

FINANCIAL MEASURES AND FINANCIAL RATIOS

Ultimately the universal measure of business performance is money and the ultimate forms of this measurement are the final accounts of the company. Money has the advantage that it can be used to measure the effectiveness and efficiency not only of different business functions (marketing, engineering, production etc.) but also of different businesses (from manufacturing companies to retailers and from hotels to garages).

Before looking at the money measures it is helpful to review what needs to be measured. The key objectives for most businesses divide into three areas:

PROFITABILITY

SURVIVAL

GROWTH

PROFITABILITY

Behind the need for profitability is the fact that any business enterprise makes use of invested money to earn profits. This is as true for even the safest investment where money is invested in a bank and earns interest as it is for the most complex situation where a company has money invested in a factory, machines, customer debts, stocks etc.

Profitability is measured by dividing the profits earned by the company by the investment (or money) used by the company:

$$\frac{\text{PROFIT}}{\text{INVESTMENT}}$$

The measure is usually expressed as a percentage. It is independent of the size or type of business. It provides a means of ranking and evaluating the success and efficiency of the business against other businesses and other forms of investment.

By using differing measures of "profit" and the investment associated with earning this profit (as we will see later) it is possible to measure the profitability from different viewpoints (for example the shareholders' viewpoint versus the management's viewpoint).

The measurement of profitability means that it is necessary to calculate profits and investments. This is done using the Profit and Loss Account and Balance Sheet respectively.

SURVIVAL

The need for profitability is of particular interest to the company's shareholders. However, shareholders only provide a part of the funds necessary for a company's operation. Bankers and suppliers supply the rest of the funds. In comparison, these may be uninterested in the company's profitability but very interested in the company's ability to pay - in other words in its ability to survive.

(Note: this is not to say that the shareholders are not interested in survival obviously they are. But survival is not the same as viability. If the business is not viable, and makes losses it will not survive. But, a very viable but rapidly growing business will often not be able to fund its growth and many such businesses have been bankrupted.)

Financial survival risk exists in both the long and short terms. This will be illustrated in detail later but the major concerns are set out below. In the long term, bankers (who have made long term loans to the company) are interested in the size of their loans relative to the size of the shareholders' holdings (**Capital Gearing**). In the short term both bankers and suppliers are interested in the company's ability to pay. Thus they are interested in the relationship between assets that can be turned in to cash quickly

(**Current Assets**) and liabilities that must be repaid quickly (**Current Liabilities**).

The analysis of these risks is done using the Balance Sheet that not only shows what the company owns (**Assets**) but where this money has been obtained (**Shareholders' Equity & Liabilities**).

GROWTH

The last objective is concerned with the growth of the business. This involves measuring how the business is changing over time and so measures changes in sales, net sales, profits, profitability etc.

It also involves, as do the other measures, comparisons with competitors, the market, the economy etc. Thus growth will be measured both on an absolute and a relative basis.

THE KEY ACCOUNTS

As previously mentioned the two key business accounts are the Profit & Loss Account and the Balance Sheet. These provide two separate but related summaries of the company's financial position.

PROFIT & LOSS ACCOUNT

The Profit & Loss Account provides a picture of the company's activity over a set period (usually a year). It measures the trading done during the period and the costs and expenses associated (as shown in the table).

PROFIT & LOSS ACCOUNT	
SALES OR TURNOVER	1809
COST OF SALES	1201
GROSS PROFIT	67
OPERATING EXPENSES	125
OPERATING PROFIT	116
FINANCIAL EXPENSES	42
INCOME BEFORE TAX	74
TAX PAID	30
EARNINGS	44
DIVIDENDS	30
RETAINED PROFIT	14

The Profit & Loss Accounts only contains information on the trading activity for the period. So it does not include costs or revenue committed or paid during the period that is part of later trading activity. This can be illustrated by two examples:

1. Factory equipment is purchased that has a useful life of several years. The value of this equipment becomes part of the company's assets and its use will be progressively charged as depreciation to the Profit and Loss account. This involves cash expenditure during the period but only the depreciation is shown in the Profit & Loss account. The value of the asset is shown in the balance sheet.
2. A customer places an order that to be delivered (and invoiced) in the following period. Here, although the sale is confirmed, the revenue from the order is part of the next period's sales.

The Profit and Loss Account not only shows the total value of sales made during the period but also itemises the main types of cost (Cost of Sales, Distribution etc. Also it is used to calculate several measures of profit viz.:

OPERATING PROFIT
PROFIT BEFORE TAX
EARNINGS

The operating profit represents the profit earned by the main stream activities of the business (i.e. Sales or Turnover less Cost of Sales, Distribution, Administration and other Operating Costs). Thus it provides a measure of the profits earned by the management in running the main stream business.

In contrast Profit Before Tax (Operating Profit less Interest Paid) also measures profit. But, its measurement is affected by the mix of funds (i.e. the proportion of funding provided by shareholders and that provided by bankers).

The Earnings (profit after tax) is the profit earned by the company on behalf of its shareholders. It will either be paid out immediately (as dividends) or will be retained for the shareholders.

BALANCE SHEET

The Balance Sheet provides a "snap shot" of the business's financial position. It provides a picture of both the assets owned by the company and the money owed by the company. The contents of the balance sheet fall into two parts:

ASSETS

EQUITY & LIABILITIES

ASSETS

The assets are items of value owned by the company and fall into two classes:

FIXED ASSETS

CURRENT ASSETS

Fixed Assets are assets that have a long life and will be owned and used by the company over several years. Typically they consist of the following:

LAND & BUILDINGS

PLANT & MACHINERY

OTHER FIXED ASSETS

INVESTMENTS

The need for The Land and Buildings, Plant and Machinery in the operation of the business is obvious. Additionally, the company will own vehicles for its staff and furniture and fixtures - the current value of these is recorded in the Other Fixed Assets. Finally the company may own shares in other companies that are shown as Investments.

Current Assets show the assets that are used during the day to day operation of the business and consist of:

RAW STOCKS

WIP STOCKS

FINISHED STOCKS

DEBTORS

CASH & DEPOSITS

EQUITY

When a company is formed it is funded by its shareholders (who are the owners of the company). As the company trades and earns profits these profits may be paid to the shareholders (as dividends) or retained as part of the owners' equity. If, after the company has been trading, further shares are issued these will be sold at the current share market price (rather than the "nominal" share price). The difference between the actual price and the nominal price will be accumulated in the share premium. Thus the total shareholders' stake in the company consists of:

ISSUED SHARES

SHARE PREMIUM

PROFIT & LOSS ACCOUNT

(Note the role of the shareholders must not be confused with the role of the board of directors. The board is employed by the shareholders to run the business on their behalf. They are paid a salary (and may have options to buy shares or be rewarded based on the company's profits). The profits earned from trading or from selling shares are earned by the shareholders).

LIABILITIES

Besides the funds supplied by the shareholders' funds are supplied by and therefore money owed to others. These fall into two categories:

LONG TERM LIABILITIES

CURRENT LIABILITIES

Long Term Liabilities consist, primarily, of bank loans that have been taken out for several years.

Current Liabilities are liabilities that are due to be paid during the next year and consist of:

OVERDRAFTS & SHORT TERM LOANS

CREDITORS

TAXATION DUE

DIVIDENDS TO BE PAID

The current liabilities may also be looked at as the money that must be paid as part of the short term, day to day, operation of the company. Therefore it is often common practice to net the current liabilities against the current assets to calculate the net current assets (or working capital).

BALANCE SHEET EXAMPLE

EQUITY	
ISSUED SHARES	600
SHARE PREMIUM ACCOUNT	51
PROFIT & LOSS ACCOUNT	613
SHAREHOLDERS' FUNDS	1264
LONG TERM LIABILITIES	
LONG TERM LOANS	340
ASSETS	
FIXED ASSETS	
LAND & BUILDINGS	547
PLANT & MACHINERY	742
INVESTMENTS	0
OTHER FIXED ASSETS	111
TOTAL FIXED ASSETS	1400
CURRENT ASSETS	
STOCKS	148
DEBTORS	357
CASH & DEPOSITS	39
TOTAL CURRENT ASSETS	544
TOTAL ASSETS	1944
CURRENT LIABILITIES	
OVERDRAFTS & SHORT	207
TRADE CREDITORS	73
TAX & DIVIDENDS	60
CURRENT LIABILITIES	340

MEASURING PERFORMANCE

As described previously the key business objectives may be conveniently described in terms of Profitability, Survival and Growth.

PROFITABILITY MEASURES

Based on the Profit and Loss Account and the Balance Sheet it is now possible to analyse the company's profitability further.

Shareholders' View - First one can look at the profitability from the viewpoint of the shareholders. At any time they have investments tied up as shareholders' funds and have profit earned on their behalf (earnings). Thus the return that the shareholders get on their investment is equal to:

EARNINGS
SHAREHOLDERS' FUNDS

In the example this is 44/1264 or 3.5%.

Operating Efficiency - a second way of looking at the business is from the viewpoint of the operating efficiency of the management. For this purpose it is usual to look at the income from operations in relation to the Total Assets:

OPERATING PROFIT
TOTAL ASSETS

In the example this is 116/1944 or 6.0%.

This analysis can be taken further to investigate possible causes of poor performance. In particular it is often useful to calculate the Net Profit percentage and the Asset Turnover. The Net Profit percent is calculated as follows:

OPERATING PROFIT
SALES or TURNOVER

(And in the example is 6.4%). The Asset Turnover is calculated as follows:

SALES or TURNOVER
TOTAL ASSETS

(And in the example is 0.9).

The net profit percent when multiplied by the asset turnover equals the income from operations to total assets. However, by splitting the measures, it is possible to investigate whether low profitability is due to inefficiency in gaining sales or whether the costs may be too high or prices too low etc. or due to an inefficient use of the company's assets. As previously mentioned this analysis would be based on a comparison of the results over time and with competitor's results.

Profitability can be analysed further by investigating stocks and debtor levels. In particular, stocks can be expressed as days of activity thus:

STOCKS
COST OF SALES

And debts owed by customers can be expressed in a similar manner:

DEBTORS
SALES or TURNOVER

These measures can be used to see if there is too much 'idle' stock or if the customers are taking too long to pay.

SURVIVAL

As previously mentioned bankers and creditors are interested in the company's ability to pay. This can be assessed in the long term from the capital gearing thus:

LOANS
SHAREHOLDERS' FUNDS

This measure is designed to show if the bankers are taking an undue risk by supplying a too large share of the company's funds. Although it is primarily concerned with the company's long term funds it is usual to include both the long and short-term loans and overdrafts in the calculation of the loans. In the example Capital Gearing is 0.4.

In the short term bankers and creditors are interested in the relation-ship between Current Assets and Current Liabilities and the ability to cover short-term commitments. There are two common measures of short-term liquidity thus:

CURRENT RATIO
QUICK RATIO

Current Ratio - the current ratio is calculated as follows:

CURRENT ASSETS
CURRENT LIABILITIES

In the example this is equal to 1.6. If this ratio falls below 1.5 then the bankers and creditors will be concerned that the company will be unable to cover its short-term commitments.

Quick Ratio - this is also known as the Liquidity Ratio or Acid test ratio. It takes into account that, if a company is in difficulties, the stocks shown on the balance sheet may be over valued and may never be sold so the ratio is calculated by discounting the value of stocks thus:

(CURRENT ASSETS - STOCKS)
CURRENT LIABILITIES

In the example this is 1.2. If it falls below 1.0 the bankers and creditors will be concerned that the company will be unable to cover its short-term commitments.

GROWTH

The company will wish to measure financial growth in several ways. In particular, besides measuring changes in the profitability measures over time, it will be useful to measure growth in sales turnover, operating profit, earnings and total assets.

**Wishes,
Third Eye Advisory Services**

