



Financial Accounting - 5



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Dear Friends welcome back to the study of Financial Accounting. Please recall that we used a fictitious case study for an intuitive understanding of the three fundamental accounting statements. Now we shall undertake a more detailed understanding of the principles behind them, so that we may be able to apply them in our different circumstances. We shall follow the earlier pattern, where Bala Sir interacts with the ladies of a Self Help Group (SHG) to explain the theory. In this lesson, we shall discuss in some detail the 'Balance Sheet Equation'. We have added a few exercise questions at the end, so that the reader may try them out, as a self-check on their own comprehension.



As agreed during the last meeting, Bala Sir welcomed the ladies, led by Vaishali, and decided to discuss the balance sheet equation. He told them, "Today, we shall go into some details of the most fundamental accounting equation – the balance sheet equation. This equation is at the root of all accounting that we do, with some additions / modifications, as we shall soon learn. If we are able to keep in our mind this fundamental equation, it would help us to resolve all our doubts that may arise in future. Basically, it says:

$$\text{Assets} = \text{Liabilities}$$

He reminded them the rationale behind this equation – we are recording all the transactions on behalf of APS as a separate entity. Therefore, whatever APS holds as an asset, it owes them to someone outside the business. They have a claim on all the assets of APS. At the time all the 10 women joined hands, contributed Rs. 6000 each and opened a bank account in the name of APS, APS had an asset of Rs. 60,000, and *APS held this asset on behalf of the 10 women – the shareholders of APS.*

Going further, Bala Sir explained that very soon other players come into the business. In our case, the bank came in, and extended a loan of Rs. 340,000 to APS at an annual interest rate of 12%. Therefore, the assets of APS went up to 400,000, and it had an additional liability of 340,000 that APS owed to the bank. As we shall see soon, many more parties come into the life of APS (so to say), and APS holds the assets on their behalf. They belong to two basic categories; *the owners of the business and others*. Liabilities are, therefore, grouped under these two basic categories: the owners of the business and others. Whatever the business owes to the owners is known as Owners Equity or Shareholders Equity and the rest is termed as Liabilities. Therefore, with this new definition of liabilities, Bala Sir rewrote the basic equation as:

$$\text{Assets} = \text{Liabilities} + \text{Shareholders Equity}$$

At this point of time (after the loan was sanctioned and disbursed), the balance sheet equation looked as under:

$$\text{APS's assets (400,000)} = \text{APS's Loan Liability (340,000)} + \text{Shareholders Equity (60,000)}$$

As we have seen before, the totals on both sides must **always** be equal.

Bala Sir now told Vaishali and team to pay attention. He told them that doing business implies keeping correct record of all business transactions. Every business transaction has an impact on the financial position of the business, as captured by the balance sheet. However, it is not possible to do the balancing exercise at each and every transaction. Accountants have, therefore, devised a system of recording, also known as book keeping, that ensures that the balance sheet equation is upheld or maintained at all times. This implies that if there be any change on any side of the equation, there must be a corresponding change on the other side of the equation. Further, this must be logically correct and represent the true facts, after each transaction. Consider the above example, the bank extending a loan of Rs. 340,000. The assets go up by this amount. Therefore, the liabilities also must go up by the same amount. This is known as the double entry book keeping system. For every transaction, there must be at least two entries, with a view to retaining the balance. If we keep recording all transactions faithfully, following the double entry principle, we should have a balance at the end of each and every transaction, and eventually, at the end of the period – a month, quarter, half-year or a year.

Bala Sir further explained that, we start with a given balance sheet at the beginning of a year, we record all the transactions faithfully, following the principle of double entry, and at the end of a financial period (half-year or 1 year), we prepare the new balance sheet. Of-course, there are some more elements to the entire matter, but the essential elements are these.

Continuing with his lesson, Bala Sir asked them to study the balance sheet they had prepared, reproduced below:

APS Balance Sheet (As on October 31, 2021)			
<i>Assets</i>	<i>Amount</i>	<i>Liabilities</i>	<i>Amount</i>
Cash	334,500	Bank loan	340,000
Furniture and Fixtures	118,000	Interest payable	3,400
Prepaid rent	11,000	Accounts payable	100,000
Merchandise inventory	20,000	Shareholders' equity	60,000
Accounts receivable	40,000	Retained Earnings	20,100
Total	523,500	Total	523,500

He drew their attention to the last entry on the liabilities side – Retained Earnings and asked them, how did this item enter the balance sheet? Everyone was uncertain, but Uma recalled vaguely that it had some connection with the Income and Expenditure calculations they made earlier. Bala Sir said, 'Exactly! This was the precise amount that they calculated at the end of the month as the amount of excess of income over expenditure, or the profit they made in their operations'. You may recall that we said, the surplus of Rs. 20,100 that APS earned during the month, actually belongs to the shareholders, and it is also a liability. We try to keep track of these surpluses (or deficits as the case may be), separately through an account called Retained Earnings.

Now, Bala Sir said, we are going to include the retained earnings in our balance sheet equation, as under:

$$\text{Assets} = \text{Liabilities} + \text{Shareholders Equity} + \text{Retained Earnings}$$

As pointed out before, we want to keep track of Retained Earnings separately.

Finally, Bala Sir repeated that Retained Earnings is the excess of income over expenditure:

$$\text{Retained Earnings} = \text{Income} - \text{Expenses}$$

If we substitute this for retained earnings in the above equation, we get the following equation:

$$\text{Assets} = \text{Liabilities} + \text{Shareholders Equity} + \text{Income} - \text{Expenses}$$

In order to keep only the positive sign in our equation, we take expenses to the left-hand side, and we get the following identity:

$$\text{Assets} + \text{Expenses} = \text{Liabilities} + \text{Shareholders Equity} + \text{Income}$$

One last modification – it is customary to distinguish assets into cash and non-cash assets. You have seen that prepaid rent is considered to be an asset. However, as we all know, this is not exactly the same as having Rs. 11,000 in our bank. This is why assets are divided into these two groups: cash and non-cash. If we do so, our balance sheet equation becomes:

$$\text{Cash} + \text{non-cash Assets} + \text{Expenses} = \text{Liabilities} + \text{Shareholders Equity} + \text{Revenue}$$

Please note that accountants use the term ‘Revenue’ for ‘Income’ as most of the income in business arises out of sales revenues.

Bala Sir pointed that all of you might be wondering what was the necessity for making all these modifications to the basic balance sheet equation?

Well, these six categories – Cash, non-cash Assets, on the one hand and Shareholders Equity, other Liabilities, Revenues and Expenses form the basic building blocks for all accounting. Any business transaction can and should be interpreted in terms of these six categories. **Accounting or book keeping means maintaining accounts or books for all transactions happening in business, classified under these six categories.** As you would see in our next session, this equation forms the fundamental basis of our double entry book keeping system. We shall return back to this equation, on every occasion, when we have a question in our mind.

Exercise

Just to make sure that everybody is familiar with this equation; Bala Sir gave them a series of hypothetical (imaginary) situations, and asked them to find the answers. They were encouraged to do this in a group of two. In all situations, they were asked to assume that only change that happens is the change(s) mentioned in the question.

1. Let us say, Assets equal 500. Liabilities are 350. What is Shareholders Equity?
2. Now let us assume that assets go up by 500, and there is no change in Shareholders Equity. What must happen in order to retain the balance?
3. All non-cash assets are 550. Liabilities are 600. Shareholders Equity is 200. What is cash?
4. Cash goes down by 200, and all non-cash go up by 250. What happens to liabilities?
5. Let us introduce another new term dividend. The Board of Directors of a company has the authority or powers to declare payment of dividends to its shareholders, normally out of the profits earned, known as the net income. Net income is another term used by accountants to indicate the excess of income over expenditure. A business may end a year with good amount of net income. A part of it may be distributed as dividends and the balance part is retained with the firm. So we get a new equation, considered to be separate from the balance sheet equation, as under:

$$\text{Net Income} = \text{Dividends} + \text{Retained Earnings}$$

Now consider this question: A firm posted an increase in retained earnings of 1000 in a year, and declared a dividend of 500. What was the firm's net income during the period?

6. Revenues go up by 1000, and everything else remains unchanged except the assets. What is the change in assets?
7. In the last exercise, expenses go up by 500. All other categories are unchanged except cash. What happens to cash?

Finally, Bala Sir assured them that this was necessary, as they would encounter similar situations throughout their business. They must be able to tackle each situation systematically, see all information they have, remember the balance sheet equation, and try to arrive at the missing detail.

