Wall Street Club

# FUNDAMENTAL ANALYSIS

## INDEX


**1. INTRODUCTION TO FUNDAMENTAL ANALYSIS** **2**
1.1 What is an Annual Report? 3
1.2 A look inside an annual financial report 3
1.3 The Financial Statements 4
**2.A. UNDERSTANDING THE P&L STATEMENT - "MEASURING THE INCOME"** **4**
**2.B. READING THE P&L STATEMENT** **7**
2.1 The Top Line of the company (Revenue) 7
2.2 The Expense details 8
2.3 The Profit before tax 10
2.4 Net Profit after tax 10
**3.A. UNDERSTANDING BALANCE SHEET STATEMENT - "ASSETS OWNED AND MONEY OWED"** **12**
**3.B. READING THE BALANCE SHEET STATEMENT** **13**
3.1 Reading the liability side of the balance sheet 14
3.2 Non-Current Liabilities 14
3.3 Current liabilities 15
3.4. Reading the Assets side of Balance Sheet 16
3.5 Non-current assets (Fixed Assets) 16
3.6 Non-current assets (Other line items) 17
3.7 Current assets 18
**4.A. UNDERSTANDING THE CASH FLOW STATEMENT - " CASH IN AND CASH OUT "** **19**
4.1. The 3 Types of Business Activities 19
**4.B. READING THE CASH FLOW STATEMENT** **20**
**5. UNDERSTANDING THE CONNECTIONS B/W THE STATEMENTS** **22**
**6. FINANCIAL RATIO ANALYSIS** **24**
**7. THE PROFITABILITY RATIOS** **24**
7.1. Profit Margins 24
7.2. Accounting for Returns 25
**8. LEVERAGE RATIOS** **26**

8.1. Measuring Financial Leverage 26
8.2. Measuring Liquidity / Credit Risk 27
**9. OPERATING / EFFICIENCY RATIOS 27**
**10. VALUATION RATIOS 28**

# 1. INTRODUCTION TO FUNDAMENTAL ANALYSIS

Fundamental Analysis (FA) is a holistic approach to study a business. When an investor wishes to invest in a business for the long term (say 3 – 5 years) it becomes extremely essential to understand the business from various perspectives. It is critical for an investor to separate the daily short term noise in the stock prices and concentrate on the underlying business performance. Over the long term, the stock prices of a fundamentally strong company tend to appreciate, thereby creating wealth for its investors.

## 1.1 What is an Annual Report?

The annual report (AR) is a yearly publication by the company and is sent to the shareholders and other interested parties. The annual report is published by the end of the Financial Year, and all the data made available in the annual report is dated to 31st March. Annual reports should provide the most pertinent information to an investor and communicate its primary message. For an investor, the annual report must be the default option to seek information about a company.

## 1.2 A look inside an annual financial report

**[**Link for Amar Raja Batteries Limited Annual Report**]**

**Please remember, this chapter's objective is to give you a brief orientation on how to read an annual report. Running through every page of an AR is not practical;**

ARBL's annual report contains the following 9 sections:

- Financial Highlights
- The Management Statement
- Management Discussion & Analysis
- 10-year Financial highlights
- Corporate Information
- Director's Report
- Report on Corporate governance
- Financial Section, and
- Notice

The first section in ARBL's AR is the **Financial Highlights**. Financial Highlights contains the bird's eye view on how the company's financials look for the year gone by. I briefly look through this section to get an overall idea, but I wouldn't say I like to spend too much time on it. The reason for looking at this section briefly is that I would anyway calculate these and many other ratios myself.

The next two sections, i.e. the '**Management Statement**' and '**Management Discussion & Analysis**', are quite important. I spend time going through these sections. These sections give you a sense of what the company's management has to say about their business and the industry in general. As an investor or a potential investor in the company, every word mentioned in these sections is important. In fact, some of the details related to the 'Qualitative aspects', can be found in these two sections of the AR.

In the 'Management Statement' (sometimes called the Chairman's Message), the investor gets a perspective of how the man sitting right on top is thinking about his business. The content here is usually broad-based and gives a sense of how the business is positioned. When I read through this section, I look at how the management attitude is.

Moving ahead, the next section is the '**Management Discussion & Analysis**' or 'MD&A'. This, in my opinion, is perhaps one of the most important sections in the whole of AR. The most standard way for any company to start this section is by talking about the macro trends in the economy. They discuss the overall economic activity of the country and the business sentiment across the corporate world. If the company has high exposure to exports, they even talk about global economic and business sentiment. Following this, the companies usually talk about industry trends and what they expect for the year ahead.

### 1.3 The Financial Statements

Finally, the last section of the AR contains the financial statements of the company. As you would agree, the financial statements are perhaps one of the most important aspects of an Annual Report. There are three financial statements that the company will present namely:

**The Profit and Loss Statement**, reports on how much a business earned in the period of analysis, while providing detail on revenues and expenses.

**The Balance Sheet,** which summarizes what a firm owns and owes at a point in time, as well as an estimate of what equity is worth.

**The Statement of Cash Flows**, which reports on cash inflows and outflows to the firm during the period of analysis and allows for a measure of cash earnings (as opposed to accounting earnings) and cash flows.

[more on accounting earnings and cash earnings later in the cash flow statement section]

You will often come across the term standalone and consolidated figures while traversing these reports. Standalone Financial statements represent the company's standalone numbers/ financials and do not include its subsidiaries' financials. However, the consolidated numbers include the companies' (i.e., Standalone financials) and its subsidiaries' financial statements. It is preferred to look through the consolidated financial statements to represent the company's financial position better.

## 2.A. UNDERSTANDING THE P&L STATEMENT - "MEASURING THE INCOME"

The Profit and Loss statement is also popularly referred to as the P&L statement, Income Statement, Statement of Operations, and Statement of Earnings. The Profit and Loss statement shows what has transpired during a time period and helps us answer the question: How much money did the business make for the period in consideration? The P&L statement reports information on:

1. The revenue of the company for the given period (yearly or quarterly)
2. The expenses incurred to generate the revenues

3. Tax and depreciation
4. The earnings per share number

Here we give you a broad overview of what all an income statement consists of and an actual example (Amar Raja Batteries Ltd.) to give you a taste of the same.

Statement of Profit and Loss for the year ended March 31,2014

₹ million

| Particulars | Note No. | Year ended March 31, 2014 | Year ended March 31, 2013 |
|---|---|---|---|
| REVENUE | | | |
| Sale of products | | 38,041.27 | 32,949.37 |
| Less: Excise duty | | 4,005.15 | 3,512.45 |
| **Net sale of products** | | **34,036.12** | **29,436.92** |
| Sale of services | | 309.32 | 137.02 |
| Other operating revenue | | 21.15 | 15.21 |
| **Net revenue from operations** | 17 | **34,366.59** | **29,589.15** |
| Other income | 18 | 455.14 | 465.51 |
| **Total Revenue** | | **34,821.73** | **30,054.66** |
| EXPENSES | | | |
| Cost of materials consumed | 19 | 21,011.95 | 17,603.12 |
| Purchases of stock-in-trade | 20 | 2,113.69 | 2,632.54 |
| Changes in inventories of finished goods, work-in-process and stock-in-trade | 20 | (292.10) | (320.89) |
| Employee benefits expense | 21 | 1,583.16 | 1,262.30 |
| Finance costs | 22 | 7.18 | 2.69 |
| Depreciation and amortisation expense [includes impairment loss of ₹Nil (PY ₹75.52 million)] | 23 | 645.71 | 660.92 |
| Other expenses | 24 | 4,346.60 | 3,904.24 |
| **Total Expenses** | | **29,416.19** | **25,744.92** |
| | | | |
| **Profit before exceptional items and tax** | | **5,405.54** | **4,309.74** |
| Less: Exceptional items (net) | 33 | 38.84 | 91.57 |
| **Profit before tax** | | **5,366.70** | **4,218.17** |
| Less: Tax expense | | | |
| Current tax | | 1,580.00 | 1,377.97 |
| Deferred tax (credit) / expense | | 106.23 | (24.51) |
| Earlier year's (excess) / short provision | | 6.11 | (2.34) |
| **Profit for the year** | | **3,674.36** | **2,867.05** |
| Basic and diluted earnings per equity share of ₹1 each | 37 | 21.51 | 16.78 |

| | *Item* | *Explanation* |
|---|---|---|
| *Start with* | Revenues | Accountant's estimate of the revenues/sales generated by any transactions made the business during the period. |
| *Net out* | Cost of Goods Sold | Expenses associated with producing products or services that represent top line sales |
| *To get* | Gross Profit | Production profitability |
| *Net out* | Other Operating Expenses | Includes selling, general and administrative and other expenses associated with operations, but not directly tied to producing goods and services |
| *To get* | Operating Profit | Profitability of business |
| *Net out* | Financial Expenses | Expenses associated with the use of non-equity capital, especially debt. |
| *To get* | Taxable Income | Income for equity investors, prior to taxes |
| *Net out* | **Taxes** | Taxes due on taxable income |
| *To get* | **Net Income** | Income for equity investors, after taxes |

**A Brief Note on Depreciation:**

Depreciation is a word you will see throughout the statements and tends to be one of the more confusing accounting concepts. We here explain the different types of depreciations and what is relevant to you.

1. **Economic Depreciation**

It reflects the loss in value of an asset. Ex. the more you use a car, the less "useful" or "valuable" it becomes. The calculation of this loss is highly nuanced and depends on several influential economic factors. This is not what is done in Accounting Statements.

2. **Accounting Depreciation**

There is a fundamental assumption/rule in accounting that expense of an asset can only be recognised when its revenue is earned from it. Ex: If you buy a factory for 1 billion and then generate no revenue in the first year, but 200mil of revenue for the next 10 years. Think about how confusing the statements may look. A lot of expense in the first year but no revenue, and then subsequently no major expense, but a lot of revenue.

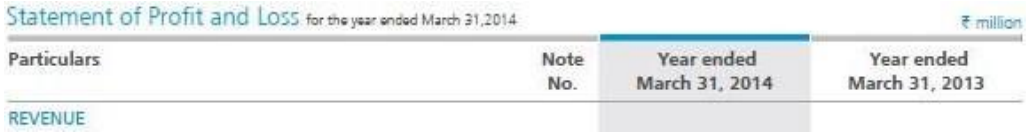
To resolve this issue, the 1 billion is "spread" over the lifetime of an asset. Ex. 100 million in each of the next years (This "spreading" need not be uniform, but is certainly governed by a very mechanical set of accounting rules).

To summarize, Accounting depreciation is the process of allocating the cost of an asset over the course of its useful life so as to align its expenses with revenue generation. This is what people mean when they talk about "depreciation".

# 2.B. READING THE P&L STATEMENT

## 2.1 The Top Line of the company (Revenue)

The top line of a company, also known as the revenue side, is the first set of numbers presented in the Profit and Loss (P&L) statement. Before we start understanding the revenue side, let us notice a few things mentioned on the header of the P&L statement:



Statement of Profit and Loss for the year ended March 31,2014 ₹ million

| Particulars | Note No. | Year ended March 31, 2014 | Year ended March 31, 2013 |
|---|---|---|---|
| REVENUE | | | |

The P&L statement shows the financial performance of a company over a certain period of time, in this case, the financial year ending on March 31, 2014. It is important to note that this is an annual statement and not a quarterly statement. The financial year being reported on is 2013-2014, also referred to as FY14. Additionally, it is specified that all currency is denominated in Rupee Million. This unit of measurement is at the discretion of the company. The P&L statement also includes a header that lists the main headings of the statement, known as the "particulars," along with any associated notes in the "note" section. The numbers presented in the financial statement are the current year's numbers on the left column and the previous year's numbers on the right column, in this case, FY14 and FY13.

The first line item on the revenue side is called the **Sale of Products.** Since we are dealing with a battery company ARBL, the sale of products means the Rupee value of all the battery sales the company has made during FY14. The sales stand at Rs.38,041,270,000/- or about Rs.3,804 Crore. The company had sold batteries worth Rs.3,294 Cr in the previous financial year, i.e. FY13. All the numbers are restated in Rupee Crore as this is more intuitive to understand. The next item on the P&L statement is the excise duty, which is the amount the company pays to the government. In this case, it is reported as Rs.400 crore. This amount must be subtracted from the revenue to determine the net sales of the company. The net sales of ARBL for FY14 is Rs.3403 crore and for FY13 it was Rs.2943 crore.

In addition to revenue from the sale of products, the company also generated revenue from services. This could include annual battery maintenance and was reported as Rs.30.9 crore for FY14. The company also reported "other operating revenues" of Rs.2.1 crore, which could include revenue from sales or services that were incidental to the company's core operations.

The total operating revenue of the company is the sum of the revenue from the sale of products, sale of services and other operating revenues. This is reported as Rs.3436 crore for FY14 and Rs.2959 crore for FY13. It is important to note that there is a note, numbered 17, associated with "Net Revenue from Operations" that provides further information on the split-up of revenues from operations, but does not include other income details.

## Notes forming part of the Financial Statements

NOTE 17: REVENUE FROM OPERATIONS

₹ million

| Particulars | Year ended March 31, 2014 | | Year ended March 31, 2013 | |
|---|---|---|---|---|
| a) Sale of products | | | | |
| Storage batteries (finished goods) | 35,237.83 | | 30,363.83 | |
| Storage batteries (stock-in-trade) | 2,089.86 | | 1,493.93 | |
| Home UPS (stock-in-trade) | 713.58 | | 1,091.61 | |
| Gross revenue from sale of products | | 38,041.27 | | 32,949.37 |
| Less: Excise duty | | 4,005.15 | | 3,512.45 |
| Net revenue from sale of products | | 34,036.12 | | 29,436.92 |
| b) Sale of services | | | | |
| Installation and commissioning | 49.14 | | 17.36 | |
| Annual maintenance | 146.91 | | 96.09 | |
| Preventive maintenance | 15.41 | | 5.75 | |
| Other services | 97.86 | | 17.82 | |
| Net revenue from sale of services | | 309.32 | | 137.02 |
| c) Other operating revenue | | | | |
| Sale of process scrap | | 21.15 | | 15.21 |
| **Net revenue from operations** | | **34,366.59** | | **29,589.15** |

If you notice the P&L statement, apart from net revenue from operations, ARBL also reports 'Other Income' of Rs.45.5 Crs. Note number 18 reproduced below explains what the other income is all about. The other income includes income that is not related to the company's main business. It includes interest on bank deposits, dividends, insurance claims, royalty income, etc. Usually, the other income forms a small portion of the total income. A large 'other income' usually draws a red flag, demanding further investigation.

NOTE 18: OTHER INCOME

₹ million

| Particulars | Year ended March 31, 2014 | Year ended March 31, 2013 |
|---|---|---|
| Interest Income | | |
| On bank and other deposits | 131.22 | 112.29 |
| Against trade receivables | 6.72 | 10.27 |
| Dividend income | | |
| On current investments - mutual funds | 142.68 | 143.96 |
| On long term investments - equity instruments | 1.51 | 1.31 |
| Net gain on foreign currency transactions and translations | 89.88 | 91.71 |
| Insurance claims | 32.27 | 13.48 |
| Scrap Sales (non-process) | 14.07 | 6.94 |
| Cash discount earned on early payments | 10.74 | 43.35 |
| Provisions and credit balances written back | 3.90 | 6.44 |
| Bad debts recovered | 15.15 | 0.25 |
| Profit on sale of tangible fixed assets written off/discarded | 4.49 | 0.04 |
| Provision on doubtful trade receivables/advances written back | 0.30 | 35.06 |
| Royalty income | 0.94 | - |
| Sundry income | 1.27 | 0.41 |
| **Total** | **455.14** | **465.51** |

So adding up revenue from operations (Rs.3436 Crs) and other income (Rs.45 Crs), we have the total revenue for FY14 at Rs.3482 Crs.

## 2.2 The Expense details

Moving further on the P&L statement, we will look at the expense side of the Profit and Loss Statement. Expenses are generally classified according to their nature or function, where in the latter case it is also called the cost of sales method. An analysis of the expenses must be shown in the Profit and Loss

statement or the notes. As you can see in the extract below, almost all the line items have a note associated with it.

| EXPENSES | | | |
|---|---|---|---|
| Cost of materials consumed | 19 | 21,011.95 | 17,603.12 |
| Purchases of stock-in-trade | 20 | 2,113.69 | 2,632.54 |
| Changes in inventories of finished goods, work-in-process and stock-in-trade | 20 | (292.10) | (320.89) |
| Employee benefits expense | 21 | 1,583.16 | 1,262.30 |
| Finance costs | 22 | 7.18 | 2.69 |
| Depreciation and amortisation expense [includes impairment loss of ₹Nil (PY ₹75.52 million)] | 23 | 645.71 | 660.92 |
| Other expenses | 24 | 4,346.60 | 3,904.24 |
| **Total Expenses** | | **29,416.19** | **25,744.92** |

The first line item on the expense side is 'Cost of materials consumed'; this is invariably the raw material cost that the company requires to manufacture finished goods. As you can see, the cost of raw material consumed/raw material is the company's largest expense. This expense stands at Rs.2101 Crs for the FY14 and Rs.1760 Crs for the FY13.

The next line item on the expense side is "Employee Benefits Expense". This is quite intuitive as it includes expenses incurred in terms of the salaries paid, contribution towards provident funds, and other employee welfare expenses. This stands at Rs.158 Crs for the FY14.

The next line item is the **"Finance Cost / Finance Charges/ Borrowing Costs"**. Finance cost is interest costs and other costs that an entity pays when it borrows funds. The interest is paid to the lenders (which could be banks or other private bodies) of the company. The company's finance cost stands at Rs.0.7 Crs for the FY14. We will cover debt and related matters more in the chapter on the balance sheet later.

Following the finance cost, the next line item is "Depreciation and Amortization" costs which stand at Rs.64.5 Crs. To understand depreciation and amortization, we need to understand the concept of tangible and intangible assets.

A tangible asset has a physical form and provides an economic value to the company—for example, a laptop, a printer, a car, plants, machinery, buildings etc.

An intangible asset does not have a physical form but still provides an economic value to the company, such as brand value, trademarks, copyrights, patents, franchises, customer lists etc.

Depreciation is a method of spreading the cost of an asset over its useful life, rather than showing an upfront lump sum expense. Useful life is defined as the period during which the asset can provide economic benefit to the company. The useful life of a laptop could be 4 years.

As an example to better understand depreciation, Zerodha, a stockbroking firm, generates Rs.100,000 from its stockbroking business but incurs Rs.65,000 towards the purchase of a high-performance computer server. The economic or useful life of the server is expected to be 5 years. Without depreciation,

the earnings data for the current year would only reflect the Rs.35,000 retained after the cost of the server is subtracted, which does not accurately reflect the company's true earning capability.

To account for this, the cost of the asset, Rs.65,000, is spread over its useful life by depreciating it. In this case, the server's useful life is 5 years, so the annual depreciation expense would be Rs.65,000/5 = Rs.13,000. This means that instead of showing an upfront expense of Rs.65,000, the company can show a smaller expense of Rs.13,000 spread over five years. After the depreciation computation, Zerodha would now show its earnings as Rs.100,000 - Rs.13,000 = Rs.87,000.

It is important to note that for non-tangible assets, the equivalent of depreciation is called amortization. Additionally, it's important to note that while depreciation captures the allocation of cost over time, it does not capture the actual cash outflow of Rs.65,000 that was paid towards the asset purchase. This cash movement is captured in the cash flow statement, which we will learn about in later sections

The last line item on the expense side is “other expenses” at Rs.434.6 Crs. This is a huge amount classified under ‘other expenses’. Hence it deserves a detailed inspection. If one were to go to the note 24, it is quite clear that other expenses include manufacturing, selling, administrative and other expenses. For example, Amara Raja Batteries Limited (ARBL) spent Rs.27.5 Crs on advertisements and promotional activities.

Adding up all the expenses mentioned in the expense side of P&L, it seems that Amara Raja Batteries has spent Rs.2941.6 Crs.

## 2.3 The Profit before tax

Profit Before Tax (PBT) is a measure of a company's financial performance, calculated as the net operating income after deducting operating expenses, but before deducting taxes and interest. On the P&L statement, ARBL has reported their profit before tax and exceptional item numbers. Exceptional items or extraordinary items are expenses that occur infrequently and are not expected to be recurring expenses. Therefore, they are treated separately on the P&L statement. The formula for PBT is:
Profit Before Tax = Total Revenues – Total Operating Expenses

For ARBL, you may think the **PBT should = Rs.3482 – Rs.2941.6 = Rs.540.5**
But, there is an exceptional item or extraordinary item of Rs.3.8 crore, which needs to be deducted.
Thus, the PBT = Rs.540.5 – Rs.3.8 = Rs.536.6 crore (and this is the figure the P&L statement shows)

## 2.4 Net Profit after tax

After-tax, the net operating profit is defined as its operating profit after deducting its tax liability.

Hence Net **PAT = PBT – Applicable taxes**.

We are now looking into the last part of the P&L statement, the profit after tax. This is also called the bottom line of the P&L statement.

| | | | |
|---|---|---|---|
| **Profit before tax** | | **5,366.70** | **4,218.17** |
| Less: Tax expense | | | |
| Current tax | | 1,580.00 | 1,377.97 |
| Deferred tax (credit) / expense | | 106.23 | (24.51) |
| Earlier year's (excess) / short provision | | 6.11 | (2.34) |
| **Profit for the year** | | **3,674.36** | **2,867.05** |
| Basic and diluted earnings per equity share of ₹1 each | 37 | 21.51 | 16.78 |

As you can see from the snapshot above, to arrive at the profit after tax (PAT), we need to deduct all the applicable tax expenses from the PBT. Current tax is the corporate tax applicable for the given year. This stands at Rs.158 Crs. Besides this, there are other taxes that the company has paid. All taxes together total to Rs.169.21 Crs. Deducting the tax amount from the PBT of Rs.536.6 gives us the profit after tax (PAT) at Rs.367.4 Crs.

The last line in the P&L statement talks about basic and diluted earnings per share. The EPS is one of the most frequently used statistics in financial analysis. EPS also serves to assess the stewardship and management role performed by the company directors and managers. The earnings per share (EPS) is a very sacred number which indicates how much the company is earning per face value of the ordinary share. It appears that ARBL is earning Rs.21.51 per share. The detailed calculation is as shown below:

NOTE 37: EARNINGS PER SHARE

| Particulars | Year ended March 31, 2014 | Year ended March 31, 2013 |
|---|---|---|
| Numerator - Earnings | | |
| Net profits for the period in ₹ million | 3,674 .36 | 2,867.05 |
| Denominator - Equity shares | | |
| Number of shares at the beginning of the year | 17,08,12,500 | 17,08,12,500 |
| Add: Shares issued during the year | - | - |
| Less: Shares forfeited / bought back during the year | - | - |
| Number of shares outstanding at the end of the year | 17,08,12,500 | 17,08,12,500 |
| Weighted average number of shares outstanding at the end of the year (Basic and Diluted) | 17,08,12,500 | 17,08,12,500 |
| Basic and diluted earnings per equity share of ₹1 each | ₹21.51 | ₹16.78 |

The company indicates that 17,08,12,500 shares are outstanding in the market. Dividing the total profit after tax by the number of outstanding shares, we can arrive at the earnings per share value. In this case:

Rs.367.4 Crs divided by 17,08,12,500 yields Rs.21.5 per share.

Now that we have gone through all the line items in the P&L statement, the statement above should look more meaningful to you by now. Remember, almost all line items in the P&L statement will have an associated note. You can always look into the notes to seek greater clarity. Also, we have just understood how to read the P&L statement at this stage, but we still need to analyze what the numbers mean. We will do this when we take up the financial ratios. The P&L statement is also very closely connected with the other two financial statements, i.e. the balance sheet and the cash flow statement. We will explore these connections at a later stage.

## 3.A. UNDERSTANDING BALANCE SHEET STATEMENT - “ASSETS OWNED AND MONEY OWED”

The P&L statement provides information about a company's profitability for a specific financial year, while the balance sheet provides information about a company over time. It contains financial information about a company since its incorporation till a particular point in time. The P&L statement is standalone and reflects the performance of the company in a specific financial year, while the balance sheet reflects how the company has evolved financially over the years. This is why a lot of investors consider the balance sheet to be a stronger indicator of the financial and business fitness of a company.

The balance sheet contains details about the company's assets, liabilities, and equity.

Assets are resources controlled by the company that are expected to create future cash inflows. Examples of assets include plants, machinery, cash, brands, and patents.

Liabilities, on the other hand, represent the company's obligations. These obligations are taken on by the company to finance the assets and provide economic value in the long run. Examples of liabilities include short-term borrowing, long-term borrowing, and payments due.

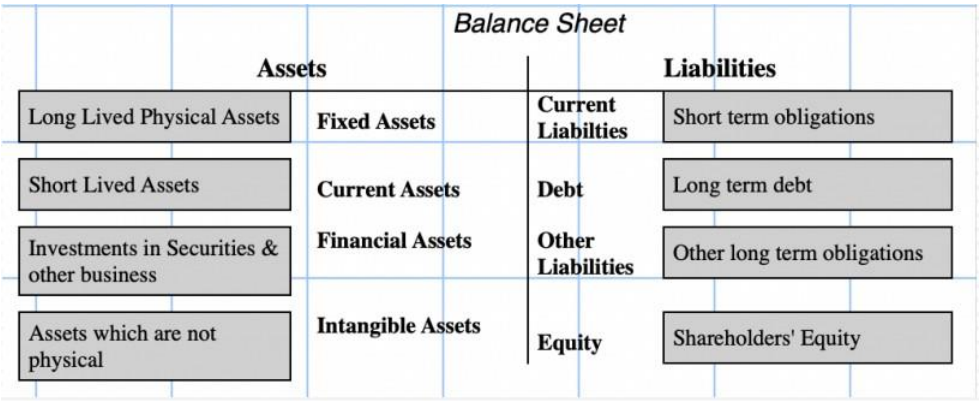
It is important to note that a company has 2 ways to finance its capital - via debt and via equity. Debt commitments or External Obligations are simply called liabilities. But, equity i.e. the internal obligation of the company to its owners is recognised as “Shareholders’ Equity”.

[At this juncture, we introduce an important accounting principle, that the finances of the promoter/investor/owner are different from the finances of the company, and hence the capital put in by the owner to set up the business is seen as “an obligation” to the owner by the business entity]

The balance sheet at its core is a record of how much a business has invested in the assets that allow for its current operations to occur. This record is governed by the “balance sheet equation” which states that assets should always be equal to liabilities, which means that everything a company owns has to be financed either through the owner's capital or liabilities.

Assets = Liabilities + Shareholders’ Equity

**A Broad Overview of types of Assets and Liabilities of a Business for our Understanding:**




## 3.B. READING THE BALANCE SHEET STATEMENT

**The balance sheet of Amara Raja Batteries Limited (ARBL):**

Balance Sheet as at March 31, 2014 — ₹ million

| Particulars | Note No. | As at March 31, 2014 | | As at March 31, 2013 | |
|---|---|---|---|---|---|
| EQUITY AND LIABILITIES | | | | | |
| Shareholders' funds | | | | | |
| Share capital | 2 | 170.81 | | 170.81 | |
| Reserves and surplus | 3 | 13,456.20 | | 10,427.33 | |
| | | | 13,627.01 | | 10,598.14 |
| Non-current liabilities | | | | | |
| Long-term borrowings | 4 | 759.47 | | 773.13 | |
| Deferred tax liabilities (net) | 5 | 301.33 | | 195.09 | |
| Long-term provisions | 6 | 369.57 | | 376.41 | |
| | | | 1,430.37 | | 1,344.63 |
| Current liabilities | | | | | |
| Short-term borrowings | 7 | 83.83 | | 98.63 | |
| Trade payables | 8 | 1,277.79 | | 1,362.84 | |
| Other current liabilities | 9 | 2,156.68 | | 1,807.26 | |
| Short-term provisions | 6 | 2,818.73 | | 2,493.20 | |
| | | | 6,337.03 | | 5,761.93 |
| **Total** | | | **21,394.41** | | **17,704.70** |
| ASSETS | | | | | |
| Non-current assets | | | | | |
| Fixed assets | 10 | | | | |
| Tangible assets | | 6,198.94 | | 3,554.97 | |
| Intangible assets | | 32.96 | | 33.69 | |
| Capital work-in-progress | | 1,443.60 | | 1,024.97 | |
| Intangible assets under development | | 3.14 | | 4.84 | |
| | | 7,678.64 | | 4,618.47 | |
| Non-current investments | 11 | 160.76 | | 160.76 | |
| Long-term loans and advances | 12 | 567.69 | | 353.52 | |
| Other non-current assets | 13 | 1.22 | | 3.43 | |
| | | | 8,408.31 | | 5,136.18 |
| Current assets | | | | | |
| Inventories | 14 | 3,350.08 | | 2,928.58 | |
| Trade receivables | 15 | 4,527.89 | | 3,806.77 | |
| Cash and bank balances | 16 | 2,945.67 | | 4,107.90 | |
| Short-term loans and advances | 12 | 2,119.30 | | 1,656.78 | |
| Other current assets | 13 | 43.16 | | 68.49 | |
| | | | 12,986.10 | | 12,568.52 |
| **Total** | | | **21,394.41** | | **17,704.70** |
| Significant accounting policies | 1 | | | | |

Statement on significant accounting policies and notes are an integral part of the financial statements

[The following discussion discusses each line item shown in the image above, the motivation behind it is to understand the terminologies so that you can read the balance sheet of any company without any issue]

## 3.1 Reading the liability side of the balance sheet

As we know, the balance sheet has two main sections, i.e. the assets and the liabilities. The liabilities, as you know, represent the obligation of the company. The liabilities side of the balance sheet details all the liabilities of the company. Within liabilities, there are three subsections – **shareholders' fund, non-current liabilities, and current liabilities**. The first section is the shareholders' funds. **The shareholders' fund** is integral to the balance sheet's liabilities side. *The shareholders' funds do not belong to the company as it rightfully belongs to its shareholders'*. Hence from the company's perspective, the shareholders' funds are an obligation payable to shareholders'. Hence this is shown on the liabilities side of the balance sheet.

Broadly speaking, Shareholders' Equity = Capital Invested + Retained Earnings

In the example shown**, 'Share capital'** refers to the total value of shares issued by a company, calculated by multiplying the number of shares by the face value of each share. In the case of ARBL, the share capital is Rs.17.081 Crs and the face value of each share is Rs.1 (can be found from the stock exchanges website) (The number of shares can be calculated by dividing the share capital by the face value).

**'Reserves and surplus'**, on the other hand, refer to the funds that are earmarked by the company for specific purposes, such as long-term projects or as a buffer. They should be essentially thought of as *"Retained Earnings".*

As you can imagine, the surplus holds the profits made by the company during the year, and is closely related to the other two financial statements, the profit and loss statement and the balance sheet. We will talk about the interconnections between the financial statements in much more detail in an upcoming section.

## 3.2 Non-Current Liabilities

Non-current liabilities represent the long-term obligations of a company, which it intends to pay off not within 365 days or 12 months of the balance sheet date. These obligations stay on the books for a few years and are generally settled after 12 months from the reporting period. Amara Raja Batteries Ltd, which has three types of non-current liabilities: long-term borrowing, deferred tax liability, and long-term provisions.

| | | | | | |
|---|---|---|---|---|---|
| Non-current liabilities | | | | | |
| Long-term borrowings | 4 | 759.47 | | 773.13 | |
| Deferred tax liabilities (net) | 5 | 301.33 | | 195.09 | |
| Long-term provisions | 6 | 369.57 | | 376.41 | |
| | | | 1,430.37 | | 1,344.63 |

**Long-term borrowing**, which is associated with note 4, is an important line item in the balance sheet as it represents the amount of money that the company has borrowed through various sources. It is also a key input for calculating some financial ratios. The note associated with long-term borrowings explains that it

is in the form of an **interest-free sales tax deferment**, which is a tax incentive from the state government and the company plans to settle this amount over a period of 14 years.

["Notes" are detailed breakdowns of a line item present after the financial statement in the annual report. These are the bread and butter for the digging up of crucial (and possibly alarming) information about a company]

NOTE 4: LONG-TERM BORROWINGS

₹ million

| Particulars | Non-current portion | | Current maturities | |
|---|---|---|---|---|
| | As at March 31, 2014 | As at March 31, 2013 | As at March 31, 2014 | As at March 31, 2013 |
| Deferred payment liabilities | | | | |
| Interest free sales tax deferment (Unsecured) | 759.47 | 773.13 | 13.66 | 9.27 |
| Total | 759.47 | 773.13 | 13.66 | 9.27 |

Interest free sales tax deferment

The Company has availed interest free sales tax deferment under Andhra Pradesh sales tax deferment scheme (Target 2000) from the financial year 1997-98 as per the eligibility norms in respect of expanded capacities. The Company has availed total deferment of ₹811.40 million since March,1998, which is repayable after a period of 14 years from the date of each availment in annual installments.

- Eligible amount of interest free sales tax deferment - ₹813.33 million
- Period eligible for availment - January 1998 till September 2015

You will find that there are many companies which do not have long term borrowings (debt). While it is good to know that the company has no debt, you must also question why there is no debt? Is it because the banks are refusing to lend to the company? Or is it because the company is not taking initiatives to expand its business operations. Do recollect; we looked at 'Finance Cost' as a line item when we looked at the P&L statement. If the debt of the company is high, then the finance cost will also be high.

The next line item **Deferred tax liability** is a provision for future tax payments, which arises due to the difference in the way depreciation is treated as per the company's act and income tax. We will talk properly about Depreciation in a bit.

The next line item **Long-term provisions** are money set aside for employee benefits such as gratuity, leave encashment, and provident funds.

## 3.3 Current liabilities

**'Current liabilities'** are a company's obligations that are expected to be settled within 365 days or less than a year. An example of current liabilities is buying a mobile phone on EMI through a credit card, while buying an apartment with a 15-year home loan from a housing finance company is an example of non-current liabilities. Refer to the above snapshot of Amara Raja batteries Ltd's (ARBL) balance sheet to notice current liabilities, which include four line items: short term borrowings, trade payable, other current liabilities and short term provisions.

**'Short-term borrowings',** as the name suggests, are short-term obligations of the company taken to meet day to day cash requirements or working capital requirements.

**'Trade payable'**, also known as account payable, is the amount payable to vendors who supply to the company and it's Rs.127.7 Crs. (This is essentially credit given by vendors in form of goods and services without any interest)

'**Other current liabilities'**, which stand at Rs.215.6 Crs, are obligations associated with statutory requirements and those that are not directly related to the company's operations. '

**Short-term provisions'**, which stand at Rs.281.8 Crs, are similar to long-term provisions, which deal with setting aside funds for employee benefits such as gratuity, leave encashment, provident funds etc.

**Total Liability = Shareholders' Funds + Non-Current Liabilities + Current Liabilities**

## 3.4. Reading the Assets side of Balance Sheet

We will now understand the 2nd half of the balance sheet, i.e. the Asset side of the balance sheet. Remember that these sections have several line items (with associated notes) included within the annual report (that are not mentioned here).

| | | | | | |
|---|---|---|---|---|---|
| ASSETS | | | | | |
| Non-current assets | | | | | |
| Fixed assets | 10 | | | | |
| Tangible assets | | 6,198.94 | | 3,554.97 | |
| Intangible assets | | 32.96 | | 33.69 | |
| Capital work-in-progress | | 1,443.60 | | 1,024.97 | |
| Intangible assets under development | | 3.14 | | 4.84 | |
| | | 7,678.64 | | 4,618.47 | |
| Non-current investments | 11 | 160.76 | | 160.76 | |
| Long-term loans and advances | 12 | 567.69 | | 353.52 | |
| Other non-current assets | 13 | 1.22 | | 3.43 | |
| | | | 8,408.31 | | 5,136.18 |
| Current assets | | | | | |
| Inventories | 14 | 3,350.08 | | 2,928.58 | |
| Trade receivables | 15 | 4,527.89 | | 3,806.77 | |
| Cash and bank balances | 16 | 2,945.67 | | 4,107.90 | |
| Short-term loans and advances | 12 | 2,119.30 | | 1,656.78 | |
| Other current assets | 13 | 43.16 | | 68.49 | |
| | | | 12,986.10 | | 12,568.52 |
| Total | | | 21,394.41 | | 17,704.70 |

## 3.5 Non-current assets (Fixed Assets)

**Non-current assets** refer to a company's assets that have an economic benefit that is enjoyed over a long period, typically beyond 365 days. These assets are expected to provide economic benefit to the company over their useful life. Within non-current assets, there is a subsection called **"Fixed Assets"** which includes assets that cannot be easily converted to cash or liquidity. Examples of fixed assets include land, plant and machinery, vehicles, buildings, and intangible assets such as patents, copyrights, trademarks, and designs.

**Depreciation** is a method of spreading the cost of acquiring these assets over their useful life, as the assets lose their production capacity due to obsolescence and physical wear and tear. The value of the assets depletes over time and this is reflected in the Depreciation expense on the Profit and Loss Account and the Balance Sheet. All the assets should be depreciated over their useful life. Keeping this in perspective, when the company acquires an asset, it is called the **'Gross Block'.** Depreciation should be deducted from the Gross block; after which we can arrive at the **'Net Block'**.

**Net Block = Gross Block – Accumulated Depreciation**

Note, the term **'Accumulated'** is used to indicate all the depreciation values since its incorporation. One needs to deduct the accumulated depreciation from the gross block to arrive at the 'Net Block'.

When a company reports its tangible assets at a certain value and its intangible assets at a certain value, it is reporting the net block, which is the net value of the assets after accumulated depreciation has been taken into account. In note numbered 10 associated with fixed assets, the gross block, depreciation/amortization, and net block are highlighted. The note also lists all the assets that the company owns. For example, the company may list buildings as one of its tangible assets. The value of the buildings is reported as the previous year's value plus any additions during the current year, minus any deductions during the current year. Thus, the Total Depreciation for the year is:

**Previous year's depreciation value + Current year's depreciation – deduction for the year**

This gives the gross block of the building. To arrive at the net block, the accumulated depreciation must be subtracted from the gross block. The same process is carried out for all other tangible and intangible assets to arrive at the total net block number.

The next two line items under the fixed assets are **Capital work in progress (CWIP)** and **Intangible assets under development**. CWIP includes building under construction, machinery under assembly etc. at the time of preparing the balance sheet. Hence it is aptly called the "Capital Work in Progress". This amount is usually mentioned in the Net block section. CWIP is the work that is not yet complete but where capital expenditure has already been incurred. As we can see, ARBL has Rs.144.3 Crs under CWIP. Once the construction process is done, and the asset is put to use, the asset is moved to tangible assets (under fixed assets) from CWIP.

The last line item is **'Intangible assets under development'**. This is similar to CWIP but for intangible assets. The work in process could be patent filing, copyright filing, brand development etc. This is at a minuscule cost of 0.3 Crs for ARBL. All these costs are added to arrive at the total fixed cost of the company.

## 3.6 Non-current assets (Other line items)

Besides fixed assets, there are other line items within non-current assets (refer to balance sheet).
"**Non-current investments"** are investments made by a company with a long-term perspective, such as buying listed equity shares, minority stakes in other companies, debentures, or mutual funds. "**Long-term loans and advances"** are loans and advances given out by the company to other group companies,

employees, suppliers, vendors, etc. **"Other Non-current assets"** is a catch-all category that includes miscellaneous long-term assets that do not fit into the other categories, such as Rs. 0.122 Crs in this case.

## 3.7 Current assets

Current assets are assets that can be easily converted to cash, and the company foresees a situation of consuming these assets within 365 days. Current assets are the assets that a company uses to fund its day to day operations and ongoing expenses. The most common current assets are cash and cash equivalents, inventories, receivables, short term loans and advances and sundry debtors. Here is the snapshot of the current assets of ARBL:

| Current assets | | | | |
|---|---|---|---|---|
| Inventories | 14 | 3,350.08 | | 2,928.58 |
| Trade receivables | 15 | 4,527.89 | | 3,806.77 |
| Cash and bank balances | 16 | 2,945.67 | | 4,107.90 |
| Short-term loans and advances | 12 | 2,119.30 | | 1,656.78 |
| Other current assets | 13 | 43.16 | | 68.49 |

The current assets section of the balance sheet includes items such as inventory, trade receivables, cash and cash equivalents, short-term loans and advances, and other current assets.

- **Inventory**, valued at Rs. 335.0 Crs, includes finished goods, raw materials, and goods in various stages of production that have not been sold.
- **Trade Receivables**, also known as Accounts Receivables, valued at Rs.452.7 Crs, represents the amount of money the company is expected to receive from its distributors, customers and other related parties. (*Remember trade payables in the current liabilities, this is the opposite end of that*)
- **Cash and Cash equivalents**, valued at Rs.294.5 Crs, are considered the most liquid assets and include cash on hand and short-term, highly liquid investments with a maturity date of less than three months from its acquisition date.
- **Short-term loans and advances** valued at Rs.211.9 Crs, are loans and advances given out by the company that are expected to be repaid within 365 days, including advances to suppliers, loans to customers, loans to employees and advance tax payments.
- **Other current assets** valued at Rs.4.3 Crs, includes miscellaneous items that are not considered important.

To calculate the total assets of the company:

Fixed Assets + Current Assets = Rs.840.831 Crs + Rs.1298.61 Crs = Rs. 2139.441 Crs, which is equal to the company's liabilities.

With this, if we run through the Balance sheet we see the balance sheet equation holds for ARBL's balance sheet, i.e. Asset = Shareholders' Funds + Liabilities

It's important to note that while we have reviewed the balance sheet and P&L statement, we have not yet analyzed the data to determine if the numbers are good or bad. We will do this in the financial ratio analysis section.

# 4.A. UNDERSTANDING THE CASH FLOW STATEMENT - "CASH IN AND CASH OUT"

The cash flow statement is a financial statement that shows a company's cash inflows and outflows during a given period. It is important to note that the cash flow statement differs from the P&L statement as it shows the actual cash that a company has, whereas the P&L statement shows the "*accrual* revenue" earned by a company. (We do not talk about what accrual is in this module but watch this short video to understand why we refer to the Cash Flow statement as the most honest financial statement).

This statement helps us answer some very important questions like: How much cash earnings the company had in the period? How much and where did the company reinvested cash during the period to sustain and grow its business? How much cash it raised from or returned to its debt and equity investors?

## 4.1. The 3 Types of Business Activities

If you think about a company and its various business activities, you will realize that the company's activities can be classified under one of the three standard baskets. And its Net Cash will be the sum of the net cash flow of all these 3 activities.

1. **Operational activities** (OA): Activities related to the daily core business operations are called operational activities. Typical operating activities include sales, marketing, manufacturing, technology upgrade, resource hiring etc.
2. **Investing activitie**s (IA): Activities about investments that the company makes intending to reap benefits at a later stage. Examples include parking money in interest-bearing instruments, investing in equity shares, investing in land, property, plant and equipment, intangibles and other non-current assets etc.
3. **Financing activities** (FA): Activities about all financial transactions of the company such as distributing dividends, paying interest to service debt, raising fresh debt, issuing corporate bonds etc

All activities a legitimate company performs can be classified under one of the above three mentioned categories. Using this above categorisation we will classify different types of business activities into these buckets and understand how they affect Cash Balance' and 'Asset/Liability'

| Activity No | Activity Type | Rational | Cash Balance | On Balance Sheet |
|---|---|---|---|---|
| 01 | OA | Expenditure on advertisement | Decreases | Treated as an asset as it increases the brand value |
| 02 | OA | Expenditure towards recruits | Decreases | Treated as an asset as it increases the company's intellectual capital |
| 03 | OA | Expenditure on new equipment | Decreases | Treated as asset |
| 04 | FA | Loan means cash inflow to business | Increases | The loan is a liability |
| 05 | FA | Deposits via CD means cash inflow | Increases | CD is a liability |
| 06 | FA | Issue of fresh capital means cash inflow | Increases | Treated as a liability as share capital increases |
| 07 | IA | Investment in a startup means cash outflow | Decreases | Investment is an asset |
| 08 | IA | Money parked in FD means cash going out of business | Decreases | Equivalent to cash, hence considered an asset |
| 09 | IA | Investment in the building means cash going out of business | Decreases | Gross block considered an asset |
| 10 | OA | Expenditure towards the sound system | Decreases | Treated as an asset |

If you look through the table and start correlating the 'Cash Balance' and 'Asset/Liability' you will observe that:

- Whenever the liabilities of the company increases, the cash balance also increases.
- This means if the liabilities decrease, the cash balance also decreases.
- Whenever the asset of the company increases, the cash balance decreases.
- This means if the assets decrease, the cash balance increases.

The above conclusion is the key concept while constructing a cash flow statement. Also, extending this further, you will realize that each company's activity is its operating activity, financing activity, or investing activity that either produces cash (net increase in cash) or reduces (net decrease in cash) the cash for the company. Hence the total cash flow for the company will be:

**Cash Flow of the company = Net cash flow from operating activities + Net Cash flow from investing activities + Net cash flow from financing activities**

## 4.B. READING THE CASH FLOW STATEMENT

Typically, when companies present their cash flow statement, they split the statement into these three segments to explicitly show how much cash the company has generated across the three business activities. Continuing with our example from the earlier chapters, here is the cash flow statement of Amara Raja Batteries Limited (ARBL):

| Particulars | Year ended March 31, 2014 | | Year ended March 31, 2013 | |
|---|---|---|---|---|
| I. CASH FLOW FROM OPERATING ACTIVITIES | | | | |
| Profit before tax from continuing operations | | 5,366.70 | | 4,218.17 |
| Add/(Less): Adjustments for | | | | |
| a. Depreciation | 636.69 | | 577.20 | |
| b. Amortisation | 11.04 | | 8.20 | |
| c. Impairment loss | - | | 75.52 | |
| d. Net income on sale of tangible fixed assets | (2.26) | | (0.04) | |
| e. Tangible fixed assets written off | 24.90 | | 44.27 | |
| f. Donation of tangible fixed asset | 0.03 | | - | |
| g. Interest paid on working capital facilities | 0.03 | | 0.11 | |
| h. Provisions and credit balances written back | (3.90) | | (6.44) | |
| i. Bad debts written off | 32.33 | | 4.84 | |
| j. Provision for doubtful trade receivables and advances (net) | (30.50) | | (38.69) | |
| k. Exchange gain on restatement - other than borrowings (net) | (33.81) | | (13.18) | |
| l. Provision for leave encashment | 14.83 | | 33.43 | |
| m. Provision for gratuity | 6.75 | | 8.74 | |
| n. Provision for warranty | (40.22) | | 156.14 | |
| o. Dividend received | (144.19) | | (145.27) | |
| p. Interest received on bank and other deposits | (137.94) | | (112.29) | |
| q. Interest on income tax | 6.70 | | 2.03 | |
| r. Provision for wealth tax | 2.00 | 342.48 | 1.83 | 596.40 |
| Operating profit before working capital changes | | 5,709.18 | | 4,814.57 |
| Add/(Less): Adjustments for working capital changes | | | | |
| a. Increase in inventories | (421.50) | | (262.41) | |
| b. Increase in trade receivables | (711.71) | | (571.57) | |
| c. Increase in loans and advances | (445.72) | | (421.49) | |
| d. Increase/(decrease) in trade payables | (77.73) | | 490.32 | |
| e. Increase in other current liabilities | 341.23 | (1,315.43) | 671.36 | (93.79) |
| Cash generated from operations | | 4,393.75 | | 4,720.78 |
| Less: a. Income tax | 1,604.42 | | 1,365.95 | |
| b. Wealth tax | 1.83 | 1,606.25 | 0.18 | 1,366.13 |
| Net cash from operating activities - A | | 2,787.50 | | 3,354.65 |

| II. CASH FLOW FROM INVESTING ACTIVITIES | | |
|---|---|---|
| a. Purchase of tangible fixed assets | (3,303.66) | (724.78) |
| b. Purchase of intangible fixed assets | (10.30) | (20.97) |
| c. Increase in capital work-in-progress | (423.26) | (718.50) |
| d. Decrease/(increase) in intangible assets under development | 1.69 | (0.25) |
| e. Sale of tangible fixed assets | 4.98 | 1.80 |
| g. Interest received on bank and other deposits | 137.94 | 112.29 |
| h. Dividend received | 144.19 | 145.27 |
| Net cash from investing activities - B | (3,448.42) | (1,205.14) |

| Particulars | Year ended March 31, 2014 | Year ended March 31, 2013 |
|---|---|---|
| III. CASH FLOW FROM FINANCING ACTIVITIES | | |
| a. Short term borrowings from banks availed / repaid | (13.70) | 42.59 |
| b. Interest free sales tax deferment repaid | (13.67) | (16.92) |
| c. Interest paid on working capital facilities | (0.03) | (0.11) |
| d. Dividend paid | (430.45) | (322.84) |
| e. Dividend tax paid | (73.15) | (52.37) |
| Net cash from financing activities - C | (531.00) | (349.65) |

[ The statement of cash flows preserves the signs on cash flows, with negative cash flows i.e. outflows shown as minuses and positive cash flows as pluses. It also looks at cash flows through the eyes of equity investors in the company.]

The company, ARBL, has generated Rs.278.7 Crs from **operating activities**, which is a positive sign of financial well-being.

From the **investing activitie**s, ARBL has consumed Rs.344.8 Crs, indicating that the company is serious about its business expansion.

In **financing activities**, ARBL consumed Rs.53.1 Crs, mostly on paying dividends. Also, if ARBL takes on new debt in the future, it would increase the cash balance (remember the increase in liabilities, increases cash balance).

**Summary:**

| Cash Flow from | Rupees Crores (2013-14) | Rupees Crores (2012-13) |
|---|---|---|
| Operating Activities | 278.7 | 335.4 |
| Investing Activities | (344.8) | (120.05) |
| Financing Activities | (53.1) | (34.96) |
| **Total** | (119.19) | 179.986 |

This means the company consumed total cash of Rs.119.19 Crs for the financial year 2013 -2014.

Here is an extract from ARBL's cash flow statement:

| | | |
|---|---|---|
| Opening cash and cash equivalents | 4,094.68 | 2,283.19 |
| Add: Net increase/(decrease) in cash and cash equivalents | (1,191.92) | 1,799.86 |
| Add: Effect of foreign exchange differences on restatement of cash and cash equivalents | 25.87 | 11.63 |
| Closing cash and cash equivalents | 2,928.63 | 4,094.68 |

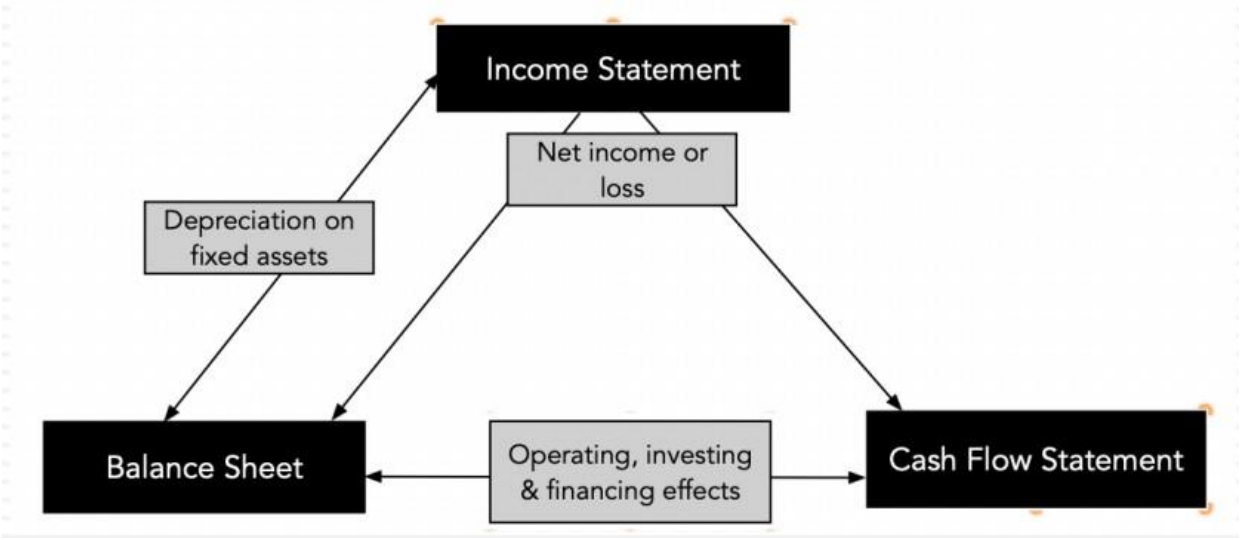
The company's cash flow statement for the year 2013-14 shows that they generated Rs.179.986 Crs from all their activities in the previous year. In the current year, the opening balance is Rs.409.46 Crs, which is the closing balance from the previous year. By including the current year's cash equivalents of Rs.119.19 Crs and a minor forex exchange difference of Rs.2.58 Crs, the company's total cash position is Rs.292.86 Crs. This indicates that while the company consumed cash in the current year, they still have adequate cash thanks to the previous year's carry forward. It's important to note that the closing balance of 2013-14 will now serve as the opening balance for the next fiscal year, FY 2014-15.

## 5. UNDERSTANDING THE CONNECTIONS B/W THE STATEMENTS

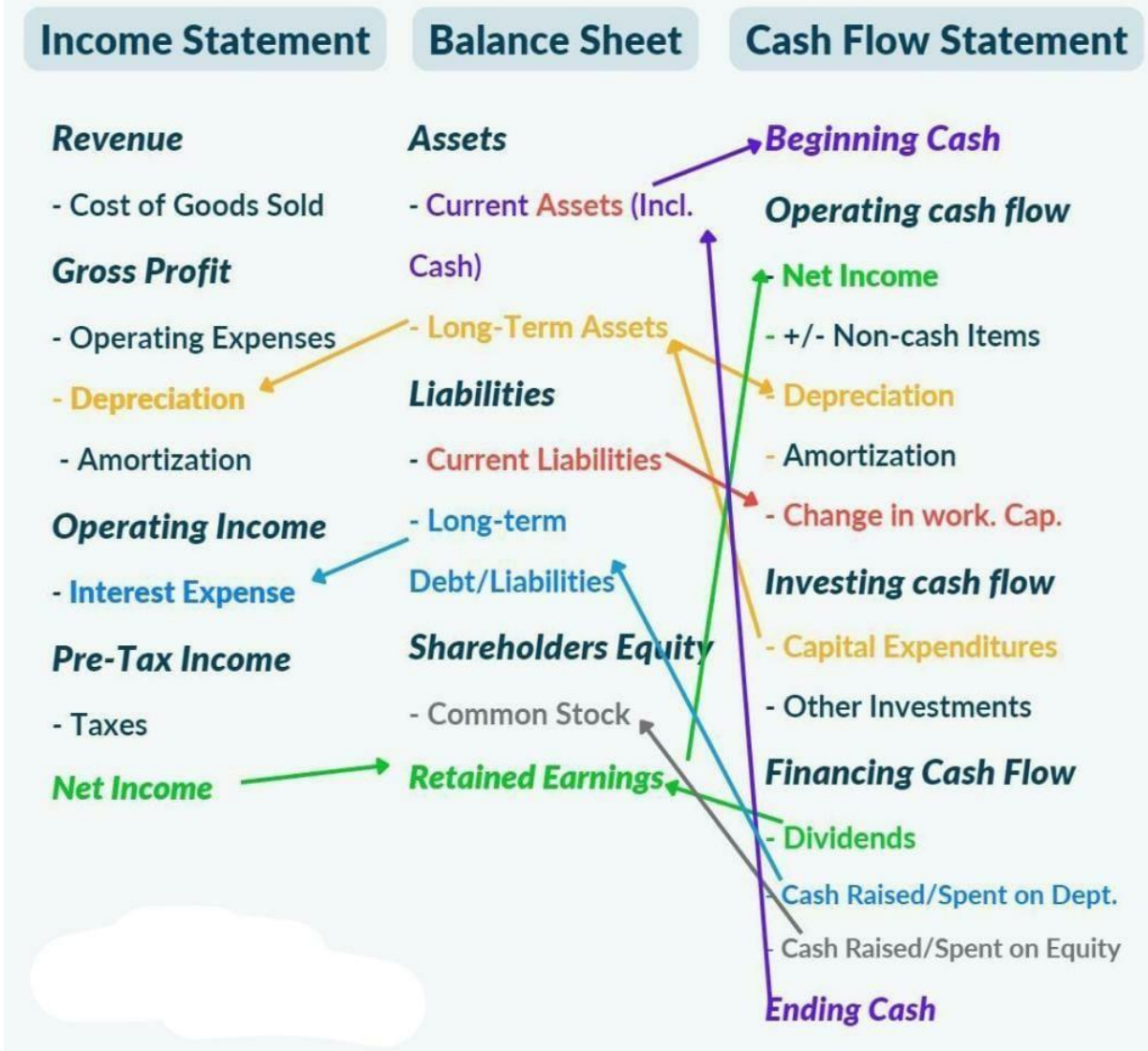
As you have gone through all 3 of these statements, you surely must have noticed that there are some similarities, that although different terminologies exist, they seem to give the ‘feel’ of the same concepts.

You are right, no statement is independent and they are highly interconnected. All three try to answer the same questions for a business: What does it own? What does it owe? How much money did it make? Although all 3 have different perspectives and methods of answering these questions.

To make sense of a company, you have to look at all 3 statements and understand the interconnections. For example, the cash you have invested in building a business will show up as Depreciation and Amortization in the Income statement, while it’ll get reflected in the balance sheet as Assets next year.



# HOW ARE THE THREE MAIN FINANCIAL STATEMENTS CONNECTED?



# 6. FINANCIAL RATIO ANALYSIS

These are values calculated using figures present in the financial statements. On its own merit, the financial ratio of a company conveys very little information. For instance, assume Ultratech Cements Limited has a profit margin of 15%, how useful do you think this information is? Well, not much really. 15% profit margin is good, but how would I know if it is the best?

However, assume you figure out ACC Cement's profit margin is 12%. Now, as we compare two similar companies, comparing the profitability makes sense. Clearly, Ultratech Cements Limited seems to be a more profitable company between the two. The point that I am trying to drive across is that more often than not, Financial Ratios on their own are quite mute. *The ratio makes sense only when you compare the ratio with another company of a similar size or when you look into the trend of the financial ratio*. This means that once the ratio is computed the ratio has to be analyzed (either by comparison or tracking the ratio's historical trend) to get the best possible inference.

# 7. THE PROFITABILITY RATIOS

## 7.1. Profit Margins

### 7.1.1. EBITDA Margin

EBITDA refers to "Earnings before Interest Taxes Depreciation and Amortization". It is a rough measure of operating cash flows, rough because it is before taxes and capital expenditure (We measure CapEx through D&A). Inspite of that, it remains a measure of the cash generating capacity of a company, prior to choices on how much to reinvest and borrow.

The EBITDA Margin which gives a sense of the cash generating capacity of a company can be useful in a variety of ways. Notably, in understanding how much a company can borrow.

As a rule of thumb, Companies with high EBITDA margins generate higher cash flows per rupee of revenues and should be able to borrow more than companies with lower EBITDA margins.

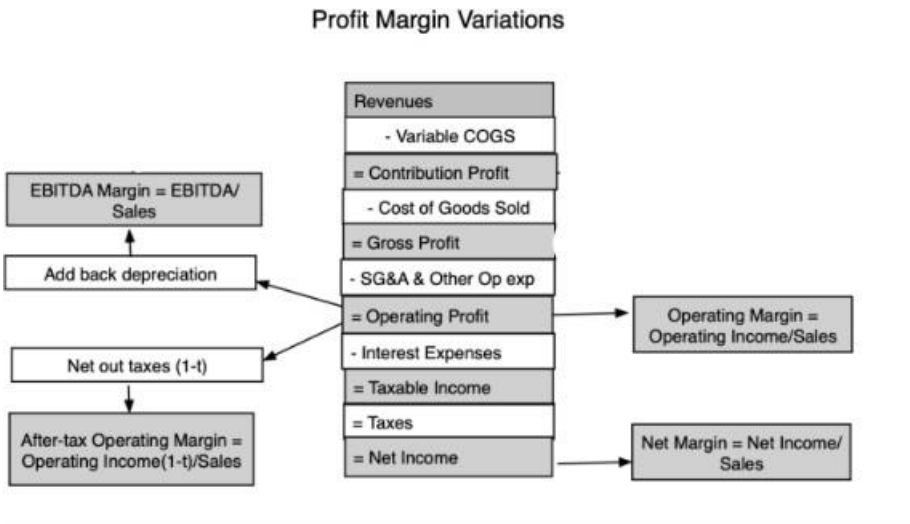
### 7.1.2. Net Margin / PAT (Profit after Tax)

It is a measure of how profitable the business is for the equity investors. Is it possible that the company is very profitable but the company receives very little? Yes (Hint: Debt).

Another verbose rule of thumb!

Companies with high net margins deliver more profits for equity investors (if debt is the reason why net margins are lower than operating margins).

### 7.1.3. Profit Margin Variations and their Calculation




COGS i.e. “Cost of Goods Sold” is the direct cost of producing the goods sold by the company. It can be calculated by adding line items from the BS and checking other expenses

“SG&A and Other Op Expenses” refers to the expenses that are not directly tied to the production of goods and services.

SG&A refers to “Selling, General and Administrative” expenses. They include: Marketing, Rent, Utilities, Legal Costs, etc

We hope you realize from the figure above that other variations of profitability margins also exist: namely, gross margin, after-tax operating margin and contribution margin. We leave it as an exercise for you to think about what they measure and scenarios in which they might prove useful!

## 7.2. Accounting for Returns

These ‘returns” are profits scaled to investments in the business, while earlier we were only looking at profits across a particular year. These returns help us assess profitability at a particular point in time, considering all such “investments” from the company’s incorporation.

## 7.2.1. ROE (Return on Equity)

It is a very important ratio, as it helps the investor assess the return the shareholder earns for every unit of capital invested. RoE measures the entity’s ability to generate profits from the shareholders' investments. In other words, RoE shows the efficiency of the company in terms of generating profits to its shareholders. Obviously, higher the RoE, the better it is for the shareholders.

**RoE = [Net Profit After Tax / Shareholders Equity* 100]**

## 7.2.2. ROIC (Return on Invested Capital)

Return on invested capital (ROIC) is a calculation used to assess a company's efficiency at allocating the capital under its control to profitable investments and gives a sense of how well a company is using its money to generate returns. Companies can raise finances through either debt or equity and Invested Capital is the combined value of the equity and debt capital raised by a firm.

Note that Invested capital is the amount of capital that is circulating in the business which is different from the "total capital a company has" [which is also called capital employed]. I.C. excludes non-active assets, especially those outside the business, such as securities held in other companies.

**ROIC = [Net Profit After Tax / Invested Capital]**

Invested capital = Total Debt + Capital Leases + Shareholders' Equity

Ratios which talk about Return on Capital also help assess competitive advantages:

- Industries where barriers to entry are high or other competitive advantages prevail should have higher returns on capital than companies without these advantages.
- Companies with strong competitive advantages within an industry should earn higher returns than their peer group.

# 8. LEVERAGE RATIOS

## 8.1. Measuring Financial Leverage

Debt is not completely bad; it is like a double edged sword. While on one hand, it enables a company to take on expansion and execute strategies, it also is the most common reason for the fall of companies when it becomes so high that the company isn't able to repay it. Hence, it becomes important for an investor to understand the debt profile of his company.

Debt ratios measure how much a company has borrowed, relative to overall capital or to earnings/cash flows.

| Name | Definition and Interpretation | Mathematical Formula | Where to find the components? |
|---|---|---|---|
| **Debt to Capital** | This is a measure of how much of the capital in a company comes from debt. | Debt / (Debt + Equity) | Balance Sheet<br><br>Equity is given by Shareholders' equity |
| **Debt to** | This is a close variant of debt to capital, | Debt/Equity | Balance Sheet |

| | | | |
|---|---|---|---|
| **Equity** | with debt stated as a percent of equity. *It shows the distribution of companies' capital employed based on debt and equity.*<br>*Higher the ratio higher the operating leverage* | | Net Debt = Long-term borrowing + Short-term borrowings |
| **Debt to EBITDA** | This measures how much debt a company has relative to the cash it generates from operations, before taxes and capital expenditures | Debt /EBITDA | Income Statement & Balance sheet |

## 8.2. Measuring Liquidity / Credit Risk

Suppose you see 2 companies, both with above average debt, how will you decide which is healthier in its debt profile? We check if the company has enough resources to meet its long term and short term obligations and use coverage ratios and liquidity ratios to do the same respectively.

Coverage Ratios are ratios which measure *how much buffer or coverage a company has in meeting commitments* while Liquidity Ratios measure how much liquidity companies have, to cover near-term needs or expenses. While the actual meaning of "liquidity" is "how easily an asset can be converted into cash", in liquidity ratios we ask: Do we have the cash if all "debts" become due at once?

| Name | Definition and Interpretation | Mathematical Formula | Where to find the components? |
|---|---|---|---|
| **Interest Coverage** | *The commitment is interest expenses, and it is scaled to operating income.*<br>*It shows the ease with which a company can pay its interest. Lower the ratio greater the possibility of bankruptcy or default.* | [Earnings before Interest and Tax / Interest Payment] | P&L statement<br><br>**NOTE**: *EBIT = Total Revenue - Total Expenses + Depreciation & Amortisation* |
| **Current Ratio** | *Measure current assets relative to current liabilities* | Current Assets / Current Liabilities | Balance Sheet |
| **Quick Ratio** | *A variant of the current ratio where we net out the inventory in the current assets as it is really not that "liquid"* | (Current Assets - Inventory) / Current Liabilities | Balance Sheet |

## 9. OPERATING / EFFICIENCY RATIOS

Operating Ratios are the management's report card and reflect the management's efficiency. They measure the revenue payoff that companies get from reinvesting back in their businesses. The higher the better.

| Name | Definition and Interpretation | Mathematical Formula | Where to find the components? |
|---|---|---|---|
| Capital Turnover | *Companies can raise finances through either debt or equity and Invested Capital is the combined value of the equity and debt capital raised by a firm.* | Sales / Invested Capital | Income Statement & Balance sheet<br>*Invested capital =*<br>*Total Debt + Capital Leases + Shareholders' Equity* |
| Asset Turnover | *Measures how efficiently the company uses its assets to generate profits.* | Sales / Total Assets | Income Statement & Balance sheet |
| Working Capital Turnover | *Shows the amount of profit generated per unit of working capital (the cost torun its day-to-day operations).*<br>*Higher the ratio, the better it is.*<br>*But it has to be compared with its peers.* | Sales / Working Capital | Income Statement & Balance sheet<br><br>**NOTE:** *Working capital = Current Assets - Current Liabilities* |

## 10. VALUATION RATIOS

No matter how good a business is, if it's not at the correct valuation, it isn't worth buying, and a mediocre company at dirt low price could be a great catch. Let us look at some important ratios.

| **Name** | **Definition and Interpretation** | **Mathematical Formula** | **Where to find the components?** |
|---|---|---|---|
| **Price to sales ratio** | *It is used to evaluate as, in some cases, due to stringent accounting techniques value of assets is considered less; hence investors prefer this ratio to offset the anomaly.*<br>*E.g. P/S is 4. Then it can be interpreted that for every 1 rupee worth of a sale—the higher the ratio greater the over-evaluation.* | Current Share Price / Sales per Share | Balance Sheet |
| **Price to book value ratio** | *Book value in layman's language, means if the company sells all its assets and repays all its debts, then it is the price the shareholder will get if the company shuts down its operations.*<br>*Higher the ratio greater the over-evaluation.* | Current Share Price / Book value per Share | Balance Sheet<br><br>Where<br>BV = [Share Capital + Reserves (excluding revaluation reserves) / Total Number of shares] |
| **Price to Earnings (P/E) Ratio** | *This shows for every 1 rupee earned how much the company is evaluated.* | Current Share Price / EPS<br>Or<br>Market Cap | P&L<br><br>EPS = PAT / Total Number of shares<br>Have a check on the earnings by ensuring no frequent change in accounting policies, |

| | | | |
|---|---|---|---|
| | | / PAT | the way depreciation is accounted, and earnings are in line with cash flows and sales. |