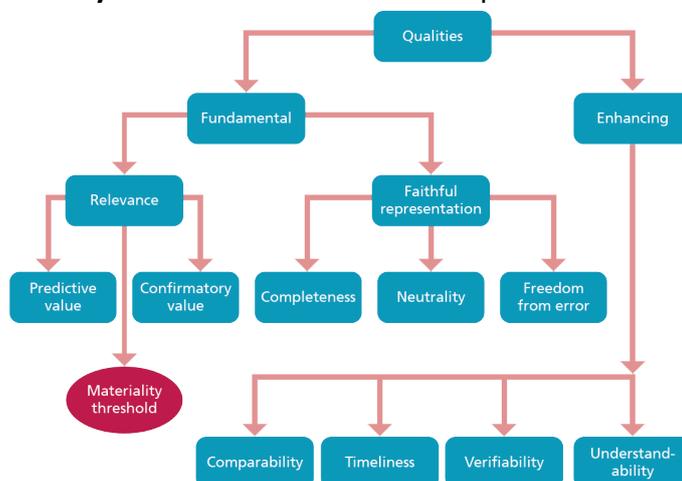


Introduction to Accounting

Nature and Role of Accounting

- **Accounting** involves the collection, analysis and communication of economic information, typically used as a tool for decision-making, planning and control within a business setting.
- Accounting traditionally focused more on providing a stewardship or accountability report on the status of transactions, but now serves to inform the allocation of scarce resources.
- The ultimate intent of an accountant's work is to discharge the accountability function of management, and to influence the decisions of those who use the information produced.
- *Accounting is a service* whereby various users are provided by accountants with financial information possessing two **fundamental qualities**: relevance and faithful representation.
- The **relevance** of financial information concerns its usefulness to users by being able to influence decisions due to prediction of future events and/or confirmation of past events; information must cross a **material threshold** (whether its presence would alter decisions).
- The **faithful representation** of financial information concerns its completeness, neutrality and freedom from error (different to accuracy given that inaccurate estimates may exist).
- Accounting information must satisfy both fundamental qualities if it is to be useful; the usefulness of the information can be enhanced given the presence of four other qualities.
 - **Comparability** of information aids in identification of relationships between items.
 - **Verifiability** of information provides assurance of faithful representation through the consensus of independent experts, and the use of evidence to support claims.
 - **Timeliness** of information is a key factor which determines its usefulness for users.
 - **Understandability** of information for clients requires clear and concise formatting.



- Accounting information should only be produced if its cost is less than its benefit or value.
- It is difficult to assess the value of information relating to this **cost-benefit** characteristic.
- *Accounting is a system* that provides economic information to inform economic decisions.
- Economic decisions generally involve choosing the best outcome using limited resources.
- The accounting system gathers, processes, and communicates information in four stages.
 - Identifying and capturing relevant economic information
 - Recording the collected information systematically
 - Analysing and interpreting the collected information
 - Reporting the information in a manner that suits users

Measuring and Reporting Financial Position

Statement of Financial Position

- Accounting reports illustrate financial performance and position, and availability of funds.
- The balance sheet represents assets and the claims against those assets at a point in time.
- An **asset**, for accounting purposes, is a business resource which has certain characteristics: it has probable future economic benefit; it can be reliably measured in monetary terms; it arises from a past transaction; and the business has exclusive right to control the asset.
- Assets must meet all four conditions so as to appear on the statement of financial position.
- **Tangible assets** are those that have a physical substance (e.g. inventory, cash, machinery).
- **Intangible assets** are those that have no physical substance (e.g. trademarks and patents).
- **Claims** against assets means the entity is obliged to provide the benefit to another entity.
- Claims against assets are split into each external (liability) and internal (owners') interests.
- **Liabilities** are claims from those other than the owner(s), resulting from past transactions.
- Liabilities include accounts payable, bank overdrafts, mortgages, holiday pay and taxation.
- **Provisions** are estimated liabilities for which there is less certainty with amount or timing.
- **Contingent liabilities** are the potential liabilities which may arise due to a particular event.
- **Owners' equity** is representative of the claims of the owner(s) on the assets of a business.
- Equity is the residual interest in the assets of the entity after deducting all of its liabilities.
- **Capital** is the term which describes the share of a business representing owners' interests.

Accounting Equation

- If a business wishes to acquire assets, it must raise the necessary funds from somewhere.
- The **accounting equation** shows the relationship between assets and claims of a business.
Assets = Liabilities + Owners' Equity
- The accounting equation will always hold true, ensuring that the balance sheet 'balances'.

Classification of Assets and Claims

- Assets, liabilities and equities are usually sorted into categories to ease with their location.
- **Current assets** are held for the short term (less than 12 months), not on a continuing basis, and include cash and other assets that are expected to be consumed or converted to cash.
- The most common current assets are stock, accounts receivable, prepayments, and cash.
- The circulating nature of current assets involves inventory, accounts receivable and cash.
- **Non-current assets** are held for the long term to generate wealth rather than to be resold.
- Non-current assets are the tools of the business and include land, machinery and vehicles.
- **Current liabilities** are amounts due for settlement in the short term (less than 12 months).
- **Non-current liabilities** are those amounts not liable for repayment within the short term.
- Current liabilities include accounts payable and overdraft; non-current include mortgage.
- While short term is usually within 12 months, it may also be the business's operating cycle; the **operating cycle** is the time between the acquisition of assets and realisation into cash.
- Owners' equity is usually categorised into owners' contributed capital and retained profit.
Owners' Equity = Equity + Revenues – Expenses
- For companies the categories will be: contributed equity; retained profit; other reserves.

Format of Statement of Financial Position

- There are two key choices for presenting a statement of financial position (balance sheet):
 - Horizontal format** (typically uses the **entity approach** of the accounting equation).

$$\text{Assets} = \text{Liabilities} + \text{Owners' Equity}$$

Brie Manufacturing
Statement of financial position as at 31 December 2017

	\$	\$		\$	\$
<i>Current assets</i>			<i>Current liabilities</i>		
Cash at bank	48,000		Accounts payable	148,000	
Accounts receivable	72,000				
Inventory	92,000		<i>Non-current liabilities</i>		
		212,000	Loan	200,000	
			Total liabilities		348,000
<i>Non-current assets</i>			<i>Owners' equity</i>		
Motor vehicles	76,000		Opening balance	200,000	
Plant and machinery	120,000		Add profit	56,000	
Property	180,000			256,000	
		376,000	Less drawings	(16,000)	
			Ending balance		240,000
Total assets		588,000	Total liabilities and owners' equity		588,000

- Vertical format or narrative format** (typically utilises the **proprietary approach**).

$$\text{Assets} - \text{Liabilities} = \text{Net Assets (Equity)}$$

Brie Manufacturing
Statement of financial position as at 31 December 2017

	\$	\$
<i>Current assets</i>		
Cash at bank	48,000	
Accounts receivable	72,000	
Inventory	92,000	
		212,000
<i>Non-current assets</i>		
Motor vehicles	76,000	
Plant and machinery	120,000	
Freehold premises	180,000	
		376,000
<i>Total assets</i>		588,000
<i>Less liabilities</i>		
<i>Current liabilities</i>		
Accounts payable	148,000	
<i>Non-current liabilities</i>		
Loan	200,000	
<i>Total liabilities</i>		348,000
<i>Net assets</i>		240,000
<i>Owners' equity</i>		
Opening balance		200,000
Add profit		56,000
		256,000
Less drawings		16,000
<i>Total equity</i>		240,000

- The listing of assets on a balance sheet is arranged by level of liquidity in descending order.
- A business normally prepares a statement of financial position as at the close of business on the last day of its accounting year (usually June 30 in Australia to coincide with taxation).

Factors Influencing Form and Content of Financial Reports

- There are three significant influences on the accounts included in the statement of financial position and the financial measures assigned to those accounts: traditional accounting conventions and doctrines; recent theoretical developments in conceptual frameworks; continuing development of professional and statutory accounting standards.

Recording Transactions

Process of Recording Transactions

- A **first-principles approach** builds up statements by using a system of pluses and minuses; while this is possible for smaller numbers of transactions, it is impracticable for most firms.
- In practice, a manual system of ledger accounts and/or a computerised system is utilised.
- Emphasis has changed almost continually to the use of computer systems since the 1960s; these have become far more complex with provision of almost all documentation needed; while not obvious, underlying all of these systems are the principles of ledger accounting.
- The recording process can be summarised as: identify the effect of a business transaction on the accounts; record it in the journal; transfer the entry into the correct ledger accounts.
- The result of this process allows for the production of the three main financial statements.
- The recording process has become more complex due to a number of factors that include: greater volumes and complexity of transactions; growing dimensions of internal control; integrated computer systems; growth of digital technology; and developments in banking.

Double-Entry Bookkeeping

- **Ledger accounting** (double-entry bookkeeping) is used to record transactions; it is a system of double entry supplemented by a system of **subsidiary records** (books of original entry) which ensures every transaction is identified and noted so that correct entries are made.
- The **ledger** is the book used to log transactions per the double-entry bookkeeping system.
- The ledger is broken down into a several **accounts**, each of which represent a basic record.
- Every type of asset, liability, equity, revenue or expense that is needed in the financial statements has an individual account, within which everything which affects it is recorded.
- Each account includes a debit (left) and a credit (right) side; a **debit (Dr)** entry is effectively a plus to an asset or expense and a minus to a liability, equity or revenue account, while a **credit (Cr)** is the reverse (minus to asset or expense; plus to liability, equity or revenue).

Assets + Expenses = Liabilities + Equity + Revenues

- It is worth noting that **Equity = Equity at Start of Period + Injections - Drawings/Dividends**
- The number of accounts depends on usefulness and cost (utilising a cost–benefit analysis).
- Details needed to record transactions in the accounts are entered into a subsidiary record.
- A simple **general journal** describes transactions and expresses them as accounting entries.
- The recording in the journal should be comprehensive, giving sufficient detail to provide an audit trail and an assurance that subsequent entries to the ledger accounts are correct.
- Transfer of an entry to the appropriate accounts is known as a ‘posting’ to the accounts.

Date	Account name and narrative	Folio	Debit side	Credit side			
Jan 1	Cash		30,000				
	Equity			30,000			
	<i>Being a contribution of cash as part of equity</i>						
Debit side		Cash		Credit side			
Date	Detail	Folio	Amount	Date	Detail	Folio	Amount
Jan 1	Capital		30,000				
Debit side		Capital		Credit side			
Date	Detail	Folio	Amount	Date	Detail	Folio	Amount
				Jan 1	Cash		30,000

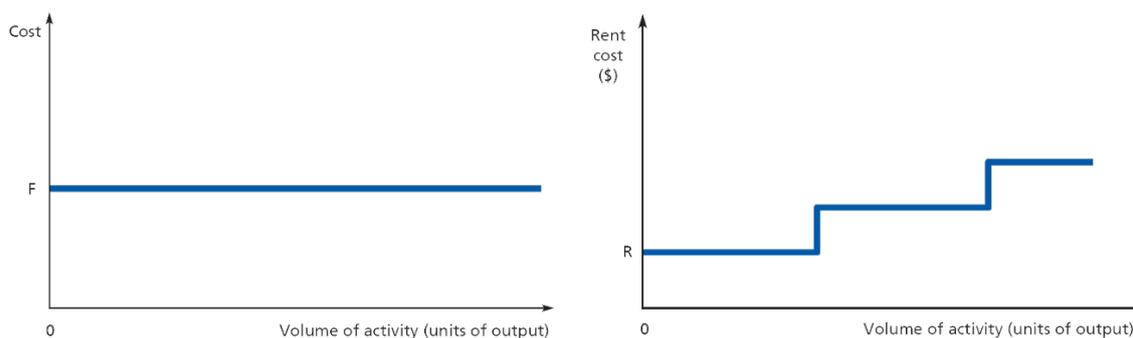
Issues Relating to Financial Analysis

- Overtrading occurs where a business is operating at a level of activity that cannot be supported by the amount of finance that has been committed; this situation is often due to poor financial control over the business by its managers; underlying reasons include: young, expanding businesses fail to prepare adequately for rapid increases in demand; managers misjudge expected sales demand or fail to control escalating project costs; inflation causing more finance to have to be committed to inventories and receivables; and owners are unable to inject further funds or persuade others to invest in the business.
- Overtrading results in liquidity problems such as exceeding borrowing limits, or slow repayment of borrowings and trade payables which can result in suppliers withholding supplies; ultimately, the business may fail because it cannot meet its maturing obligations.
- To deal with overtrading, a business must ensure that the finance available is consistent with the level of operations; thus, if a business that is overtrading is unable to raise new finance, it should cut back level of operations in line with the finance available; although this may mean losses in the short term, it may be necessary to ensure long term survival.
- **Trend analysis** is a form of analysis that uses trends, usually graphically or by percentage.
- Key ratios can be plotted on a graph to give a simple visual of changes occurring over time; trends occurring in a company may be plotted against trends in the industry as a whole.
- Ratios are the most important and powerful tool for analysing financial statements, but a simple technique that can be used to highlight potential strengths and weaknesses in financial performance, financial position and liquidity over time or between entities is **index** or **percentage analysis** which replaces monetary figures with an index or percentage.
 - **Common size reports** (vertical analysis) indexes the key magnitude of the report to 100 and all other subsidiary figures as a percentage of that figure; the key figure is normally sales in the income statement, and assets or claims in the balance sheet.
 - The trend percentage method indexes all figures in an allocated base year as 100 and expresses all subsequent years' figures as a percentage of the base year figure.
 - Percentage change (horizontal analysis) shows percentage change for all line items.
- Index analysis can readily highlight pleasing and disturbing trends in the financial reports.
- Attempts have been made to develop a more rigorous and systematic approach to the use of ratios for prediction purposes; researchers have shown an interest in the ability of ratios to predict financial distress in or financial failure of a business, and new methods and models employing ratios claim to predict future financial distress/financial failure.
- Ratios are based on financial statements, and so the results of ratio analysis depend on the quality of these statements; limitations may relate to the accounting policy choice (methods used) and the resultant effect on the financial magnitude for that account, and failure to include all resources controlled by the business (some intangibles like goodwill).
- A persistent problem is that the financial results can be distorted as a result of inflation; inflation can lead to an overstatement of profit and an understatement of asset values; expenses will be understated in the income statement and thus profit will be overstated; this means that comparisons between businesses or between periods will be hindered.
- Exclusive reliance on ratios can cause a business to lose sight of the information contained in the underlying financial statements (e.g. total sales, capital employed, profit figure etc.).

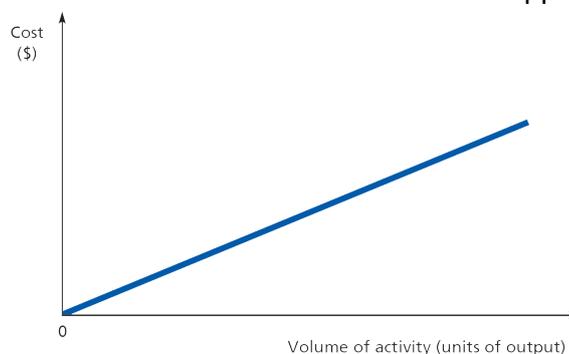
Cost–Volume–Profit Analysis and Relevant Costing

Behaviour of Costs

- Costs incurred by a business may be classified in various ways, one of which is according to how they behave in relation to changes in the volume of activity: fixed and variable.
- **Fixed costs** are those that stay the same in total when changes occur to volume of activity; such costs almost always vary with time (e.g. due to inflation) but not with level of output; 'fixed' does not mean set in stone for all time, but usually over the short to medium term given that at certain thresholds of activity fixed costs will change to adjust to output level; examples include rent, insurance, cleaning costs and salaried staff (not casual employees).



- **Variable costs** vary according to the volume of activity that is undertaken by the business; such costs increase in a straight line as activity increases, although in some cases economies of scale or diseconomies of scale may be achieved which would alter the line; examples include cost of raw materials for manufacturers or supplies for service providers.

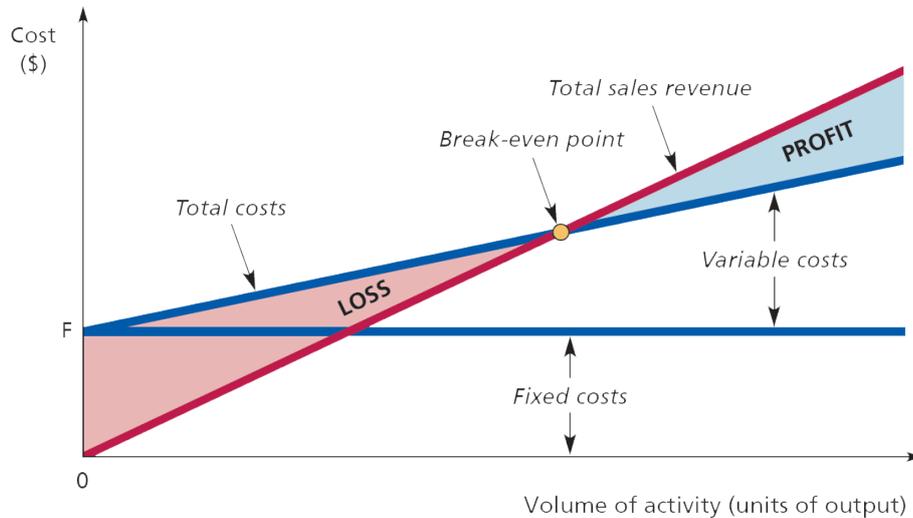


- **Mixed, semi-fixed or semi-variable** costs have elements of both fixed and variable costs; plotting several cost figures on a graph to create a line of best fit ($y = mx + c$) is often done; it is common to use figures based on past information to help forecast future figures, but this may mean the line of best fit is not a good fit or the range of values is inadequate; examples include electricity, administration costs, salaries and commission for sales staff.

Break-Even Analysis

- With knowledge of the elements of the cost for a particular good or service, it is possible to make predictions regarding total and per-unit cost at various projected levels of output.
- **Break-even analysis** is an important method of analysing cost behaviour and revenues so as to enable the break-even point (and other target levels of profit) to be calculated.
- The **total cost** of an activity is the sum of the fixed costs and variable costs of pursuing it; this chart can be graphed by adding the fixed cost graph and variable cost graph together.

- Superimposing a total revenue graph on top of a total cost graph gives a **break-even chart**; the **break-even point** is the level of activity where revenue equals costs (no profit or loss).



- As the relationships in the break-even chart are all linear, simple calculations can be made; if the number of units of output at break-even point is represented by b , we can derive:

$$\text{Total Revenues} = \text{Total Costs}$$

$$(b \times \text{Sales Revenue per Unit}) = \text{Fixed Costs} + (b \times \text{Variable Cost per Unit})$$

$$(b \times \text{Sales Revenue per Unit}) - (b \times \text{Variable Cost per Unit}) = \text{Fixed Costs}$$

$$b \times (\text{Sales Revenue per Unit} - \text{Variable Cost per Unit}) = \text{Fixed Costs}$$

$$b = \text{Fixed Costs} / (\text{Sales Revenue per Unit} - \text{Variable Cost per Unit})$$

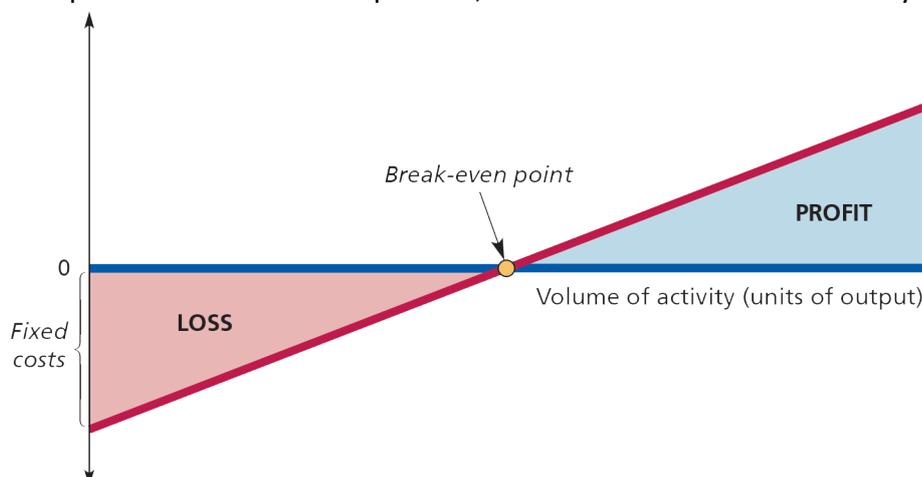
- Variable cost per unit is also termed **marginal cost** (cost incurred making one more unit).

Contribution

- Sales Revenue per Unit – Variable Cost per Unit is what is termed the **contribution per unit**; it is termed a contribution as it contributes first to meeting fixed costs and then to profit.

$$\text{Break-even Point} = \frac{\text{Fixed Costs}}{\text{Contribution per Unit}}$$

- The **contribution margin ratio** expresses as a percentage contribution per unit divided by sales revenue per unit, or total contribution margin divided by total sales revenue.
- The **profit–volume (PV) chart** is a plot of loss/profit against volume of activity; slope of the graph is equal to the contribution per unit; contribution increases as activity increases.



Full Costing

Nature of Full Costing

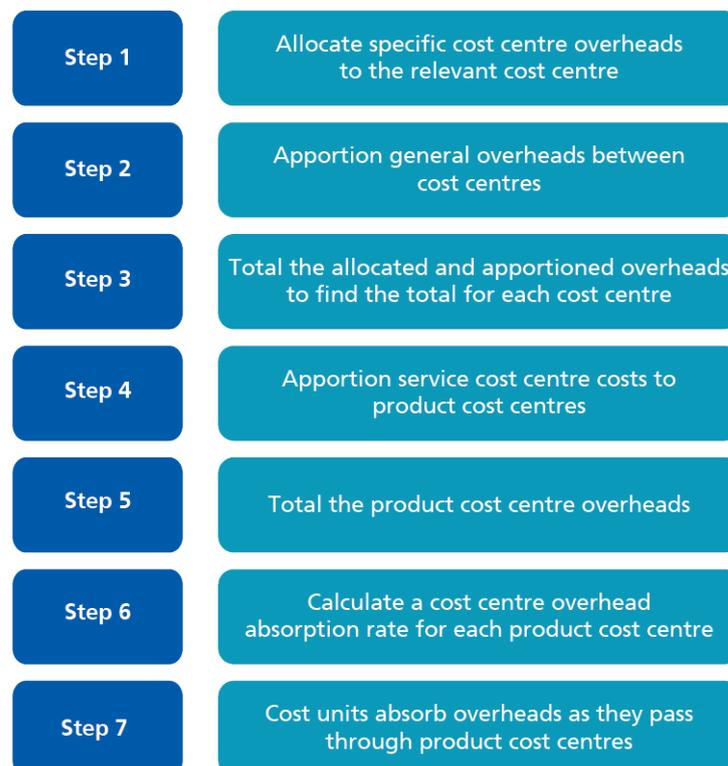
- **Full costing** involves deducing the total direct and indirect (overhead) costs of pursuing some objective or activity of the business; **full cost** is the total amount of resources, usually measured in monetary terms, that are sacrificed to achieve a particular objective.
- There are four primary areas where information relating to full costing may prove useful:
 - Pricing and output decisions: full cost information can help with decisions relating to product price to charge customers, number of units of products to produce etc..
 - Exercising control: budgets and plans are often expressed in full cost terms; example of control is where a reported full cost figure is too high so elements of full cost are then examined to see whether there are opportunities for reduction.
 - Assessing relative efficiency: full cost information can help managers compare the cost of carrying out an activity in a particular way or place with alternative options.
 - Assessing performance: to measure the profit arising from providing a particular product, the revenue it generates should be compared with the costs consumed.

Deriving Full Costs

- The simplest case for deducing full cost per unit occurs when the business has one product (each unit of product is identical); this is called **process costing** and involves adding all the costs of production incurred in the period before dividing this total by the total number of units of output for the period; issues could relate to historic cost as well as depreciation.
- A **cost unit** is the object for which the cost is being deduced, usually an individual product.
- When units of output are not identical, costs are separated into direct and indirect costs.
- **Direct costs** are those costs which can be identified with specific cost units to the extent that the effect of the cost can be measured in respect of each particular unit of output.
- **Indirect costs (overheads)** cannot be directly measured in respect of each unit of output.
- Total cost is the sum of direct and indirect costs (and the sum of fixed and variable costs).
- Cost units that are defined broadly will typically have a higher proportion of indirect costs.
- A technique for identifying the full cost per unit of dissimilar output is **job costing** where all possible direct costs are ascribed to output before charging each unit of output with a fair share of indirect costs (termed **absorption costing** as the cost units absorb overheads).
- **Overhead absorption (recovery)** rate is that at which overheads are charged to cost units.
- It is difficult to evaluate the extent to which cost units have 'benefited' from overheads; in practice, time, measured by **direct labour hours**, is usually the most popular basis for distinguishing between cost units for calculating an appropriate overhead absorption rate.
- The main reasons why direct labour hours are seen as the most logical basis for sharing overheads between cost units are: large jobs logically attract large amounts of overheads as they are likely to have been rendered more 'service' by the overheads than small ones; most overheads are related to time; and direct labour hours can be measured for each job.
- The most appropriate basis for charging overheads is that most useful to decision makers; nature of overheads should influence choice of the basis of charging overheads to jobs.
- It is impractical to charge overheads on differing bases to different jobs (incorrect charge).

Segmenting the Overheads

- It is possible to charge one part of the overheads on one basis and other parts on another; this is called segmenting the overheads; it is quite common in practice, usually by dividing a business into separate areas, and hence provides a better basis for charging overheads.
- Firms are divided into departments due to size, complexity, expertise and accountability; applying overheads on a department-by-department basis is typically not expensive but in many cases does not greatly improve the fairness or accuracy of the resulting full costs.
- A **cost centre** is an area, object, person or activity for which costs are separately collected; **product cost centres** are those in which jobs are worked on by direct workers and/or where direct materials are added, while **service cost centres** have no direct cost involved.
- The cost of service cost centres must be charged to product cost centres and become part of the product cost centres' overheads, so that those overheads can be charged to jobs.
- The process of dividing overheads between cost centres is as follows: cost allocation, where indirect cost elements that are specific to particular cost centres are allocated; cost apportionment, where the more general overheads are apportioned to cost centres; and then finally apportioning the total cost of service cost centres to product cost centres.



- **Batch costing** is a technique for identifying full cost where the production of many types of goods and services, particularly goods, involves producing a batch of identical or nearly identical units of output, but where each batch is distinctly different from other batches.
- Although full costs can be deduced after completing the work, it is often done in advance.
- Costs are frequently predicted; to price output, costs involved must be known/estimated.
- Where, for example, full costs are used as a basis on which to set selling prices of products, prices will usually have to be set before the customer will agree to the job being done.
- Even if no customer has been identified, an idea of ultimate price is required before the producer judges whether potential customers will buy the product and in what quantities.

Preparation of Cash Budget

- Most economic aspects of a business are reflected in cash sooner or later, thus the typical business cash budget will reflect the whole business more so than any other single budget; small and simple businesses should almost certainly prepare a cash budget as a minimum.
- Since budgets are documents to be used only internally by the business, style and format is determined by management choice and so these vary from one business to the next; most firms have fairly consistent approach, with the cash budget featuring the following:
 - The budget period is broken down into sub-periods (this will typically be months).
 - The budget is presented in columnar form with each month assigned to a column.
 - Receipts of cash are identified under various headings with monthly totals shown.
 - Payments of cash are identified under various headings with monthly totals shown.
 - Monthly surplus of receipts over payments (or payments over receipts) is identified.
 - Running cash balance is identified by taking balance at end of the previous month and adjusting for surplus or deficit of receipts over payments for the current month.

	Jan \$'000	Feb \$'000	Mar \$'000	Apr \$'000	May \$'000	Jun \$'000
<i>Receipts</i>						
Accounts receivable	60	52	55	55	60	55
<i>Payments</i>						
Accounts payable	(30)	(30)	(31)	(26)	(35)	(31)
Salaries and wages	(10)	(10)	(10)	(10)	(10)	(10)
Electricity			(14)			(9)
Other overheads	(2)	(2)	(2)	(2)	(2)	(2)
Van purchase	–	–	(11)	–	–	–
Total payments	(42)	(42)	(68)	(38)	(47)	(52)
Cash surplus/(deficit)	18	10	(13)	17	13	3
Opening balance	12	30	40	27	44	57
Cash balance	30	40	27	44	57	60

- Despite idiosyncrasies, other budgets tend to follow the same pattern as the cash budget; other budgets include the accounts receivable, accounts payable and inventories budgets.

Using Budgets for Control

- The budget is prepared in sufficient detail to be able to both plan and control activities; actual and budgeted performance are compared; variances are examined and rectified.
- In many businesses a simple comparison will enable issues to be identified and examined; in other cases comparison might be difficult, especially in the situation where the actual and budget figures are not prepared on the same basis (the budget will need to be flexed).
- **Flexing the budget** means to revise the budget to reflect differences between the planned and actual levels of output; it is usually flexed to reflect the volume which actually occurred; flexible budgets allow for more valid comparison between the budget and actual results.

	ORIGINAL BUDGET	FLEXED BUDGET	ACTUAL
Output (production and sales)	1,000 units	900 units	900 units
	\$	\$	\$
Sales	100,000	90,000	92,000
Raw materials	(40,000)	(36,000)	(36,900)
Labour	(20,000)	(18,000)	(17,500)
Fixed overheads	(20,000)	(20,000)	(20,700)
Operating profit	\$20,000	\$16,000	\$16,900