\$ (156,800)	-33.39%
Accounts receivable	212,625	21,000	191,625	912.50%
Related party receivable	2,953	3,542	(589)	-16.63%
Prepaid expenses	55,000	50,162	4,838	9.64%
Inventory	19,633	310	19,323	6233.23%
Total current assets	603,044	544,647	58,397	10.72%
Property and equipment:				
Office furniture, equipment and software	179,039	172,394	6,645	3.85%
Less accumulated depreciation	93,101	86,103	6,998	8.13%
Property and equipment, net	85,938	86,291	(353)	-0.41%
Other assets:				
Investments	53,456	48,452	5,004	10.33%
Total other assets	53,456	48,452	5,004	10.33%
TOTAL ASSETS	\$ 742,438	\$ 679,390	\$ 63,048	9.28%

Based on the expectation developed are there any account balances that stand out as indications of risk?

## Preliminary Analytical Procedure- Example

	20X9	20X8	Change -\$	Change -%
<u>Liabilities and Retained Earnings</u>				
Current liabilities:				
Accounts payable				
Trade	\$ 40,546	\$ 69,545	(28,999)	-41.70%
Other	8,505	8,897	(392)	-4.41%
Accrued payroll and payroll related liabilities	91,856	\$ 69,899	21,957	31.41%
Deferred revenue	53,508	45,279	8,229	18.17%
Total current liabilities	194,415	193,620	795	0.41%
Notes Payable	398,258	360,238	38,020	10.55%
Total Liabilities	592,673	553,858	38,815	7.01%
Common Stock	1,000	1,000	-	0.00%
Retained earnings	148,765	124,532	24,233	19.46%
Total Shareholder's Equity	149,765	125,532	24,233	19.30%
TOTAL LIABILITIES AND SHAREHOLDER'S EQUITY	\$ 742,438	\$ 679,390	\$ 63,048	-

Based on the expectation developed are there any account balances that stand out as indications of risk?

## Preliminary Analytical Procedure- Example

Statements of Operations				
	20X9	20X8	\$ Change 20X9-20X8	% Change 20X9-20X8
Revenue:				
Product Sales	\$ 184,327	\$ 174,814	\$ 9,513	5.44%
Service contracts	289,275	337,483	(48,208)	-14.28%
Investment income	8,275	7,806	469	6.01%
Total revenue	481,877	520,103	(38,226)	-7.35%
Expenses:				
Payroll and benefits	238,406	254,873	(16,467)	-6.46%
Cost of product sold	145,395	150,021	(4,626)	-3.08%
Administrative expenses	58,652	51,459	7,193	13.98%
Total expenses	442,453	456,353	(13,900)	-3.05%
Pretax income	39,424	63,750	(24,326)	-4%
Income tax expense	(14,530)	(16,550)	2,020	-12.21%

Based on the expectation developed are there any account balances that stand out as indications of risk?

## What You Might Learn Could Pay Dividends Later

- Risk of Fraud- AU-C 240 discusses the need to perform analytical procedures on revenue.
- In some entities where there is a significant lack of segregation of duties (often small companies), the trusted bookkeeper can get away with fraud where analytical procedures could have identified an issue.
- If an auditor looks at the fluctuation of balances without regard to whether they **should** fluctuate, then the value of the analytical procedure is lost.

## Fraudster Holds a Balance Constant to Avoid Detection- Example

A large fraud was committed by a trusted bookkeeper. The entity had very limited segregation of duties as the bookkeeper had access to the approval process, recording process and the bank reconciliation process. She also prepared the analytics which were sent to the board and the CFO. The board and auditors made the error of looking at the changes in the account balances month to month. The bookkeeper knew the threshold that was used (10%) to investigate variances and was careful to hide her defalcations in one account in amounts that would not trigger questioning. If the auditor had performed analytics on expense per unit produced, the fraud would have been apparent since the expense line item where the bookkeeper was recording the fraudulent expenses should have fluctuated with volume. The bookkeeper was holding the line item steady so the board or the auditor would not ask questions. The fraud was finally detected by an attorney who looked at the financial statements with a fresh eye. He questioned why the balance of that expense item was so high.

## Preliminary Analytical Procedures on Revenue- Example

The auditor of a Martin's Pool Supplies, a privately held company that sells pool supplies and services residential pool contracts was performing preliminary analytical procedures. She wanted to perform specific analytics on revenue as required by professional standards. She recently identified a trade publication that said that margins in the industry were approximately 7-12%. She used that information to evaluate product sales as well as an analysis of the change in sales, cost of sales and margin over the last 2 years. She also evaluated revenue per customer served for the service contracts. For the service contracts the use of nonfinancial metrics helped her to understand how much of the change in sales was attributable to volume and how much to price.

	20X1	20X0	\$ Change 20X1-20X0	% Change 20X1-20X0
Product Sales	\$ 1,184,327	\$ 1,174,814	\$ 9,513	0.81%
Cost of products sold	(1,045,395)	(1,050,021)	4,626	-0.44%
Margin	138,932	124,793	14,139	11.33%
Margin %	12%	11%		
Service contracts	\$ 289,275	\$ 337,483	(48,208)	-14.28%
Number of customers served	175	205	(30)	-14.63%
Average Revenue per contract	\$ 1,653	\$ 1,646	7	0.41%



## Engagement Question

The purpose of preliminary analytical procedures is to \_\_\_\_\_.

- A. Determine if the account balances are fairly presented.
- B. Search for fraudulent activity.
- C. Assess the preliminary account balances to see if there are any risk indicators present.
- D. Perform them at a detailed aggregate level so substantive procedures are not necessary



## Engagement Question

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- B. Search for fraudulent activity.
- C. Assess the preliminary account balances to see if there are any risk indicators present.**
- D. Perform them at a detailed aggregate level so substantive procedures are not necessary



## Final Analytical Procedures

- Near the end of the audit the auditor is required to perform final analytical procedures.
- Purpose- to assist the auditor when forming an overall conclusion about whether the financial statements are consistent with the auditor's understanding of the entity.
- Opportunity to assess the adequacy of the evidence gathered during the audit and a take a wholistic look at the statements once adjustments are posted.
- Review may reveal unusual or unexpected balances, misposted journal entries or other misstatements that need to be corrected.
- Implicit expectation- balances and disclosures will reflect the team's knowledge of the entity as observed during the audit.



## Substantive Analytical Procedures

- AU-C 330, *Performing Audit Procedures in Response to Assessed Risks and Evaluating the Audit Evidence Obtained*, states that irrespective of the assessed risks of material misstatement, the auditor should design and perform substantive procedures for all relevant assertions related to each **material** class of transactions, account balance, and disclosure.
- A conforming amendment from SAS 145 modifies this requirement to say- regardless of the assessed level of control risk (rather than for all relevant assertions related to each material class of transactions, account balance, and disclosure, irrespective of the assessed risks of material misstatement, as previously required).
- Rationale is that there are inherent limitations to internal control of management override.



## Substantive Analytical Procedures

- The auditor can perform tests of details or substantive analytical procedures (SAP) or a combination of the two.
- When a significant risk has been identified the auditor can perform substantive analytical procedures when they are combined with tests of controls or tests of details.

Risk Assessment	Testing Combinations
Significant risk	Tests of details alone SAP combined with tests of details SAP combined with tests of controls
Not significant risk	Tests of details alone Substantive analytical procedures alone Combination including tests of controls, but it is not possible to simply perform tests of controls

25

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## Substantive Analytical Procedures

- Several factors affect the amount of an account balance.
  - significant events
  - accounting changes
  - business and industry factors
  - market and economic factors
  - management incentives
- Auditor should consider the level of assurance needed depending on the amount of evidence that is needed for testing the assertion.
- When inherent risk and/or control risk is higher the assurance needed is higher.

26

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## Substantive Analytical Procedures

### Effectiveness and Efficiency

- The expected effectiveness and efficiency of a substantive analytical procedure in addressing risks of material misstatement depends
  - nature of the assertion and account type
  - plausibility and predictability of the relationship
  - availability and reliability of the data used to develop the expectation
  - precision of the expectation.



## Substantive Analytical Procedures

- When performing SAPs, the auditor should focus the procedures on relevant assertions related to each material account balances, class of transactions, and disclosure
- SAPs require more thought because they should be more robust than those used for planning or the final analytical review.
- Before performing SAPs the auditor should determine the suitability of substantive analytical procedures for different account balances and assertions
- Consider how much evidence is needed from the test based on risk assessed and the auditor's intent to perform more than one type of substantive test.
- When more persuasive audit evidence is needed from SAPs it will be important to use more predictable relationships to develop the expectation.



## When to Perform SAP

- Some account balances/classes of transactions lend themselves to SAPs and some do not
- Relationships in a stable environment are usually more predictable than relationships in a dynamic or unstable environment.
  - Balance of payroll accrual is predictable as it does not tend to fluctuate much in relation to payroll expense except with days not paid, balance of AP is not as predictable
- Relationships involving income statement accounts tend to be more predictable because they represent transactions over a period of time
  - If the auditor understands the drivers of the expense most operating expenses are predictable
- Relationships involving transactions subject to management discretion may be less predictable.



## When to Perform SAP- Example

An auditor was auditing a equipment manufacturing company. The COVID environment caused a decline in the hospitality industry, a major line of business for the company. Management decided to stop spending on items that could be deferred such as replacement of equipment and make repairs, as necessary. Certain discretionary expenses were also heavily scrutinized such as retirement contributions, advertising expenses. Bonuses were not given. Other expenses were not able to be adjusted such as rent, utilities, insurance, and other fixed costs. The auditor decided that discretionary expenses would be detailed tested where those that were predictable could be subjected to SAPs.



## Substantive Analytical Procedures

- Assertions like rights and obligations and presentation and disclosure do not lend themselves to be tested through analytical procedures.
- If the account is comprised of relatively few large transactions tests of details are likely to be more efficient.
- For some balance sheet accounts the account balance fluctuates widely on a regular basis, so it is difficult to predict.
- If an account balance is small, there is little change in the account drivers from period to period and the risk is low then a comparison of the two years may be all that is necessary.
- Generally, analytic procedures are effective for simultaneously testing for both understatement and overstatement.



## Engagement Question

An auditor was considering performing SAPs on several account balances. Which of the following account balance and assertions are good candidates for SAPs as a primary test?

Account Balance	Assertion	Assessed Risk of Material Misstatement	Other information	Yes or No
Cash	Existence	Moderate	Low account balance, high volume of transactions	
Accounts receivable	Valuation	High	Tie in with existence testing	
Prepaid expenses	Existence	Low	Client has good controls. Balance is small.	
Inventory	Completeness	Moderate		
Accounts payable	Cutoff	Moderate		
Notes payable	Rights and Obligations	Moderate	One debt instrument with a stated rate of interest.	
Revenue	Occurrence	High	Controls are tested and found reliable.	
Expenses	Existence	Moderate		



## Engagement Question- Solution

Account Balance	Assertion	Assessed Risk of Material Misstatement	Other information	Yes or No
Cash	Existence	Moderate	Low account balance, high volume of transactions	NO
Accounts receivable	Valuation	High	Tie in with existence testing	YES
Prepaid expenses	Existence	Low	Client has good controls. Balance is small.	YES
Inventory	Completeness	Moderate		NO
Accounts payable	Cutoff	Moderate		NO
Notes payable	Rights and Obligations	Moderate	One debt instrument with a stated rate of interest.	NO
Revenue	Occurrence	High	Controls are tested and found reliable.	YES
Expenses	Existence	Moderate		YES



## Substantive Analytical Procedures

### Reliability

- Reliable data and knowledge of the drivers of account balances and classes of transactions are key to successful SAPs
- If reliable data is not available to develop expectations, the ability to use analytical procedures to detect material misstatement is diminished.
- Generally, data processed through a system of effective controls over the collection of operating and/or accounting data is more reliable.



## Substantive Analytical Procedures

### Reliability (con't)

- Audited data is more reliable than unaudited data
- Data obtained from a source independent of accounting is generally considered more reliable.
- Data from external sources is objective but if it is just broad general data it may be directionally correct for all industries but may be misleading for a particular industry.
- There are certain industries that published statistics by geographic location, size, corporate type and function.



## Testing Internal Controls

- Testing the controls over the entity's preparation of information to be used in the SAP may be important when information is very complex or only available in electronic form.
- When controls are effective, the auditor has greater confidence in the reliability of the information and, therefore, in the results of analytical procedures.
- When controls are effective, less precision is needed from the test.
- The auditor should evaluate the risk of management override.



## Steps to Performing Substantive Analytical Procedures- 6 Step Process

1. Set a threshold for unexplained differences (precision)
2. Develop the expectation
3. Compare the expectation to recorded amounts
4. Investigate amounts differences between the expectation and recorded amounts of over the desired threshold
5. If reasonable explanations cannot be obtained and corroborated for amounts over the threshold, try to disaggregate the balance and test a portion of it by SAP and another portion by tests of details
6. Where the auditor is unable to substantiate the unexplained differences over the threshold and they does not wish to perform other substantive tests, consider the effects both individually and in the aggregate of misstatements (known and likely) that are not corrected by the entity.

37

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## Step 1: Setting the Threshold

- The auditor will set a threshold for unexplained differences from expectation
- Precision is defined as a measure of the closeness of the auditor's expectation to the recorded balance.
- The auditor's consideration of precision is influenced primarily by materiality and should be consistent with the desired level of assurance.
- Determination of this amount involves considering the possibility that a combination of misstatements in the specific account balance, class of transactions, or disclosure could aggregate to an unacceptable amount.
- In designing substantive analytical procedures, the auditor should increase the desired level of assurance as the risk of material misstatement increases.

38

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## Step 1: Setting the Threshold

- Another factor that affects the precision of analytical procedures is the type of expectation developed and the nature of the account balance/assertion.
- For example, some account balances, such as depreciation expense are easier to predict than others such as claims incurred but not reported.
- A simple predictive test should carry a higher need for precision to be effective where a more complicated predictive test will require additional procedures to be performed in order for the auditor to expect less precision.
- Alternatively, the auditor could use a more sophisticated methods such as regression analysis or a combination of tests to get the precision they need.



## Step 1: Setting the Threshold

- Regression analysis provides potentially the highest level of precision.
- With any predictive test understanding the drivers of the account balance/class of transaction is critical.
- Neither AU-C 520 nor AU-C 330 identify specific levels which constitute an appropriate level of precision for an SAP.
- The Audit and Accounting Guide, Analytical Procedures, says that planning materiality is an indication of the amount of misstatement in the financial statements that an auditor is willing to accept.



## Step 1: Precision

- Planning materiality, in part, determines the level of assurance that the auditor expects to obtain from the audit procedure.
- Because the precision of the expectation directly affects the level of assurance, the auditor should consider materiality/performance materiality when determining how precise an expectation needs to be to detect misstatements that, in the aggregate, exceed materiality.
- An inverse relationship exists between the precision of the expectation and planning materiality. Holding all other factors constant, as planning materiality decreases, the expectation becomes more precise to achieve the same level of assurance.



## Step 1: Precision

- Differences from expectation can be due to:
  - Misstatements
  - Inherent factors that affect the account being audited
  - Difference due to factors related to the reliability of the data
- The greater the precision of the expectation, the more likely it is that variances between the expectation and actual are due to misstatements. If the auditor does not believe the test will be sufficiently precise, then they should choose another type of test



## Step 1: Precision- Example

An auditor of an insurer wanted to perform an SAP for claims incurred but not reported- both the expense and the liability. Since this significant estimate had high inherent risk and data was processed almost completely electronically, the auditor tested controls over data capture in the claims system and found controls to be reliable. The auditor also tied the claims information provided monthly to the client by a third-party administrator into the general ledger with insignificant differences.

The auditor made inquiries into possible outliers and performed procedures on claims received after year end through the date of testing. With this information the auditor developed independent expectations for each category of claims (medical, dental and eye). The auditor set precision at 35% of materiality since the expense category represented approximately 40% of expenses. For the liability precision was set at 10% higher or lower than the actual account balance.



## Engagement Question

Precision is important when performing a substantive analytical procedure. Which of the following is discussed by professional standards as a guide to be used in assessing precision?

- A. Commercial practice aids
- B. Individually significant item
- C. Materiality
- D. Auditor judgment



## Engagement Question- Solution

Precision is important when performing a substantive analytical procedure. Which of the following is discussed by professional standards as a guide to be used in assessing precision?

- A. Commercial practice aids
- B. Individually significant item
- C. Materiality**
- D. Auditor judgment



## Step 2: Develop the Expectation

- Good understanding of account balance or class of transaction drivers
- Expectations may be a point or a range- range for estimates
- Valuation of pledges receivables:
  - Obtain a report rolling forward from prior year
  - Test the reliability of the report – have payments been properly recorded – or test controls over cash receipts
  - Examine trends in the collections
  - Perform a hindsight review to evaluate management’s estimation process
  - Create an expectation



## Step 2: Develop the Expectation

**Purpose:** to test the valuation assertion related to accounts receivable. This test is supplemented by tests of details since valuation of accounts receivable is deemed a significant risk.

**Expectation:** Based on detailed testing performed related to subsequent collections and discussions with personnel handling collections, we believe that the allowance for bad debts should be between \$30,000 and \$35,000.

**Conclusion:** The client's estimate is \$22,000. We asked management about their calculation and have concluded that the allowance needs to be increased. Management was willing to make the adjustment.

Summary Aging Category	Amount	Percent	Subsequent receipts	Amount remaining	% collected	Auditors estimate
0-30 days	526,622	79.64%	482,251	44,371	92%	11,093
31-60 days	72,205	10.92%	38,154	34,051	53%	6,810
61-90 days	32,529	4.92%	19,506	13,023	60%	2,605
91-120 days	18,650	2.82%	4,510	14,140	24%	3,535
121-150 days	11,252	1.70%	-	11,252	0%	9,564
	661,258	100.00%	544,421	116,837		33,607
Client's estimate	22,000					
Auditor's estimate	30,000				8,000	
Difference	(8,000)					8,000

47

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## Step 2: Develop the Expectation

- Disaggregate expenses to form a more precise expectation
  - Like kind expense categories (payroll, contractual items, operating items adjusted for inflation or circumstances)
  - Limited vouching may be necessary
- Use prior year audited balance (e.g. payroll expense) as a base and modify the expectation for adds, terminations and raises or bonuses
- Use business drivers like units times cost or sales price
- Use historical information adjusted for current circumstances (estimates)

48

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## Step 2: Develop the Expectation- Example

Test of Payroll Expense and Payroll Accrual (SAP)				
<b>Purpose:</b> to test payroll expense. We intend to use this as the primary substantive test. Materiality is \$75,000. Payroll is 60% of expenses. Controls were not tested. For the test expectation to be met it should not be more or less than \$30,000 from the recorded balance.				
<b>Expectation:</b> In speaking with the HR department manager (independent of accounting) and using audited 20X1 income statement balances as a base, we expect payroll expense to have increased 4.5% from the prior year plus an additional \$91,575 (vouched salary). There were very few terminations and the positions were filled at the approximate salary almost immediately. The \$110,000 is prorated salary for a newly created position. The payroll accrual should be in line with expense. Our expectation that it is expected salary divided by 360 times the number of days unpaid at YE (5).				
<b>Conclusion:</b> Test expectation met. Difference from expectation is within threshold for payroll expense and accrual				
Payroll expense 20X1				745,380
increase for raises at 4.5%				778,922
Add salaried position (8 mos)	137,500	0.6660		91,575
Expectation for 20X2				870,497
Actual payroll for 20X2				877,500
Difference from expectation		higher		7,003
Accrued payroll - salary expectation divided by 360				2,418
5 days accrued				12,090
Salary accrual				12,188
Difference from expectation				97

49

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## Step 2: Develop the Expectation- Example

An auditor of a museum wanted to predict revenue for the current year. There were several factors that impacted the expectation.

- Two different types of memberships with different prices
- Partial year and full year memberships
- Rate increase during the current year

The auditor obtained information from the membership department and tested the accumulation of the information, reconciliation process as well as tied the disaggregated totals into the general ledger. She used the information to perform the SAP as illustrated in the charts below.

Data	Audited	Reported	Dollar	%	20X0	20X1	Average	20X0	20X1
	20X0	20X1	Change	change	Members	Members	Member mos	Rate	Increase
Individual membership recurring	4,825,212	5,110,230	285,018	5.91%	38,602	39,540	12.00	125	2%
Individual membership new in CY	123,521	183,250	59,729	48.36%	1,450	1,780	8.00	125	2%
Family membership recurring	3,201,531	3,435,500	233,969	7.31%	16,008	16,745	12.00	200	2%
Family membership new in CY	125,622	172,700	47,078	37.48%	628	1,240	8.00	200	2%

50



## Step 2: Develop the Expectation- Example (con't)

Expectation	Individual recurring	Family recurring
20X0 dollars	4,825,212	3,201,531
divided by 20X0 members	38,602	16,008
Membership price	125	200
Increase in membership price	1.02	1.02
	127.50	204.00
Number of members for 20X1	39,540	16,745
Membership price for 20X1	127.50	204.00
Expectation	5,041,310	3,415,906
Actual	5,110,230	3,435,500
Unexplained difference- Actual > expectation	68,920	19,594

51



## Step 2: Develop the Expectation- Example (con't)

Expectation	Individual new	Family new
20X0 dollars	123,521	125,622
divided by 20X0 members	1,450	628
Portion of the year they were members (average)	66.67%	62.50%
Members converted to partial year	966.72	392.50
Membership price	125	200
Increase in membership price	1.02	1.02
	127.50	204.04
Number of members for 20X1	1,780	1,240
Portion of the year they were members converted to partial year	1,186.67	775.00
Membership price for 20X1	127.50	204.04
Expectation	151,300	158,128
Actual	183,250	172,700
Unexplained difference- actual > expectation	31,950	14,572

52



## Step 2: Develop the Expectation- Example (con't)

Results of the analytical procedure	Individual recurring	Family recurring	Individual new	Family new	Total
Expectation	5,041,310	3,415,906	151,300	158,128	8,766,645
Actual	5,110,230	3,435,500	183,250	172,700	8,901,680
Unexplained difference actual > expectation	68,920	19,594	31,950	14,572	135,035

Notes- in the first year the membership is prorated for the months left in the year. Renewal begins the first day of the new fiscal year.  
All 20X0 data was audited. Membership data for the current year was received from the membership system independent of accounting but reconciled to the GL. Data was tested for reliability.

Using materiality, which was \$105,000, as a guide the auditor compared the expectation to actual. The difference was \$105,465 in total but also represented a difference in the family recurring category which was significant. The auditor asked the client to identify where any variables that she might have missed to investigate the individual and family recurring membership categories.

**Conclusion:** The auditor learned that \$75,000 in subscription revenue had been misposted to the individual recurring membership revenue in error. The remainder was attributed to the averages used in the calculation. The auditor proposed an adjustment for the \$75,000 to correct the individual recurring category. No further testing was deemed necessary.



## Question for Discussion

Which of the following analytical procedures is best suited for substantive analytical review?

- A. Scanning the general ledger
- B. Predictive tests
- C. Trend analysis
- D. Fluctuation analysis



## Question for Discussion- Solution

Which of the following analytical procedures is best suited for substantive analytical review?

- A. Scanning the general ledger
- B. Predictive tests**
- C. Trend analysis
- D. Fluctuation analysis

55



## Step 2: Develop the Expectation- Example

### Disaggregation for more precision

- Not all operating expenses fluctuate the same way to get a precise enough expectation to be used in SAPs
- One strategy is to identify those that fluctuate in a similar manner and combine them.

#### Example

The auditor of a privately owned specialty bakery considered substantive tests over expenses. He calculated the number of sample selections it would take to perform tests of details and concluded that for operating expenses, SAPs were more effective and efficient. Since all expenses did not fluctuate the same way, the auditor categorized them in buckets that fluctuated in the same way. The expenses related to products were considered a cost of sale and analyzed separately.

56

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## Step 2: Develop the Expectation- Example (con't)

**Divide the expenses into logical categories.**

**Category A.** In a company that has mainly salaried personnel the relationships are even more stable. In a business with a large percent of salaries to total expenses, SAPs are very efficient. Generally, payroll taxes and benefits generally fluctuate the same way, an auditor can develop an SAP for the compensation expenses as a whole.

**Category B.** The auditor should consider what other expenses fluctuate the same way and identify several types of expenses that fluctuated with inflation.

**Category C** The third category of expenses might be items that were tested in other areas of the audit. For example, depreciation was tested with fixed assets and interest expense was tested with debt. Those expenses would be referenced to the respective workpapers.

**Category D** The expenses in this category are those that are subject to a contract that is easily vouched. For example, rent expense per month per the rent agreement multiplied by 12 was easily compared to the recorded balance. Another example might be an outsourced IT help desk/consulting arrangement.

**Category E** Some expenses are challenging as it relates to SAPs but once the bulk of the expenses are tested by SAP, the auditor could take the remaining balance and sample it if coverage were not sufficient. The auditor should test at least 75% of the recorded balance of expenses.



## Using Budgets as Expectations

- Budgets can sometimes be used as an expectation for analytical procedures
  - Testing the budgeting process is critical to determining whether the expectations will be good ones to use
  - Management's use of budgets to monitor results of operations is important here.
  - Management should also be documenting the variances from budget and the reasons why

## Step 2: Develop the Expectation- Example

- Convenience store company with 23 stores
- 5 of the stores are new (1,4,10, 13 and 22)
- Operations do not change much unless a new product line is introduced. (check cashing services, lottery tickets)- no changes in the current year.
- Product lines affect number of employees as well as customers
- Stores that sell gas tend to be more profitable

**This example also illustrates how information from a preliminary analytical procedure can help inform a substantive test performed later in the audit.**

59

## Step 2: Develop the Expectation- Example (con't)

### Relevant information

\* New store

Store	Prior-Year Sales		Current-Year		Current Percent Change (%)	Current Year Inventory (\$)	Square Feet	Average Number Full-Time Employees
	(Audited) (\$)	Sales (\$)	Dollar Change (\$)					
1 *	N/A	781,793	781,793		N/A	48,725	2,500	11.00
2	1,165,221	1,146,438	(18,783)		(1.16)	44,171	2,500	11.31
3	1,147,430	1,195,004	47,574		4.15	45,714	2,500	12.46
4 *	N/A	951,784	951,784		N/A	37,218	4,000	11.86
5	2,037,463	1,981,409	(56,054)		(2.75)	45,826	4,000	10.06
6	2,257,920	2,300,671	42,751		1.89	53,862	4,000	11.10
7	1,850,354	1,956,481	106,127		5.73	49,883	4,000	10.71
8	1,916,884	1,799,713	(117,171)		(6.11)	47,016	4,000	7.50
9	1,833,209	1,820,641	(12,568)		(.69)	59,726	4,000	14.00
10 *	N/A	774,954	774,954		N/A	35,882	2,500	11.20
11	980,484	1,159,004	178,520		18.21	37,664	2,500	11.60
12	1,069,652	1,139,475	69,823		6.53	34,662	2,500	12.70
13 *	N/A	948,522	948,522		N/A	44,782	4,000	11.86

60

## Step 2: Develop the Expectation- Example (con't)

### Relevant information

\* New store

Store	Prior-Year Sales		Current-Percent Change		Current Year	Square Feet	Average Number Full-Time Employees
	(Audited) (\$)	Current-Year Sales (\$)	Dollar Change (\$)	(%)	Inventory (\$)		
14	1,795,123	1,984,777	189,654	10.56	38,774	4,000	12.20
15	2,119,015	2,293,847	174,832	8.25	55,423	4,000	11.10
16	1,947,303	1,984,722	37,419	1.92	52,884	4,000	10.40
17	1,705,789	1,798,336	92,547	5.42	46,834	4,000	8.84
18	2,396,971	2,484,503	87,532	3.65	53,772	4,000	12.10
19	1,901,631	1,837,400	(64,231)	(3.38)	43,982	4,000	9.70
20	1,514,798	1,609,385	94,587	6.24	44,893	4,000	7.20
21	1,886,587	1,874,229	(12,358)	(.66)	37,665	4,000	10.50
22*	N/A	698,333	698,333	N/A	33,826	2,500	10.50
23	1,092,908	1,198,229	105,321	9.64	44,857	2,500	10.90
Total	30,618,742	35,719,650	5,100,908	16.66	1,038,041	80,000	250.80

**10.90 average**

61

## Step 2: Develop the Expectation- Example (con't)

- Auditor wants to perform analytical procedures (preliminary and substantive) including fraud procedures on revenue
- Assertions: occurrence (existence)
- Audit objective: overstatement of revenue
- Drivers used in prediction:
  - Square feet
  - Employees per store
  - Audited prior year information
  - Industry factors (regional)
  - No significant changes in product mix or new products added
  - Inflation is low, competition keeps management from raising prices
  - Stores that sell gas have higher sales- Stores 5,6,7,8,14,15,16,17,18,19, 20 and 21 sell gas.

62

## Step 2: Develop the Expectation- Example (con't)

- Assumptions: no significant events or accounting changes occurred except store openings based on discussion with company personnel
- Industry and economic factors are stable
- Materiality is \$150,000. The auditor tested controls and found them reliable. \$150,000 is .42% of sales.
- **Preliminary analytical review: Trend analysis** using prior year sales

	Current Year	Prior Year	Change	% Change
Total Sales	\$35,719,650	\$30,618,742	\$5,100,908	16.66%

This analytic does **not** have precision. Even in a preliminary analytic if the auditor wants to learn much about the year- to-year changes, disaggregation is better. If the auditor added the sales amounts of the new stores together it would = \$4,155,386. Adding the new store total to the PY sales = \$34,774,128. This would represent a 3% change from prior year.

63

## Step 2: Develop the Expectation- Example (con't)

	Current Year	Prior Year
<b>All stores open all year (excludes new stores):</b>		
Total sales	\$31,564,264	\$30,618,742
Cost of goods sold	21,463,700	21,987,932
Gross margin	\$10,100,564	\$8,630,810
Gross margin percentage	31.99%	28.19%
<b>Stores that sell gas:</b>		
Total sales	\$23,905,473	\$23,329,838
Cost of goods sold	16,112,291	16,307,557
Gross margin	\$7,793,182	\$7,022,281
Gross margin percentage	32.6%	30.1%
<b>Stores that do not sell gas:</b>		
Total sales	\$7,658,791	\$7,288,904
Cost of goods sold	5,351,409	5,680,375
Gross margin	\$2,307,382	\$1,608,529
Gross margin percentage	30.1%	22.1%

### Analytical review using ratio analysis

Higher gross margin expected for those stores selling gasoline

The gross margin appears more consistent for the stores that sell gas than those that do not.

The auditor may want to investigate the stores that do not sell gas in more detail. ★

With a precision level guided by \$150,000 (materiality) **this will not be precise enough for a substantive test.**

**Information is much more informative for preliminary analytical review. However, this could also provide supporting evidence for the SAP (predictive test).**

64

## Step 2 & 3: Develop the Expectation and Compare to Recorded Balance- Example (con't)

**Procedure:** This is the beginning of the predictive tests (SAP). The auditor looked at the difference in the aggregate noting that once the new stores were backed out.

### Step 3: Compare to recorded balance.

**Conclusion:** Evaluating the stores that were in operation all year, the test expectation was met for the analytic. That leaves the auditor to evaluate the new stores in a different way.

	Actual Sales	Actual Total Square Footage
Total sales and square footage for the year	\$35,719,650	80,000
<b>New stores</b> Less: sales and square footage for stores opened part of the year (store nos. 1, 4, 10, 13, 22)	4,155,386	15,500 @ \$490 sq ft X 15,500 = \$7,595,000
Sales and square footage for stores opened for full year	\$31,564,264	64,500
Average sales per square foot (provided by NACS)		× \$490
Expected total sales for stores open for a full year		\$31,605,000
Actual On the Go sales for the current year (stores open for a full year)		31,564,264
<b>Difference</b>		<b>\$40,736 or 0.13%</b>

65

## Step 4: Investigate Differences - Example (con't)

★ Sells gas  
\* New store

Source: NACS (National Assn. of Convenience Stores)

**Procedure:** The auditor wanted to look at the stores individually. Here the auditor is taking actual sales per square ft for stores X the NAC average per square foot. To evaluate the differences on the individual store level.

Store	Current Year Sales (\$)	Square Feet	Sales per Square Foot (\$)	Average per Square Foot per NACS (\$)	Difference (\$)	Difference (%)
1*	781,793	2,500	313	490	177	36.20
2	1,146,438	2,500	459	490	31	6.40
3	1,195,004	2,500	478	490	12	2.40
4*	951,784	4,000	238	490	252	51.40
5	1,981,409	4,000	495	490	(5)	(1.10)
6	2,300,671	4,000	575	490	(85)	(17.40)
7	1,956,481	4,000	489	490	1	.02
8	1,799,713	4,000	450	490	40	8.20
9	1,820,641	4,000	455	490	35	7.10
10*	774,954	2,500	310	490	180	36.70
11	1,159,004	2,500	464	490	26	5.40
12	1,139,475	2,500	456	490	34	7.00
13*	948,522	4,000	237	490	253	51.60
14	1,984,777	4,000	496	490	(6)	(1.30)
15	2,293,847	4,000	573	490	(83)	(17.00)
<b>Total (all stores)</b>	<b>\$35,719,650</b>	<b>80,000</b>	<b>\$446</b>	<b>\$490</b>	<b>\$44</b>	<b>averages</b>

Only the first half of the stores is shown with the total at the bottom.

**Observation:** Compared to the NACS standard there are certain stores that stand out as unusual.

▲ 1,4,10, 13 have high percentage differences (>20%). They are new stores.

▲ 6 and 15 are unusual because they sell gas so should not have fewer average sales than the benchmark.

Auditor would investigate those stores.

66



## Step 4: Investigate Differences - Example (con't)

**Overall Conclusion:** The auditor determines how much precision is necessary for the test. With \$150,000 for materiality, the auditor determines the level of precision needed. The first test showed that the test expectation met for the stores that were in operation all year. The issue appeared to be with the new stores.

To get a better handle on the differences the auditor looked at the stores individually. Only the first page of stores was shown in the example, but the auditor identified that that the drivers of the differences was stores 1,4,10, 13. These are new stores.

At the same time the auditor identified that stores 6 and 15 are unusual because they sell gas so should not have fewer average sales than the benchmark.

Auditor would investigate those stores by inquiry of management. The answers provided by management should be corroborated by documents or other evidence.

67



## Engagement Questions

1. Do you believe that the analysis for the existing stores is sufficient to conclude that the test expectation was met?
2. What follow-up do you believe the auditor should perform on the new stores?
3. What tests would you perform to ensure the reliability of the data?

68

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## Step 4: Investigate Differences

- Auditor should corroborate explanations for significant differences by obtaining sufficient appropriate audit evidence.
- The auditor should not simply rely on discussion with accounting personnel. Consider:
  - Inquiries of persons outside the client's organization.
  - Inquiries of independent persons inside the client's organization.
  - Evidence obtained from other auditing procedures
  - Examination of supporting evidence. The auditor may also request and examine supporting documentary evidence of transactions to corroborate explanations.

69



## Steps 5 & 6, When the Auditor Cannot Resolve Unexplained Differences

5. If reasonable explanations cannot be obtained and corroborated for amounts over the threshold, try to disaggregate the balance and test a portion of it by SAP and another portion by tests of details
6. Where the auditor is unable to substantiate the unexplained differences over the threshold and does not wish to perform other substantive tests, consider the effects both individually and in the aggregate of misstatements (known and likely) that are not corrected by the entity.

70

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## Engagement Questions

1. An auditor uses an SAP to test prepaid expenses. The prepaid balance at 20X1 was \$19,225 and at 20X0 was \$14,550. Materiality is \$60,000. Is follow up on this difference necessary?
2. An auditor performs SAP on operating expenses. Payroll, taxes and benefits were aggregated, office expenses were aggregated. Contracts were tested separately. These procedures covered 80% of the expenses. Materiality is \$20,000. The auditor identified differences in the aggregate of \$52,000 in 4 expense accounts. Individually there were no amounts over materiality. The auditor did not test controls. Is follow up on this difference necessary?

71



## Engagement Questions

1. An auditor uses an SAP to test prepaid expenses. The prepaid balance at 20X1 was \$19,225 and at 20X0 was \$14,550. Materiality is \$60,000. Is follow up on this difference necessary? **No, the auditor would conclude that the possibility of a material misstatement is remote.**
2. An auditor performs SAP on operating expenses. Payroll, taxes and benefits were aggregated, office expenses were aggregated. Contracts were tested separately. These procedures covered 80% of the expenses. Materiality is \$20,000. The auditor identified differences in the aggregate of \$52,000 in 4 expense accounts. Individually there were no amounts over materiality. The auditor did not test controls. Is follow up on this difference necessary? **The auditor should consider the deviations both individually and aggregate when evaluating results. Additional procedures should be performed such as:**
  - **Obtain more information on expense fluctuations from the client, scan the GL for unusual items.**
  - **Vouch sufficient expenses in those areas where necessary.**

72



## Audit Documentation

- Expectation and the factors considered in its development
- Results of the comparison of the recorded amounts, or ratios developed from recorded amounts, with the expectations
- Any additional auditing procedures performed relating to the investigation of fluctuations or relationships that are inconsistent with other relevant information or that differ from expected values by a significant amount and the results of such additional procedures
- Conclusions reached.

73



## Other Uses for Data Analytics

- Analytical procedures can be used as specific fraud diagnostics/tests
  - Scan purchase orders with blank approvals/zero amounts
  - Split purchase so they are just under the threshold for approval or second approval.
  - Run queries for:
    - Duplicate invoices
    - Invoice amount paid to goods received.
    - Invoices with no matching receiving report.
    - Multiple invoices with the same purchase order and date
    - Pattern of sequential invoices from a vendor
    - Nonapproved vendors
    - Suspect purchase of consumer items
    - Employee and vendor with the same information (name, address, phone number, bank acct. number)

74

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## Other Uses for Data Analytics

- Analytical procedures can be used as specific fraud diagnostics/tests (con't)
  - Run queries for:
    - Vendor address is a mail drop.
    - Payment without invoice
    - Vendor master charges for brief periods
    - Transactions made with P cards on weekends or holidays.
    - Unusually high sales discounts
    - Frequent credit memos to the same customer
    - Shipments where the employee address matches the ship address.
    - Terminated employees on the payroll.
    - Unusually high overtime amounts and rates
    - Invalid tax IDs
    - Unusually high commissions
    - Multiple employees with the same addresses
  - Use Benford's law to spot anomalies

75

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## Unit: 2

Performing Analytical Procedures in  
Review Engagement





## AR-C 90 Reviews of Financial Statements

- Objective of a review: Express limited assurance that there are no material modifications that should be made to the financial statements for them to be in conformity with an applicable financial reporting framework.
- Two primary procedures in a review- inquiry and analytics
- Peer reviewers have noted that accountants are not performing an appropriate level of analytics to support the review conclusion.
- Accountant may perform procedures ordinarily performed in an audit, if deemed necessary.
  - This does not negate that this level of service is a review

77



## AR-C 90 Reviews of Financial Statements

- SSARS 25 defines limited assurance as less than reasonable assurance in an audit but acceptable to form the conclusion in the accountant's review report
- Sufficiency of evidence to support review is both qualitative and quantitative
- Review evidence is cumulative in nature
- Risk **awareness**- not a risk assessment as performed in an audit but necessary for design of review procedures.
- To reiterate- if analytical procedures are not properly performed this would be considered a nonconforming engagement

78



## AR-C 90 Reviews of Financial Statements

- Even in a review the accountant computes materiality.
- Misstatements, including omissions, are considered to be material if there is a **substantial likelihood** that, individually or in the aggregate, they would influence the judgment made by a **reasonable user** based on the financial statements. (updated by SSARS 25).
- Prior to performing analytical procedures, accountant should update their knowledge of the industry and client's business.
  - Operating characteristics, nature of assets, liabilities, revenue and expenses, related party transactions, accounting policies, etc.
- Inquiries- this is the first of 2 major procedures to be performed. Inquiries should be made of management with accounting and financial reporting responsibility, and others within the entity including governance if necessary

79



## When Choosing Analytical Procedures

- Accountant determines the suitability of particular analytical procedures
- Considers the reliability of data considering the source, comparability, and nature and relevance of information available
- No requirement to understand internal controls in a review
- Accountant is required to reconcile the financial statements with supporting records

80 Kaplan Inc. Communications

2022



## Review Analytical Procedures

- **Fluctuation analysis** is the process of comparing recorded amounts (or developing ratios off of those recorded amounts) with expectations and following up on those that appear to be inconsistent.
- **Scanning** is reviewing various sources of financial information to identify any significant or unusual items for follow up
- **Trend analysis** – Compares a current year's balance with its corresponding previous years or years' balance(s) to see if the balances are varying significantly over time.
- **Ratio analysis** – Compares current year ratios with those from the prior year(s), or to industry averages to uncover inconsistencies
- **Regression analysis**- this is an analytic that can be used to obtain better precision. It is typically used in financial statement audits but less used in reviews because there is less need for precision.

81



## Six Step Process

- Analytical procedures- 6 step process
- **Step 1** -- Develop the expectation using plausible relationships using industry and client data
  - Consider materiality in determining the level of disaggregation needed for limited assurance.
- **Step 2** -- Set a threshold for investigation.
  - Thresholds should be established in the context of overall materiality and are often set at levels that are less than materiality.

82



## Six Step Process

- **Step 3** -- Perform the analytic.
  - Compare the financial statements with comparable information for the prior period, considering knowledge about changes in the entity's business and specific transactions
  - Consider plausible relationships among both financial and, when relevant, nonfinancial information
  - Compare recorded amounts or ratios developed from recorded amounts to expectations developed by the accountant through identifying and using relationships that are reasonably expected to exist, based on the accountant's understanding of the entity and the industry

83



## Six Step Process

- **Step 4** – Accountant investigates variances that are greater than the threshold. No requirement to substantiate management's answers.
  - The accountant should ask:
    - Should there be a change when the general ledger does not show one? What should have changed, but did not?
    - Are there any unrecorded transactions that are being "hidden"? What should be there, but is not?
  - Management should explain the whole difference, not just the amount that is over the threshold
  - Beware of factors that might net to a small number

84



## Six Step Process

- **Step 5-** If the accountant believes the explanations are reasonable then they stop at this point.
- **Step 6-** Where explanations do not appear to be reasonable, the accountant should perform additional procedures.
  - Perform additional review procedures when necessary.
    - Confirm receivable balances
    - Check physical inventory items for obsolescence
    - Review minutes of board meetings if this was not already performed in gaining a knowledge of the entity

85



## Review Analytic Example

### EXPECTATION

Based on the client's past sales growth and the articles published by the American Medical Association on the beneficial effects of B-50, Magnesium and Glucosamine Chondroitin, we expect the client's sales growth to be 10, 15 and 20 percent, respectively.

We expect the client's costs to increase by 10 percent, mainly due to an increase in supplier prices.

<u>Expected</u>	<u>B-50</u>	<u>Magnesium</u>	<u>G.C.</u>	<u>TOTAL</u>
P/Y Sales	\$2,800,000	\$2,180,000	\$13,520,000	
Increase	<u>10%</u>	<u>15%</u>	<u>20%</u>	
Expected Sales	<u>\$3,080,000</u>	<u>\$2,507,000</u>	<u>\$16,224,000</u>	\$21,811,000
P/Y Costs	\$1,080,000	\$1,016,000	\$ 9,966,000	
Increase	<u>10%</u>	<u>10%</u>	<u>10%</u>	
Expected Costs	<u>\$1,188,000</u>	<u>\$1,117,600</u>	<u>\$10,962,600</u>	<u>\$13,268,200</u>
Expected Gross Profit	<u>\$1,892,000</u>	<u>\$1,389,400</u>	<u>\$ 5,261,400</u>	<u>\$ 8,542,800</u>
Expected Gross Profit Percent	61.4%	55.4%	32.4%	39.2%

86 Kaplan Inc. Communications

2022



## Review Analytic Example (con't)

	<u>B-50</u>	<u>Magnesium</u>	<u>G.C.</u>	<u>TOTAL</u>
Expected Sales	\$3,080,000	\$2,507,000	\$16,224,000	\$ 21,811,000
Actual Sales	<u>2,680,200</u>	<u>2,497,000</u>	<u>16,352,000</u>	<u>21,529,200</u>
Variance	<u>399,800</u>	<u>10,000</u>	<u>(128,000)</u>	<u>281,800</u>
Expected Costs	\$1,188,000	\$1,117,600	\$10,962,600	\$13,268,200
Actual Costs	<u>1,206,350</u>	<u>1,146,320</u>	<u>10,988,980</u>	<u>13,341,650</u>
Variance	<u>\$ (18,350)</u>	<u>\$ (28,720)</u>	<u>\$ (26,380)</u>	<u>\$ (73,450)</u>
Actual Gross Profit %	55%	54.1%	32.8%	38%
<b>Expectation</b>	<b>61.4%</b>	<b>55.4%</b>	<b>32.4%</b>	<b>39.2%</b>
				
	<b>Investigate</b>	<b>Test Expectation Met</b>		

87

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2022



## Review Analytic Example (con't)

- Client explained that with regard to B-50 they ran a promotion for 5 months offering customers a 20% discount.
- Accountant might have accepted this answer and not pursued any further work since substantiation is not required. The accountant performed one more analytical procedure.

### ADDITIONAL WORK PERFORMED on B-50

Five months actual sales during promotion	\$1,500,000
Impact of discount (1,500,000 ÷ 80% = 1,875,000-1,500,000)	375,000
Seven month sales	<u>1,105,200</u>
Revised Expected Sales	2,980,200
Sales per General Ledger	<u>2,680,200</u>
Variance	<u>\$ 300,000</u>

88

Kaplan Inc. Communications

2022



## Review Analytic Example (con't)

- Materiality for this client was \$225,000
- Since the accountant was looking at actual sales of product the accountant thought there might be a misstatement since the GL was off by \$300,000. She asked the client to look into the issue.
- Client reported back that a sale had not been recorded because it was right at year end, cash had not been received. A journal entry should have been recorded. The sales journal did not interface with the GL so the misstatement was not detected by management.
- The client recorded an adjustment



## Review Documentation of Analytical Procedures

Explicitly requires documentation of:

- Expectations and factors used to develop
- Comparison of expectations to recorded amounts
- Management's responses
- Additional procedures to investigate variances
- Review Conclusion



## Has Sufficient Review Evidence Been Gathered?

- The accountant should evaluate whether sufficient appropriate review evidence has been obtained from the procedures performed
- If the accountant is not able to obtain sufficient appropriate review evidence to form a conclusion, the accountant should withdraw from the engagement.



## Reminders

- Post event evaluation:** Please complete the course evaluation that will be pushed out to you as a pop up link on your screen. We welcome your feedback!

**KAPLAN**