

SA 520 – “Analytical Procedures”

MEANING

1. Analytical procedures means evaluations of financial information through analysis of plausible relationships among both financial & non-financial data
2. A.P also encompass investigation of ~ identified fluctuations OR relationships that are inconsistent with other relevant info. OR that differ from expected values by a significant amount.
3. Examples of Analytical Procedures having

E.g. of Analytical Procedures having Consideration of comparisons of entity's financial info.

- Comparable info. for prior periods
- Anticipated results, such as : budgets or forecasts, or expectations of auditor
- Similar industry info., such as comparison of entity's ratio ---> of sales to a/c receivable with industry averages or with other entities of comparable size in same industry.

Examples of Analytical Procedures having consideration of relationships are:

- Among elements of financial info. that would be expected to conform to a predictable pattern, such as gross margin %ages.
- B/w financial & relevant non-financial info., such as payroll costs to no. of employees

ANALYTICAL PROCEDURES MAY BE SEGREGATED INTO FOLLOWING:

- A comparison of client and industry data
- A comparison of client data with similar prior period data
- A comparison of client data with clients' expectations or budgeted results
- A comparison of client data with auditors' determined expected results and
- A comparison of client data with expected results using non-financial data

PURPOSE OF ANALYTICAL PROCEDURES

- Analytical procedures use comparisons & relationships to assess if a/c balances appear reasonable.
- Compare balances in P&L a/c with previous year. It would be possible to find out reasons for change in profits (increase or decrease).
 - By calculating expense ratios from P&L & comparing with previous year, it is possible to ascertain changes in item of expenses w.r.t sales.
 - If differences are material, auditor would accretion reasons & assess if a/c is manipulated to inflate/suppress profits?
- Often it is possible to independently verify correctness of items of expenses included in P&L.
 - E.g., Quantity of sugar sold can be verified from GST paid. Amount of income or expenses which has direct relationship with profits or sales can be verified independently, e.g. commission paid to selling agent as % of sales.
- A.P can help identify existences of unusual transactions or events that might indicate matters that have audit implications
- Unusual relationships identified may assist auditor in identifying ROMM, due to fraud.

ANALYTICAL PROCEDURES DURING PLANNING

In Planning stage, Analytical Procedures assist auditors in understanding client's business and in identifying areas of potential risk by indicating aspects of entity's business of which he was previously unaware. This info will assist auditors in determining NTE of his other audit procedures. Analytical Procedures in planning use both financial data & non-financial info.

*Timing of AP ~ Required in all 3 phases: Planning phase, testing phase & completing phase

SUBSTANTIVE ANALYTICAL PROCEDURES

1. Auditor's substantive procedures at assertion level may be
 - Tests Of Details,
 - Substantive Analytical Procedures, or
 - Combination of both.
2. Decision about which procedures to perform, including whether to use substantive analytical procedures, is based on auditor's judgment about expected effectiveness & efficiency of available audit procedures to reduce audit risk to an acceptably low level.
3. Auditor may inquire mgt. as to availability & reliability of info. needed to apply SAP, and results of any such analytical procedures performed by entity.
4. Effective to use data prepared by mgt., provided auditor is satisfied that data is properly prepared.

FACTORS TO BE CONSIDERED FOR SUBSTANTIVE AUDIT PROCEDURES

1. **Availability of Data** - Availability of reliable & relevant data will facilitate effective A.P
2. **Disaggregation** - Degree of disaggregation in data can directly affect degree of its usefulness in detecting misstatements
3. **Account Type** - Income statement a/c tend to be more predictable, whereas balance sheet a/c represent are subject to greater mgt. judgment
4. **Source** - Some classes of transaction tend to be more predictable because they consist of numerous, similar transactions, (e.g., routine processes). Whereas transactions recorded by non-routine and estimation SCOTs (Significant Classes Transactions) are often subject to mgt. judgment & therefore more difficult to predict. e.g. Transactions of routine nature like sales & purchases are predictable. However, Significant Classes Transactions are not frequent in nature. E.g.: Expenditure on Research & Advertisement are subject to mgt. judgement & difficult to predict
5. **Predictability** - SAP are more appropriate when an a/c balance or relationships b/w items of data are predictable (e.g., b/w sales & cost of sales or b/w trade receivables & cash receipts). A predictable relationship is one that may reasonably be expected to exist and continue over time.
6. **Nature of Assertion** - SAP may be more effective in providing evidence for some assertions (e.g., completeness or valuation) than for others (e.g., rights & obligations).
7. **Inherent Risk or "What Can Go Wrong"** - When inherent risk is higher, we may design TOD to address higher inherent risk. When significant risks have been identified, audit evidence obtained solely from SAP is unlikely to be sufficient.

TECHNIQUES AVAILABLE AS SUBSTANTIVE ANALYTICAL PROCEDURES

Design of SAP is limited only by availability of reliable data & experience & creativity of audit team

1. Trend analysis

- It is a commonly used technique. It is comparison of current data with prior period balance or with a trend in two or more prior period balances.
- Auditor evaluates whether current balance moves in line with trend established. E.g ~ Compare salary paid by co. during year with salary paid for several earlier years. An unusual increase in such expense may indicate fraudulent payments to fake employees

2. Ratio analysis

- Ratio analysis is useful for analysing asset & liability accounts as well as revenue & expense a/c. An individual B/s a/c is difficult to predict on its own, but its relationship to another a/c is often more predictable (e.g., sales to trade receivables).
- Ratios can also be compared over time or to the ratios of other co. in same industry.

Commonly used Ratios include:

- | | |
|--|---|
| <ul style="list-style-type: none"> ▪ Gross profit Turnover ▪ Accounts receivable turnover ▪ Trade receivables | <ul style="list-style-type: none"> ▪ Inventory turnover ▪ Profitability, Leverage & Liquidity ▪ Freight expense as a %age of sales revenue |
|--|---|

3. Reasonableness tests -

- Unlike trend analysis, this **does not rely on events of prior periods**, but upon **non-financial data** for period under consideration (e.g., occupancy rates to estimate rental income).
- These tests are generally **more applicable to income statement a/c**. E.g. ~
 - Raw Material Consumption to Production (quantity)
 - Sales discounts and commissions against sales volume
 - Rental revenues based on occupancy of premises

4. Structural modelling -

- A modelling tool constructs a **statistical model** from financial and/or non-financial data of **prior a/c periods** to predict current a/c balances (e.g., linear regression)

ANALYTICAL PROCEDURES USED AS SUBSTANTIVE TESTS

When designing & performing AP as substantive procedures as per SA 330, auditor shall -

- **Determine suitability** of particular analytical procedures taking a/c assessed of ROMM & TOD
- **Evaluate reliability of data** from which auditor's expectation is developed
- **Develop expectation of recorded amounts** & evaluate whether expectation is sufficiently precise to identify material misstatements
- Determine **amount of difference that is acceptable** without further investigation

SUITABILITY OF PARTICULAR ANALYTICAL PROCEDURES FOR GIVEN ASSERTIONS

1. SAP are generally more **applicable to large volumes of transactions** that **tend to be predictable** over time. Suitability of a particular analytical procedure will depend upon auditor's assessment of how effective it will be in detecting a misstatement
2. In some cases, even an **unsophisticated predictive model** may be **effective** as an analytical procedure
 - E.g. ~ If entity has a known **no. of employees** at **fixed rates** of pay, Use this to estimate **total payroll costs** with a high degree of accuracy, thereby reducing need to perform TOD on payroll.
3. Different types of analytical procedures provide **different levels of assurance**.
 - E.g., ~ **Prediction of total rental income** on a building, taking **rental rates**, no. of apartments & vacancy rates, can provide **persuasive evidence** & may eliminate need for TOD. Calculation & comparison of **gross margin %ages** to confirm revenue provide less persuasive evidence
4. Determination of suitability of particular SAP is influenced by nature of assertion & auditor's assessment of ROMM. E.g., if controls are weak, place more reliance on TOD
5. **Particular SAP** may also be considered **suitable when TOD are performed on same** assertion.
 - E.g., For evidence regarding valuation for a/c receivable, auditor may apply analytical procedures to an aging of customers' a/c.

RELIABILITY OF DATA

Reliability is influenced by its source, nature & is dependent on circumstances in which it is obtained.

- **Source** of info. available. E.g., more reliable when obtained from independent sources
- **Comparability** of info available. E.g., broad industry data need to be supplemented to be comparable to entity that produces & sells specialised products
- **Nature & relevance of info.** available. E.g., whether budgets established as results to be expected rather than as goals to be achieved

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- **Controls over preparation** of info. to ensure its completeness & accuracy. E.g. ~ When controls are effective, greater confidence in reliability of info., Controls over non-financial info. may be tested

EVALUATION OF WHETHER EXPECTATION IS SUFFICIENTLY PRECISE

Matters relevant to auditor's evaluation of whether expectation can be developed sufficiently precisely to identify a material misstatement include:

1. **Accuracy with which the expected results** of substantive analytical procedures **can be predicted**.
 - E.g., Auditor may expect greater consistency in comparing GP margins **than** in comparing **discretionary expenses**, such as research or advertising.
2. **Degree** to which info can be **disaggregated**.
 - E.g., SAP may be **more effective** when applied to financial info on **individual sections** of an operation, than when applied to FS as a whole
3. **Availability of the info**, both financial & non-financial.
 - E.g., Consider whether non-financial info, such as no. of units produced or sold, is available. If available, consider reliability of info.

AMT. OF DIFFERENCE OF RECORDED AMOUNTS FROM EXPECTED VALUES THAT IS ACCEPTABLE

- Auditor's determination of amount of difference from expectation that can be accepted without further investigation is influenced by **materiality & Desired level of assurance**
- SA 330 requires auditor to **obtain more persuasive evidence, higher the assessment of risk**.
- As **risk increases**, amount of **difference considered acceptable** without investigation, **decreases**.

INVESTIGATING RESULTS OF ANALYTICAL PROCEDURES

If analytical procedures **identify fluctuations or relationships** that are **inconsistent** with other info or that **differ from expected values** by significant amount, auditor shall investigate such differences by-

1. **Inquiring of management** & obtaining appropriate audit evidence relevant to mgt's responses
2. **Performing other audit procedures** as necessary in circumstances -
 - E.g. ~ When management is unable to provide explanation or Explanation, together with evidence obtained for management response is not considered adequate

ANALYTICAL PROCEDURES THAT ASSIST WHEN FORMING CONCLUSION

- **Conclusions** drawn **from** results of **analytical procedures designed & performed** are intended to **corroborate** with **conclusions formed during audit of individual components** or elements of the F.S.
 - This **assists auditor**, to draw reasonable conclusions, on which **to base auditor's opinion**.
 - Results of such analytical procedures **may identify a previously unrecognised ROMM**.
 - In such circumstances, SA 315 requires auditor to revise assessment of ROMM & modify FAP procedures accordingly.
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