Evaluation of firms through financial statements

Standards of comparison

In using dollar and percentage changes, trend percentages, component percentages and ratios, we require standards of comparison to judge whether the relationships they have found are favourable or not. Two common standards are:

<u>Past performance of the company – year on year growth, x-year average of change/absolute numbers</u>

- Known as horizontal analysis
- Does not give basis of comparison in *absolute* terms, only *relative* terms – e.g. if profit was 2% last year, 3% this year, but *should* be at 7%, unfavourable in both years

<u>Performance of other companies in the same industry</u>

- Conclusions now have a fair basis for comparison
- Conclusive only if companies used for comparison are *reasonably* comparable in their core businesses and skills

<u>Methods of analysis:</u>

- Ratios
- Trend percentages
- Absolute values
- Averages
- Percentage compositions

Qualitative considerations in analysis

Quality of earnings	In assessing the prospects of a company, we are interested not only in the amount of earnings, but also the rate, stability and source of earnings. Breakdown of sales and earnings by major product lines is a useful method of organising the business before proceeding with quantitative analysis. • Satisfactory earnings indicate company's long term ability to pay its debts and dividends
Quality of assets and amount of debt	Aside from satisfactory earnings and performance, one must also look at: • Composition condition and liquidity of assets • Timing of repayment of liabilities, total liabilities e.g. company may be profitable now, but with PPE deteriorating, patens expiring etc. losses may be imminent
Industry information & annual reports	Indicates company's past performance, summaries of key financial data and management's discussion and analysis. Could be insightful.
Accounting methods	In judging the quality of assets and earnings, the analyst should consider the impacts of the accounting methods used when proceeding with quantitative analysis – the meaning of the numbers depends on these assumptions. There is always a risk of window dressing. • Inventory methods • Depreciation methods • Valuing financial assets <u>Other considerations</u> • Unused lines of credit • Concentration of credit risks

Quantitative indicators

Measurement	Computation	Significance
Short-term liquidity		
Short-term creditors have the same interest as shareholders and bondholders in the profitability and long-run stability of the businesses. Their primary interest, however, is the current position of the company and its ability to generate sufficient funds (working capital) to meet the current operating needs and to pay debts promptly.		
Stability		
Current ratio	$\frac{\text{Current assets}}{\text{Current liabilities}}$	• Measures short-term debt paying ability. • Higher, more liquid; but whether that's good or bad depends on the quality of current assets. E.g. high current ratios due to slow turnover in receivables and inventory
Quick Ratio	$\frac{\text{Quick assets}}{\text{Current liabilities}}$	Quick assets: the most liquid assets (cash and its equivalents, some receivables) • Especially useful in evaluating liquidity of companies with slow inventory turnover or large inventories
Working capital	Current assets – Current liabilities	Measures a company's potential excess sources of cash over its upcoming uses of cash. Hence liquidity and size of 'cushion' over the amount expected to bee needed in the near future to satisfy maturing obligations
Debt ratio	$\frac{\text{Total liabilities}}{\text{Total liabilities}}$	Measures the proportion of total assets financed by creditors distinguished from shareholders
Quality of assets		
% composition receivables less impairment losses	Found in statement of financial position	Indicates types of assets to explain potential changes in other indicators
% composition non-current assets		
% composition quick assets		
Types of liabilities		
% composition unearned revenue	Found in statement of financial position	Indicates types of liabilities to explain potential changes in other indicators
% composition current liabilities		
Non-current liabilities		
Quality of working capital		
Accounts receivable turnover rate	$\frac{\text{Net sales}}{\text{Average balance of net receivables}}$	Indicates how fast a company converts its receivables into cash
Days required to accounts receivable	$\frac{365}{\text{Accounts receivable turnover rate}}$	
Inventory turnover rate	$\frac{\text{COGS}}{\text{Average balance of inventory}}$	• Indicates how fast a company can clear its inventory • Especially important for companies with small gross profit margins (e.g. dollar store vs jewellery)
days required to sell inventory	$\frac{365}{\text{Inventory turnover rate}}$	
Operating cycle	Days to turnover inventory + days to collect receivables	How quickly inventory sells and converts into cash
Cash flow analysis		
Net cash from operating activities	In cash flow statement	Indicates cash flow from operating activity after allowing for cash payment of expenses and operating liabilities
Cash conversion cycle	Days to collect accounts receivable + sell inventories – pay back payables	Indicates company's ability to generate cash and return to a stable state
Free cash flow	Net cash from operating activities – cash used for investing activities and dividends	Indicates excess of operating cash flow over basic needs
Cashflow from operations to current liabilities	$\frac{\text{Cash flow from operations}}{\text{Current liabilities}}$	Indicates company's ability to cover maturing liabilities from normal operations

Long-term credit risk		
Long-term creditors are primarily interested in three factors: rate of return, firm's ability to meet its interests requirements and the firm's ability to repay the principal of the debt.		
Yield rate on bonds	Bond interest rate	Yield rate = bond interest rate, which varies inversely with changes in market price of the bond
Interest coverage ratio	$\frac{\text{Operating profit}}{\text{Annual interest expense}}$	Measure's company's ability to cover its annual interest obligations
Trend in net cash from operating activities	Appears in comparative statement of cash flows	Indicator of company's long term ability to generate cash for obligations
Profitability & adequacy of profit		
Investors normally consider two factors in evaluating profitability: the trend and the amount of current earnings relative to the amount of resources needed to produce the earnings.		
Gross profit	Net sales – COGS	Indicates profitability of merchandising operations
Profit margin	Gross profit/sales	
Operating expenses: sales	Found in income statement	Indicates expenses managed by management
Operating expenses: administrative		
Non-operating expenses: interest		Indicates expenses faced by company
Non-operating expenses: taxes		
Profit		Measures management's ability to control expenses and retain a reasonable portion of revenue as profit
Profit as a percentage of sales	$\frac{\text{Profit}}{\text{Net sales}}$	Measures management
Return on investment	$\frac{\text{Returns}}{\text{Average amount invested}}$	Measures efficiency with which financial resources are employed to generate earnings
Return on assets	$\frac{\text{Operating profit}}{\text{Assets}}$	• To evaluate whether management has earned a reasonable return with the assets under its control. • Return is defined as operating profit since interest expense and income taxes are determined by factors other than the manner in which the assets are used. • If a company is well managed, it should be able to earn return on assets higher than the company's cost of borrowing
Return on equity	$\frac{\text{Profit}}{\text{Total average equity}}$	Return earned by management on shareholder investments - equity
Percentage changes in net sales	Found in annual report	Growth rate
Percentage changes in net income		
Operating expense ratio	$\frac{\text{Operating expenses}}{\text{Net sales}}$	Measures management's ability to manage resources to generate income
Operating income	Gross profit – operating expenses	
Evaluating shares		
Market value	-	Indicates investors expectations and market conditions
Dividend yield	$\frac{\text{Annual dividend}}{\text{current share price}}$	
Earnings per share	$\frac{\text{Profit}}{\text{Shares}}$	Indicates profit applicable to each share
Price-earnings ratio	Market price per share/annual earnings per share $\frac{\text{Market price per share}}{\text{Annual earnings per share}}$	• Indicates expectations concerning a company's future performance. The more optimistic, the higher the ratio • Generally, >20, earnings expected to climb. <10, decline. >30, over-valued • Note: if earnings decline to very low levels, price of shares usually don't follow the earnings all the way down – so a company in bad shape may have a high p/e ratio even if expectations are poor