ANALYTICAL PROCEDURES

Highlights of Technical Clinic

BY
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Analytical procedures are an important part of an audit process and consist of evaluations of financial information through analysis of plausible relationships among financial and non-financial data. Rick Chan, Partner, Head of Technical and Training, Mazars LLP, facilitated this topic for a group of practitioners at ISCA's monthly technical clinic. Here are the highlights of the discussion.

Q1 WHAT ARE THE PURPOSES OF ANALYTICAL PROCEDURES?

Analytical procedures are performed at three stages of audit, namely planning, execution and completion, serving three primary purposes:

(1) Risk assessment
The auditor carries out analytical procedures at the planning stage to identify financial statement areas that are of higher risk for the purpose of directing the focus of the audit.

(2) Obtain assurance
The auditor may obtain assurance through substantive analytical procedures only or in combination with other audit testing (such as tests of controls and substantive test of details) in respect of the applicable assertions on financial statement areas.

Analytical procedures are performed at three stages of audit, namely planning, execution and completion, serving three primary purposes: risk assessment, obtain assurance and financial analytical review.

(3) Final analytical review
The auditor performs analytical procedures at the end of the audit to assess whether the financial statements are consistent with the auditor's understanding of the entity. Where the results of the overall analytical review identify an inconsistent trend which may imply potential misstatement, the auditor needs to investigate the reason, re-assess the risk of the affected balance and perform further audit procedures. To achieve its purpose, a final analytical review should be performed on the final adjusted numbers at the end of the audit.

Q2 WHAT ARE THE TYPES OF ANALYTICAL PROCEDURES?

There are various methods to perform analytical procedures, from simple comparisons to regression analysis using advanced statistical techniques. We share three types of analytical procedures which are commonly used by the auditor.

(1) Trend analysis
This involves the analysis of changes in an account over time. This is more effective for a company whose business demonstrates a consistent sales pattern. Take the example of a company that sells furniture in Singapore. Based on the audit of the company in the last few years, the auditor has identified the company's sales pattern: sales are generally higher in festive months. Hence, if sales during non-festive months are exceptionally high, it is an indication of potential risk of material misstatement and the auditor needs to investigate further and consider performing additional audit procedures.

(2) Ratio analysis
This includes comparison with benchmarks, or comparing relationships between financial statements accounts and between an account and non-financial data. Let's illustrate using an example where a company purchases products from its related companies and sells to its customers at a fixed gross profit (GP) margin of 22% on a back-to-back basis. In addition to a test on details performed on the individual sales and purchases transaction, the auditor can also obtain assurance by analysing the GP margin of each sales transaction. If the GP margin deviates from 22%, the auditor would need to investigate and obtain appropriate corroborative audit evidence on the deviation identified.

(3) Reasonableness testing
This involves the analysis of accounts, or changes in account between accounting periods, that entails the development of a model to form an expectation based on financial data, non-financial data, or both. For example, rental of office premises at a monthly rate of $10,000 is supported by a signed rental agreement between the company and the landlord. Multiplying the monthly rental against the rental period would give the auditor an estimated rental expenses to check against the rental expenses recorded in the general ledger. Similarly, any difference identified needs to be investigated, corroborated, and documented.

Q3 HOW DOES THE AUDITOR PERFORM SUBSTANTIVE ANALYTICAL PROCEDURES?

There are four distinct steps to performing substantive analytical procedures. We illustrate using an example where the auditor is performing substantive analytical procedures to check payroll cost of a company with five employees. There is no change to its number of employees and employees' salaries in the year of audit.

STEP 1 *Evaluate the reliability of the data and develop an independent expectation* Through inquiring management, the auditor confirms that there are no changes to the company's payroll process. The company continues to maintain employment contracts for all employees and salaries are paid to employees by cheque. Employees will acknowledge on the payment vouchers upon receipt of their monthly pay cheques. It is also the company's practice to pay two months' bonus to each employee every year, as supported by the actual bonus payout by the company in the past few years. Using the last month's salary figures extracted from the salary payment vouchers to the employees, the auditor is able to form an expectation of the estimated staff cost for the year (refer to Table 1).

STEP 2 *Define a significant difference or threshold* The auditor needs to determine a threshold that can be accepted without further investigation. In our illustration, the auditor expects a high level of assurance from the substantive analytical procedures and he is able to develop a relatively precise expectation. Hence, the auditor has determined that any difference identified must be investigated regardless of materiality.

★ **Three types of analytical procedures commonly used by auditors are trend analysis, ratio analysis and reasonableness testing.**

STEP 3 *Compute differences* Thereafter, the auditor compares the expected amount with the actual payroll cost and compute the difference (if any).

STEP 4 *Investigate and corroborate significant differences to conclude* The auditor needs to investigate, corroborate and document the differences identified. Through further inquiry with management, the auditor found that the difference arises from a special bonus amounting to 1.5 months of the monthly total employees' salaries accrued for all five employees as at year-end. To corroborate management's explanation, the auditor performs further audit procedures by checking to the accrual schedule and subsequent payment vouchers for the validity of the special bonus accrual and payout subsequent to year-end. Last but not least, the work performed needs to be sufficiently documented in the audit work papers to enable an experienced auditor, having no previous connection with the audit, to understand the work that has been performed.

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TABLE 1 illustrates the computation

DESCRIPTION	COMPUTATION
Expected amount = Total salary paid out in December 2013 multiply by the total number of months in the year (12) and bonus rate (2 months)	\$13,500 x 14 = \$189,000
Staff cost for the year ended per general ledger	\$209,250
Difference	\$20,250

Q4 WHAT WOULD THE AUDITOR CONSIDER BEFORE DECIDING TO APPLY SUBSTANTIVE ANALYTICAL PROCEDURES?

We illustrate using two cases where the auditor performs work to check rental income.

CASE 1 A company that owns a property and generates rental income from that property.

CASE 2 A company that owns 1,000 properties and sublets the properties to 1,000 different tenants.

For the two cases, the following factors are considered:

(1) Understanding of the underlying data

The underlying data for the rental income consists of monthly rental rate and rental period of each property. This information can be extracted from the rental agreement. In Case 1, the data is readily available and easily predictable by the auditor. Thus the auditor can develop a relatively precise expectation by multiplying monthly rental rate with rental period of that property. However, for Case 2, there is voluminous data and therefore, many more variables that will affect the precision of the substantive analytical procedure results. Hence, it will be challenging to set precise expectation and perform an effective substantive analytical procedure. Under such circumstances, a test of details should be performed and the auditor may consider testing the effectiveness of the company's accounting and internal controls for processing rental agreements to reduce the sample size for the test of details.

(2) Risk assessed and level of assurance

Revenue is always presumed to be a high risk area for all companies unless rebutted. Hence, the auditor will aim to achieve a high level of assurance from the procedures performed. In Case 1, a relatively precise expectation can be set and therefore, the auditor is able to obtain high assurance from the reasonableness testing. Conversely, in Case 2, it is unlikely that the auditor is able to achieve high assurance on revenue using substantive analytical procedures only, given the challenge in setting precise expectation. However, the auditor can still obtain lower assurance from substantive analytical procedures and perform a combination of test of control and test of details, or test of details only to obtain higher assurance of the rental income for Case 2. ISCA

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