Appendix D

Assurance and Materiality

Introduction

Chapter 7 provides details of how the auditor updates:
- assessment of materiality, planned precision and audit risk;
- determination of components;
- determination of specific financial audit objectives, related compliance with authority objectives, error conditions and irregularities;
- assessment of inherent risk and control risk; and
- assessment of the optimum mix of tests of internal control, analytical procedures and substantive tests of details.

As summarised in Chapter 7, the optimum mix of tests of internal control, analytical procedures and substantive tests of details for one specific financial or compliance with authority audit objective for one component may be different than for a different objective for the same component, or for different components.

As such, the auditor may be:
- placing a lot of reliance on the internal control structure for some objectives and components, but placing little reliance on the internal control structure for others;
- Doing detailed predictive or statistical analysis for some objectives and components but only reviews for reasonableness or comparative analysis for other objectives and components; and
- Using a low confidence level to perform substantive tests of details for some objectives and components, while adopting a high confidence level for other substantive tests of details.

The challenge is to combine all of these different sources of assurance to reach an overall conclusion on the financial statements.

This Appendix does not attempt to provide a mathematical proof; rather, it presents a non-technical discussion. It first considers what the overall error evaluation would be like if the auditor used one substantive sample as the sole source of assurance for the financial statements as a whole. It then considers what the overall error evaluation would be like if the auditor divided the financial statements into components but continued to obtain all of his/her assurance for each component from a substantive sample. Finally, it considers what the overall error evaluation would be like if the auditor used substantive tests of details as only one source of assurance for each component, and used different confidence levels for different components and objectives.

One overall substantive sample as the sole source of assurance for the financial statements as a whole

Assume the auditor sets materiality at Rs. 3,000,000, expected aggregate error at Rs. 816,500 and audit risk at 5%. Also assume that the auditor does *not* divide the financial statements up into components, and does *not* obtain any inherent assurance, or any assurance from testing

the internal control structure or from analytical procedures. Instead, the auditor decides to use one overall substantive sample for the financial statements as a whole. The confidence level used would be 95% – the converse of the 5% audit risk.

It is extremely unlikely that such an approach would be practicable, or cost–effective. However, if it was possible, the auditor would:

- treat all of the transactions and balances in the financial statements as one population;
- use the Rs. 3,000,000 materiality amount and the Rs. 816,500 expected aggregate error; and
- use a confidence level of 95% to sample the population.

In this scenario, some of the selected sample items would be payroll expenditures, some would be revenue transactions, some would be part of the year-end cash balance, some would be part of the year-end long-term debt balance, etc. The auditor would perform the appropriate audit procedures on each sample item.

Using this approach, the error evaluation for one substantive sample would become the overall error evaluation. The auditor would have one most likely error for the financial statements as a whole, one upper error limit for overstatements for the financial statements as a whole, and one upper error limit for understatements for the financial statements as a whole.

Substantive samples as the sole source of assurance for each component

Next, assume the auditor divides the financial statements into components but continues to obtain all of his/her assurance from a substantive sample performed at a 95% confidence level.

In this scenario, the auditor would likely have virtually the same sample size in total as he/she had in the previous scenario. The sample size for payroll expenditures would be virtually the same as the number of sample items in the global sample that represented payroll expenditures; the sample size for revenue transactions would be virtually the same as the number of sample items in the global sample that represented revenue transactions, etc. In other words, really nothing would change.

The reason is that:

- the auditor continues to use the same Rs. 3,000,000 materiality amount, and the same Rs. 816,500 expected aggregate error;
- the auditor continues to use the same 95% confidence level; and
- the population value, in total and for each component, has not changed.

Given this fact the auditor would add up the most likely errors from each component, and calculate an overall most likely error, an overall upper error limit for overstatements and an overall upper error limit for understatements. It is likely that the overall most likely error would be virtually the same as it was when the auditor used one overall substantive sample as the sole source of assurance.

As for the upper error limit, the error evaluation process results in a very conservative overall error evaluation. This is because the largest basic precision for each of overstatements and understatements is being used, and because the sum of the precision gap widenings will almost always be much higher than if the entire financial statements were treated as one population and one overall sample had been taken.

Substantive samples as only one source of assurance for each component and performed using different confidence levels

Next we move on to the approach described in this manual, where substantive samples are only one source of assurance. The auditor also obtains inherent assurance, assurance from tests of internal control, and assurance from analytical procedures. Furthermore, the auditor may obtain different amounts of assurance from these other sources, resulting in different confidence levels for different substantive samples.

Under this scenario, the auditor can *still* use the error evaluation described above.

The reason is that the auditor:
- continues to use the same Rs. 3,000,000 materiality amount and the same Rs. 816,500 expected aggregate error; and
- while the confidence levels being used for the substantive tests of details are not the same, the auditor is obtaining, *in total,* the same 95% overall assurance with respect to each component and objective as he/she was obtaining in the previous scenarios.

In effect, then, all the auditor has done is change the sources of assurance to obtain the same overall audit assurance of 95%.

To make this work, though, the auditor needs to address two other matters.

First, in order to ensure that he/she is, indeed, getting the required 95% assurance from all of the tests, the auditor needs to deal with any conflicting audit evidence.

Second, while the most likely error is not affected by the confidence level being used, and can therefore be added together just like in the previous scenarios, the further possible error (the difference between the upper error limit and the most likely error) *is* affected by the confidence level being used. To deal with this, the auditor will need to make a conservative estimate of the further possible error.

Why Allocation of Materiality is Not Required

Introduction

As noted in the Manual, the materiality amount that is determined during the audit planning phase is used for the audit of all components. There is no need to allocate the amount to the various financial statement components. If materiality is set at Rs. 3,000,000 for the financial statements as a whole, the same Rs. 3,000,000 can be used for each financial statement component, and for each specific financial audit objective and error condition.

While a mathematical proof of this is beyond the scope of this manual, it can be illustrated with a numerical example.

Some basic concepts

This example makes use of two basic concepts.

The first concept is that risk and assurance are converses of each other. If the auditor wants to be 95% confident that the financial statements are not materially misstated, this means that the auditor is prepared to take a 5% risk that he/she will fail to detect errors summing to more than the materiality amount.

The second basic concept is that the probability of two mutually exclusive events occurring is the probability of the first event occurring times the probability of the second event occurring. If there is a 5% chance that Event A will occur, and a 5% chance that Event B will occur, the probability that both Event A and Event B will occur is 5% times 5% or 0.25% (.05 x .05 = .0025).

Numerical example

Let's assume that the auditor wants to have 95% assurance that a financial statement is not misstated by more than Rs. 3,000,000. Let's also assume that the financial statement is composed of two components – Component 1 and Component 2.

Based on the theory contained in this manual, the auditor could plan the audit in such a way as to be able to conclude that he/she has:

- 95% assurance that Component 1 is not misstated by more than Rs. 3,000,000; and
- 95% assurance that Component 2 is not misstated by more than Rs. 3,000,000.

How can this be? If the auditor has 95% assurance that Component 1 is not misstated by more than Rs. 3,0000,000, and 95% assurance that Component 2 is not misstated by more than Rs. 3,000,000, how can the auditor have 95% assurance that the two components, in total, are not misstated by more than Rs. 3,000,0000? Shouldn't the total be Rs. 6,000,000?

The reason why the total is not Rs. 6,000,000 is that the probability of *both* Component 1 being misstated by more than Rs. 3,000,000 *and* Component 2 being misstated by more than Rs. 3,000,000 (i.e., that, in total they are misstated by more than Rs. 6,000,000) is *not* 5%. Using the second basic principle noted above, the probability that the components are misstated, in total, by more than Rs. 6,000,000 is 5% times 5% or only 0.25% (.05 x .05 = .0025). Therefore, the auditor has 99.75% (100.00% - 0.25%) assurance that, in total, the two components are not misstated by more than Rs. 6,000,000,

If the auditor has 99.75% assurance that, in total, the two components are not misstated by more than Rs. 6,000,000, how much assurance does the auditor have that, in total, the two components are not misstated by more than Rs. 3,000,000?

Logically, the answer is a lower level of assurance than 99.75%. If, for example, the auditor finished performing his/her work and concluded that the most likely error in the financial statements is Rs. 100,000,000, the auditor may be:

- Virtually certain that the maximum possible error in the financial statement is less than Rs. 6,000,000;

- Reasonably confident that the maximum possible error is less than Rs. 3,000,000; and

- Only somewhat confident that the maximum possible error is less than Rs. 1,500,000.

Therefore, decreasing the materiality amount decreases the amount of assurance that one can get from the same amount of work.

Using monetary unit sampling, the sample size required to obtain 95% assurance that a component is not misstated by more than Rs. 3,000,000 is exactly the same as the sample size required to obtain 77.65% assurance that the component is not misstated by more than Rs. 1,500,000. Therefore, instead of concluding that he/she has 95% assurance that Component 1 is misstated by more than Rs. 3,000,000, the auditor can conclude that he/she has 77.65% assurance that the component is misstated by more than Rs. 1,500,000. The auditor can do the same with Component 2. And in total? Well, if there is a 22.35% (100.00% - 77.65%) risk that Component 1 is misstated by more than Rs. 1,500,000, and a 22.35% risk that Component 2 is misstated by more than Rs. 1,500,000, then the risk that, in total, the financial statement is misstated by more Rs. 3,000,000 is 22.35% times 22.35%, or 5% (.2235 x .2235 = .05). This is, of course, exactly the same as the risk that the auditor is prepared to take that each component is misstated by more than Rs. 3,000,000.

The same result will occur no matter which combination of amounts adding up to Rs. 3,000,000 is used. For example, the sample size required to obtain 95% assurance that a component is not misstated by more than Rs. 3,000,000 is exactly the same as the sample size required to obtain:

- 83.40% assurance that the component is not misstated by more than Rs. 1,800,000; and

- 69.88% assurance that the component is not misstated by more than Rs. 1,200,000.

Therefore the risk that, in total, Component 1 is misstated by more than Rs. 1,800,000 and that Component 2 is misstated by more than Rs. 1,200,000 (i.e., that, in total, the two components are misstated by more than Rs. 3,000,000), is 16.60% (100.00% – 83.40%) times 30.12% (100.00% – 69.88%), or 5% (.1660 x .3012 = .05).

The same result will also occur no matter how many components are used. As long as the amounts being used sum to Rs. 3,000,000, the risk will always multiply out to 5%.

In conclusion, then, there is no need to allocate materiality – the auditor can use the Rs. 3,000,000 materiality amount on each component, and can still conclude with respect to Rs. 3,000,000 overall.