Accounting and Finance (AEW)

Revision summary by Michael Prior-Jones

Cash Flow Forecast:

Description of projected incomes and expenditures over a given period. Provides information that informs the profit & loss statement and the balance sheet.

Balance Sheet:

Snapshot summary of the worth of an organisation. Valid only at time of issue. Contains:

- Assets- things owned
- Liabilities - things/amounts owed to others.

The Net Worth = Assets – Liabilities.

Assets

Assets can be fixed or current.

Current assets are things you acquire as part of your main line of business, like stock and debtors. They are generally held for short periods before being realised as cash.

Fixed assets are things you hold over a longer term, such as office equipment. Fixed assets further subdivide into tangible assets (things you own, such as a building), intangible assets (such as brand names, patents and IPR) and financial assets, such as savings and investments.

How to draw a balance sheet:

FIXED ASSETS

- Tangibles
- Intagibles
- Financials

CURRENT ASSETS (held for less than 1 financial year)

eg:

- Stock
- Cash
- Debtors

TOTAL ASSETS = total value of above

CURRENT LIABILITIES
(show as NEGATIVE amounts)

- Creditors (amounts falling due within 1 financial year)
- Long Term Liabilities (amounts due beyond this)

TOTAL LIABILITIES = total of above (negative number)

NET ASSETS = total assets + total liabilities
Show this as represented by total of:

- Shareholders' funds
- Profit and Loss Account (balance of at date of issue)
- any reserves held.

Important notes:

- On a balance sheet, stock is valued at its purchase price.

How to draw a profit and loss statement

This is like a bank statement, showing income and expenditure over the financial year or other accounting period.

SALES REVENUE (also called turnover)
COST OF SALES

- labour cost
- materials cost

Sales Revenue – Cost of Sales = GROSS PROFIT

OVERHEADS

NET PROFIT (also called Profit Before Interest and Taxation, PBIT) = Gross profit – overheads

INTEREST

PBIT – Interest = Profit Before Taxation

TAXATION

PBIT – Interest – Taxation = Profit After Taxation (PAT)

which is the "bottom line". This is then retained as reserves and/or distributed as a dividend.

Important notes:

- Sales Revenue is the value of the sales you made during the period, regardless of whether you have been paid for them!
- Cost of sales must allow for stock: Value of goods purchased – value of stock held at end of period – cost of goods sold.

How Accountants handle Assets (Depreciation)

There are three depreciation models:

- 100% write-off in year of purchase: you show the payment entirely on the first year's accounts.
- Straight-line depreciation: the asset is "paid for" over its lifetime in equal annual payments. Annual depreciation is:

  $A = \frac{C - R}{n}$ where A is the annual depreciation, C is the cost of the asset, R is the value of the asset at the end of its life (the residual value) and n is its lifetime in years.
- Reducing-balance depreciation: the asset depreciates by a percentage each year, according to the following formula:

  $percentage = 1 - \sqrt[n]{\frac{R}{C}}$ where all the terms have the same meaning as above.

Financial Analysis:

Useful ratios:

Return on Sales

$$RoS = \frac{PBIT}{SR}$$

SR is Sales Revenue, aka turnover.

Return on Capital Employed (RoCE)

$$RoCE = \frac{PBIT}{TCE}$$

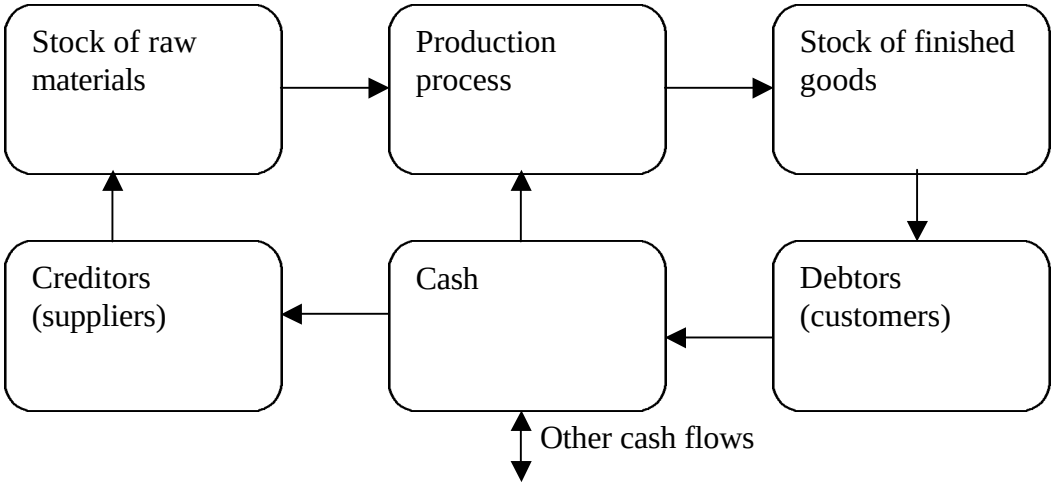
TCE = total capital employed, aka Net Assets

Asset Utilisation Ratio (AUR)

$$AUR = \frac{SR}{TCE}$$

RoS x AUR = RoCE

The Working Capital Cycle



Stock Management

- FIFO stock accounting (UK tax accounting): charge each months costs to P&L account, using existing stock **before** new purchases
- Average stock costs: charge each months costs based on weighted average stock price.
- LIFO method: thoroughly screwy, don't do it.

Ratios for the Working Capital Cycle

Creditor days

$$\text{Creditor Days} = \frac{\text{Average creditors}}{\text{Account purchases}} \times 365$$

This is the average number of days the organisation takes to pay its creditors.

Average creditors = average over financial year of money owed.
Account purchases = value of goods bought on credit over the year.

Debtors days

$$\text{Debtor Days} = \frac{\text{Average debtors}}{\text{Account sales}} \times 365$$

This is the average number of days that the organisation has to wait to be paid by its debtors.

Average Stock Turnover

$$\text{Stock Turnover} = \frac{\text{Average stock}}{\text{Cost of sales}} \times 365$$

Duration of WKC = stock turnover + debtors days – creditors days

Liquidity ratio (acid test)

$$\text{Liquidity Ratio} = \frac{\text{Current assets - Stock}}{\text{Current liabilities}}$$

Current Ratio

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

Typically 1.5 to 4. For some organisations (supermarkets), this can be less than 1, but only with careful management of cash.

Cost/Volume/Profit analysis

Each product or service has two kinds of cost associated with it:

- fixed costs, which don't vary with the volume of output (tooling, for example)
- variable costs, which vary with the volume produced.

Total cost of production:

$$\text{Total cost} = (\text{variable cost} \times \text{number of units}) + \text{fixed cost}$$

$$Tc = C_V \times V + C_F$$

where V is the volume of production (i.e. the number of units made)

$$\text{Sales revenue} = \text{Selling price} \times \text{Volume}$$

$$\text{Sr} = \text{Sp} \times \text{V}$$

$$\text{Profit (PBIT)} = \text{Sales revenue - Total cost}$$

$$P = Sp \times V - (C_V \times V) - C_F$$

$$P = (Sp - C_V)V - C_F$$

If profit = 0, project breaks even. Therefore we can find the break-even volume:

$$V_{BE} = \frac{C_F}{(Sp - C_V)}$$

The denominator of this is called the *margin* or *contribution* – it's the gross profit per unit.

This strategy assumes a number of things:

- fully linear cost function
- no semivariable costs
- manufacturing strategy constant, and has capacity to expand.

Sometimes, a *contribution to overheads* is used to account fixed costs (overheads) on a per item basis. This is called *absorbtion costing*.
However, when making more than one product line, contribution must be calculated for each product. Also, when expanding production, additional products make large profits, as overheads have been accounted for.

Investment Appraisal

This is trying to assess whether an investment is worth making.

It involves comparing the return on an investment with the interest rate:

Draw a table showing projected cashflows over several years. You can find the *accounting return*, which is the "profit" you make over that period. However, had you not invested, the money would have earned bank interest at a compound rate *r*. So, we back-calculate the *net present value* of the investment at the end of the period by the following formula:

$$NPV = \sum_{i=0}^{n} \frac{FV_i}{(1+r)^i}$$

NPV = net present value of investment
n = number of years invested
FV_i = cash received (paid out if negative) in year i.

If the NPV is positive, it shows the money you gain over and above bank interest. If the NPV is negative, it shows the money you lose with respect to bank interest.

The *hurdle rate* is the interest rate at which the NPV is zero (i.e. break even)- if you anticipate interest rates being lower than the hurdle rate during the period, the investment is worth making!