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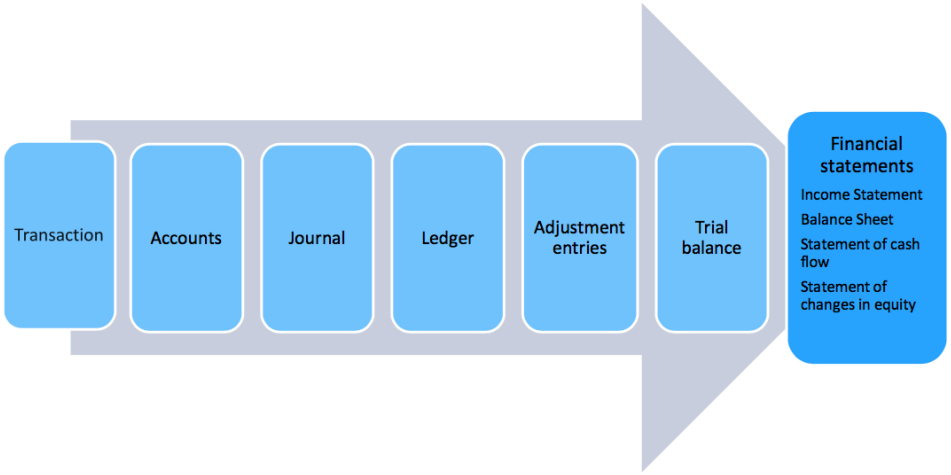
INTRODUCTION TO INTRODUCTORY ACCOUNTING

Financial Accounting		
What do we want to know?	**Accounting tool that can answer the question**	**Who uses it?**
What assets (machines, factory) does it have?	Balance Sheet	○ Shareholder/ owners ○ Potential investors ○ Creditors ○ Suppliers ○ regulators
How efficiently is it using these assets?	Income Statement	
Does it have the money to pay the bills?	Cash Flow Statement	

Management Accounting		
What do we want to know?	**Accounting tool that can answer the question**	**Who uses it?**
What is the cost of a product (such as the cost of a Bachelor of Commerce)?	Cost analysis and Activity-based costing	○ managers ○ employees
How do I know the level of activities that would generate the target profit?	Cost-Volume-Profit analysis	
How do I plan, manage and control costs?	Budgets and Variance analysis	
How do I plan and manage performance?	Balanced Scorecard	

NON-CURRENT ASSETS AND INTANGIBLE ASSETS

Accounting Cycle



Three Perspectives

- Technical accounting
- Reflection on the objectives of financial reporting
- Users' utilisation of financial reports

Technical Accounting

- How accounting numbers are constructed
- How managers prepare the financial statements following the accounting rules
  Accounting standards
  Conceptual framework
  GAAP
- Auditing
- Regulations (ASX, ASIC, Corporations Act)

Reflection on the objectives of financial reporting

- Accountability
- Decision usefulness

- '.... the types of information that are likely to be most useful to the existing and potential investors, lenders and other creditors for making decisions about the reporting entity....' (page 29 para QC1 1of *'Framework for the preparation and presentation of financial statements'*)
- 'If financial information is to be useful, it must be relevant and faithfully represent what it purports to represent.' .... (page 29 para QC1 1of *'Framework for the preparation and presentation of financial statements'*)
- reliable, relevant, understandable, timeliness, comparable, faithful representation

Users' utilisation of financial reports

- the primary objective is to serve the information needs of external users
- who are the users? Why and how do they use accounting information?

Who are the users?

- Current owners (existing shareholders)
- Potential investors
- Financial statements help investors to estimate the return they may
- expect on their investment and whether they want to become or continue to be the owners.
- Lenders (Banks)
- Financial statements help a creditors to decide whether to loan money
- to the business and if so, under what conditions (e.g., interest rate, conditions and monitoring)
- suppliers

How to access the financial statement

- Financial statements of companies listed at the stock exchange can be accessed from the ASX website Price and research → announcements → insert ASX code and release date → annual report
- May also be called financial report or full year statutory accounts. Could be June 30 or December 31

Information from financial reports

- Risk
- the uncertainty about the future earnings potential of a business. The greater the possibility that a business will earn a satisfactory profit, the less risk there is in investing in that business. As the chance decreases that a business will earn good profit, the risk of investing in that business increases.
- Shareholders' expected rate of return on their investment is related to the risk. The greater the risk, the higher will be the required rate of return.
- Creditors' lending rate of interest is related to the risk. The greater the risk, the higher will be the lending rate of interest.
- Operating capability
- A business' ability to continue a given level of operations in the future. Investors want to assess whether a business can earn a stable stream of operating income.
- Financial flexibility
- a business' ability to adapt to change in the future. This refers to the ability of a business to take advantage of business opportunities (such as new product or technology or a new market).
- Liquidity
- Measures of how quickly a business can convert its assets into cash to pay its bills
- Profitability
- Measures the ability of a business to earn an income

Standards for comparison

- Intra-company: comparison uses the prior year(s) of the same company as a benchmark
- Intercompany: comparison uses competitors as a benchmark
- Industry standards: also used as a benchmark. Can be obtained from financial websites

Analysis Tools

- Horizontal Analysis: a comparison of a company's financial results across time
- Vertical Analysis: comparison of financial balances to a base account from the same company
- Ratio Analysis: a comparison of different balances from the financial statements. Ratios are grouped together to assess a company's profitability, ability to pay debts and survival in the long term

Horizontal Analysis

A technique that calculates the change in an account balance from one period to the next and expresses that change in both dollar and percentage terms.

A simple but powerful analysis tool. It reveals significant changes in account balances and therefore identifies items for further investigation.

Figures in $ millions	2014	2013	$ Change	% Change
Current Assets:				
Cash and cash equivalents	2 067	1 333	734	55%

$ Current Year - $ Base Year = $2 067 - $1 333 = 55%
$ Base Year $1 333

$ Change = $2 067 - $1 333 = $734

Figures in $ millions	2014	2013	$ Change	% Change
Sales	60 181	57 749	2 432	4.2%
COGS	41 424	39 617	1 807	4.6%

$60 181 – 57 749 = $2 432

$2 432 / $57 749 = 4.2%

Note: while sales rose 4.2% COGS increased 4.6%

Vertical Analysis

Vertical analysis is a technique that states each account balance on a financial statement as a percentage of a base amount on the statement.

It also allows comparisons of different companies (and the same company over time) by controlling for differences in size.

For Balance Sheet For Income Statement

$$Percentage = \frac{account\ balance}{total\ assets}\ or\ \frac{account\ balance}{net\ sales\ or\ revenue}$$

Figures in $ millions	2014	%	2013	%
Cash	2 067	5.2%	1 333	3.1%
Total assets	39 724	100%	43 155	100%

$ asset accounts are stated as a percentage of Total assets (set at 100%).

$2 067 / $39 724 = 5.2%

Ratio Analysis

- Provide a mean of examining the financial health of a business
- Express the relationship between figures appearing in the financial statements, e.g. sales revenue and total assets
- When comparing the financial performance and position of different companies, the scale of operations pose a major challenge. The direct comparison of accounting measures (such as *profit* or *total assets*) of businesses may lead to incorrect inferences due to differences in prices. Ratios can solve this problem s it expresses an accounting number (i.e., *Profit*) in relation some other measure (such as *Sales* or *Total Assets*). The rations help to compare the financial condition of different businesses.

One of the most important aspects of any financial analysis is profitability.

But that tells only a portion of the story. It does not reveal how efficiently and effectively those profits were generated.

Each ratio reveals something different about a company's profits and they are best used in tandem so that a broad understanding of a company's profitability can be obtained.

- Comparison with a *benchmark*

- Ratios need to be compared with some form of 'benchmark'.
- This helps to interpret and evaluate a company's performance and position.
- *Benchmark* may include:
  past periods
    Trading conditions change over time
  similar businesses
    Different accounting policies
    Availability of financial statements
  planned performance
    not available to investors or external users
  Industry average
- Profitability ratio

Creditors are concerned with profitability because it indicates an ability to make required principal and interest payments.
Shareholders are interested in profitability because of related increases in share prices or dividends paid to shareholders.
Managers are also concerned with profitability as it is often relates to performance evaluations and tangible rewards from bonus payments and other incentive compensation plans.

- Profitability ratios evaluate the ability of a business to meet its profit objectives:
  profit margin
  return on equity
  return on assets
  earnings per share
  price to earnings

Profit Margin Ratio

- The profit margin ratio compares net income to net sales.
- It measures the ability of a company to generate profits from sales. A higher ratio indicates a greater ability to generate profits from sales.

$$Profit\ Margin = \frac{total\ comprehensive\ income}{net\ sales}$$

e.g. Wesfarmers 2014: $2 706 / $60 181 = 4.5% (4.5c for every $1 of sales)

Return on Equity

- The return on equity ratio compares profits to the average
- balance in shareholders' equity.
- It shows how effectively a company uses the funds provided by shareholders during the year to generate additional equity for its owners.

$$Return\ on\ equity = \frac{total\ comprehensive\ income}{average\ shareholders\ equity\ *}$$

$$*\ Average\ equity = \frac{beginning\ equity + ending\ equity}{2}$$

Return on assets

- The return on assets ratio compares income to average total assets
- It represents the ability to generate profits from its entire resource base (not just those resources provided by owners).

$$Return\ on\ assets = \frac{Total\ Comprehensive\ income}{Average\ total\ assets\ *}$$

$$*\ Average\ assets = \frac{beginning\ assets + ending\ assets}{2}$$

Earnings per share

- Earnings per share compares a company's profits to the average number of shares.
- It is the return on each share owned by an investor. •You cannot compare one company's EPS to another

- because of the number of shares.

$$Earnings\ per\ share = \frac{Total\ Comprehensive\ income}{Average\ number\ of\ shares}$$

$$Average\ assets = \frac{beginning\ shares + ending\ shares}{2}$$

Price earnings ratio

- The price to earnings ratio compares income to the current market price of the company's shares, it is an investor's perception of the company.
- A price earnings ratio of 10 means that investors pay ten times current EPS share to buy one share.
- A higher price to earnings ratio generally indicates that investors are more optimistic about the future prospects of a company.

$$Price\ to\ earnings = \frac{Current\ market\ price\ of\ share}{earnings\ per\ share}$$

- Wesfarmers 01/06/15: $43.60 / $2.34 = 18.6

- Liquidity ratio

Liquidity is a measure of a business's ability to convert its assets into cash to pay its bills.
The liquidity position of a business can be assessed by studying its working capital.
Liquidity ratios assess the ability of a company to meet its immediate or short-term financial obligations.
A business's inability to pay interest and to repay the liabilities is the reason why businesses are placed into administration. This can result in additional expenses and, ultimately, bankruptcy.
Directors may be personally liable if they allow a company to trade while it is insolvent.

- Creditors are concerned with liquidity because it indicates an ability to make required principal and interest payments.
- Suppliers are concerned with liquidity because it indicates an ability of the business to pay for its purchases.
- Shareholders are interested in liquidity as it indicates the ability of the company to pay cash dividend.
- Managers are also concerned with liquidity as it indicates an ability of the business to settle for its short-term obligations.

Liquidity ratios	Relation
Current ratio	Current assets to current liabilities
Quick ratio	Cash-like assets to current liabilities
Receivables turnover ratio	Sales to account receivable
Inventory turnover ratio	Cost of goods sold to inventory

Current Ratio

- The current ratio is one of the most frequently used ratios in financial analysis and compares current assets to current liabilities.
- It compares assets that should be turned into cash within one year to liabilities that should be paid within one year. A higher ratio indicates greater liquidity.

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

- E.g. Wesfarmers 2014: $9 311 / $8 229 = 1.13, what does it mean?

Quick Ratio

- The quick ratio (the acid-test ratio) compares a company's cash and near-cash assets, or *quick assets,* to its current liabilities.
- It also measures the degree to which a company could pay off its current liabilities immediately, a higher quick ratio indicates greater liquidity.

$$Quick\ Ratio = \frac{Cash + short\ term\ investments + accounts\ recievable}{current\ liabilities}$$

Receivables turnover ratio

- The receivables turnover ratio compares a company's credit sales during a period to its average accounts receivable.
- A higher ratio means that the company is better able to collect sales revenue, thus has better liquidity.

$$Recievables\ turnover\ ratio = \frac{Net\ sales}{Average\ accounts\ recievables\ *}$$

$$*\ Average\ accounts\ recievables = \frac{Neginning\ accts\ rec. + ending\ accts\ rec.}{2}$$

- E.g. Wesfarmers 2014: meaningless as only small percentage sales on credit

Inventory turnover ratio

- The inventory turnover ratio compares a company's cost of goods sold to its average inventory during that period.
- Inventory turnover is produce specific. A higher ratio is usually desirable.

$$Inventory\ turnover\ ratio = \frac{Cost\ of\ goods\ sold}{Average\ inventory\ *}$$

$$*\ Average\ Inventory = \frac{beginning\ inv. + ending\ inv.}{2}$$

Operating capability

- *Inventory turnover* and *Receivable turnover* also reflect the operating capability of a business.
- This refers to a business' ability to sustain a given level of operations.
- Information about a business' operating capability helps to assess the strength of a business to maintaining its operating efficiency.

Cash Flow Position

- The cash flow statement can help to
- Evaluate the business' need for additional cash to pay for its existing operations or for the expansion of its operations.
- Evaluate the ability of the business to make interest payments and to pay off debt when it comes due.
  - Solvency ratio

Financial flexibility is the ability of a business to adapt to change.

Managers, owners and creditors are interested in a business' ability to take advantage of major, long-term business opportunities. This financial flexibility refers to a business's ability to generate additional funds to take full advantage of a business expansion opportunity (new market, new product or technological advancement).

To assess long-term financial flexibility, financial statement users calculate a business' solvency ratios.

Solvency refers to a company's ability to remain in business over the long term and satisfy its long-term obligations. Solvency is related to liquidity but differs with respect to time frame.

- May be called solvency ratios, financial gearing ratios or financial leverage ratios
- Liquidity measures the ability to pay short-term debt, whereas solvency measures a company's ability to stay financially healthy over the long run.
- Solvency focuses on capital (finance) structure and assesses the extent of borrowing needed.
- Financial leverage is the degree to which a company obtains capital through debt rather than equity in an attempt to increase returns to shareholders.
- These ratios show how a company uses leverage, to create greater returns to shareholders, but also greater solvency risk.

  Leverage:

  Return to shareholders

  Solvency risk

Solvency ratios	Relation
Debt to assets	Total liabilities to total assets
Debt to equity	Total liabilities to total equity
Times interest earned	Net income to interest expense

Debt to assets

- The debt to assets ratio compares a company's total liabilities to its total assets.
- It informs the percentage of assets provided by creditors.
- A decreasing ratio shows that a company is taking on a less risky capital structure.

$$Debt\ to\ assets\ ratio = \frac{Total\ liabilities}{Total\ assets}$$

Debt to equity

- The debt to equity ratio compares total liabilities to total equity.
- Higher debt to equity ratios indicate a riskier capital structure and therefore greater risk of insolvency.

$$Debt\ to\ equity\ ratio = \frac{Total\ liabilities}{Total\ equity}$$

- E.g. Wesfarmers 2014: \$13 740 / \$25 987 = 52.9% (Woolworths = 130.0%) For every \$1 shareholders have put in or left in they borrowed 52.9c

Times interest earned

- The times interest earned ratio compares a company's total comprehensive income to its interest expense.
- It shows how easily interest can be paid out of profits.
- A higher ratio indicates a greater ability to make payments, therefore less risk of insolvency.

$$Times\ interest\ earned\ ratio = \frac{net\ income + interest\ expense + income\ tax\ expense}{Interest\ expense}$$

DuPoint Analysis

A DuPoint analysis provides insight into how a company's return on equity was generated by decomposing the return into three components:

- Operating efficiency
- Asset effectiveness and
- Capital structure

$$Operating\ efficiency = \frac{Total\ comprehensive\ income}{Sales}$$

- This is the ability to turn sales into profits. The higher the ratio, the more efficient a company is in turning sales into profits.

$$Effectiveness\ at\ using\ assets = \frac{Sales}{Assets}$$

- This is the ability to generate sales from assets. The higher the ratio, the more effective a company is in generating sales given its assets.

$$Leverage = \frac{Assets}{Equity}$$

- It measures how a business has financed its assets (capital structure). The higher the ratio, the more financing with debt rather than equity. A high ratio means more financial leverage, a riskier capital structure. This ratio is sometimes called the leverage multiplier.

e.g.

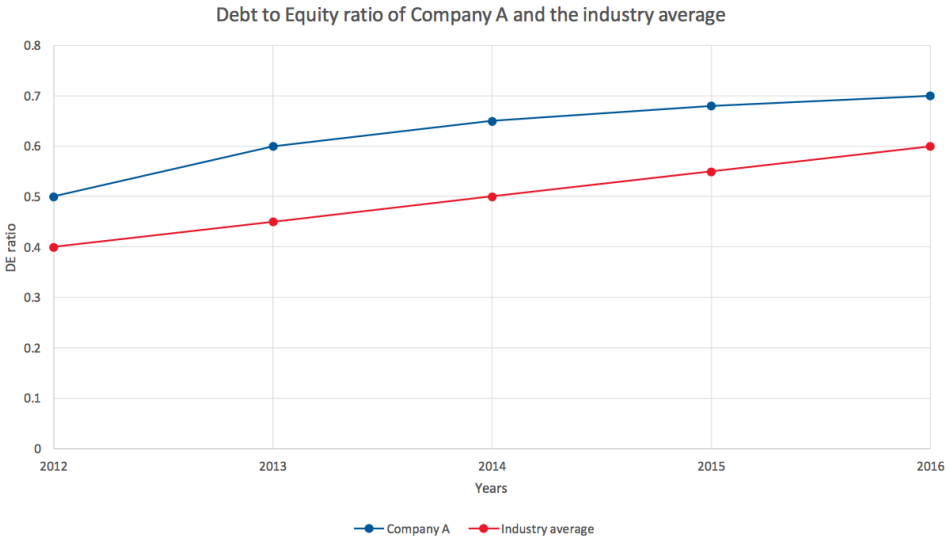
	2016 (in $millions)
Total average assets	$ 350
Total average equity	190
Sales	55
Net profit	9

Operating efficiency	×	Asset effectiveness	×	Leverage	=	Return on equity
$\frac{\text{Net profits}}{\text{Sales}}$	×	$\frac{\text{Sales}}{\text{Assets}}$	×	$\frac{\text{Assets}}{\text{Equity}}$	=	$\frac{\text{Net profits}}{\text{Equity}}$
$\frac{\$9\,000}{\$55\,000}$	×	$\frac{\$55\,000}{\$350\,000}$	×	$\frac{\$350\,000}{\$190\,000}$	=	$\frac{\$9\,000}{\$190\,000}$
0.16	×	0.157	×	1.84	=	0.047

Trend Analysis

Financial accounting data and ratios may be plotted on a graph. This provides a visual representation of changes happening over time.

Trends may be utilised to compare a performance of a company against other companies or industry trends



- Interpretation of ratios depend on the judgement of the managers
- The quality of the underlying financial statements determines the relevance ratios
- Businesses are not identical and the greater the differences, the more cautions need to be exercised to use ratios as a basis for comparison
- Selecting the right set of *benchmark ratios* for comparison and analysis

There is certain information which may not be fully reflected in ratio analysis. This information can also help us to interpret a deeper understanding of the ratios. Some of this information are listed below:

- Reduction in the cash balance
- Increase in current assets or current liabilities
- Acquisition of non-current assets
  - Companies may disclose additional information about business in their management discussion and analysis section of the Annual Reports.
  - These disclosures provide valuable information about the strategic direction and plan of a business.
  - This information provides valuable insights into the future profitability and risk of a business.
  - This information should be carefully considered while interpreting the ratios.
  - After all, the objective of the external users is to understand he future performance (profitability) and position (risk and liquidity) of businesses.

- Information about business and relevant information are also disclosed in electronic media, press analysis, websites and business forums.