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1. Companies background

1.1 National Grid Group (The) PLC¹

The company was formed in 1990 as part of the United Kingdom's electricity industry privatisation process and was given the task of facilitating competition in the generation and supply of electricity and the launching of the first open market for trading electricity.

National Grid is developing new businesses in the UK and internationally, the most significant new business to date is the Telecommunications company Energis. Investments have also been made in overseas transmission projects.

This monopoly knows how to play the game, and it makes real money. The National Grid Group is the sole owner of the electricity transmission system in England and Wales. Accountable to government regulators, it delivers electricity to more than 23 million customers through 300 substations, 400 miles of underground lines, and 4,300 miles of overhead lines. National Grid also trades electricity with France and Scotland. Its 74%-owned Energis subsidiary provides telecommunications services to more than 12,000 business customers through a network of about 2,500 miles of fiber-optic cables across the UK. As part of its overseas expansion, National Grid is acquiring US utility New England Electric System.

Major Shareholders:

(10 Jan 00) 1484.74m 11 13/17p Ords - HSBC Investment Bank 10.06%, Prudential Portfolio Mgrs 4.90%, Other Dirs 0.02%.

The National Grid Group plc (NGG) is the holding company for the National Grid Company plc (NGC).

NGC operates one of the world's largest interconnected transmission systems which despatches and transports electricity generated by over 70 power stations to the distribution networks operated by the 12 Regional Electricity Companies. This involves the ownership and control of:

- over 7000 route kilometres of 400,000 and 275,000 volt overhead lines
- over 280 substations
- interconnectors with Scotland and France

GROUP PROFIT AND LOSS ACCOUNT	Mar.99	Mar.98	Mar.97
All amounts in millions of pounds.			
Turnover	1,514.2	1,519.3	1,457.5
Operating Profit	583.6	543.5	661.9
Operating Margin	38.5%	35.8%	45.4%
Profit for the Financial Year	1,001.5	441.3	415.2
Profit Margin	66.1%	29.0%	28.5%
Earnings/Share	0.13	0.26	0.24

BALANCE SHEET	Mar.99	Mar.98	Mar.97
All amounts in millions of pounds.			

¹ Information taken by Hoover online

Fixed Assets	4,885.4	3,422.3	3,347.3
Current Assets	1,746.3	384.0	368.2
Cash	1,524.5	49.9	194.9
Trade Debtors	192.5	321.5	164.1
Stocks	12.7	12.5	9.1
Creditors: Due within 1 year	1,414.9	1,105.3	973.7
Short-Term Debt	590.6	194.8	238.0
Net Current Assets/Liabilities	331.4	(721.3)	(605.5)
Creditors: Due beyond 1 yr.	1,726.5	1,428.4	984.7
Long-Term Debt	1,178.4	1,320.5	804.0
Net Assets	1,744.0	888.6	1,388.9
Shareholders Funds	1,744.0	888.6	1,388.9
Number of Shares	1,477.9	1,474.5	--

Closing Share price on 10-Jan-2000 : **462p**

No of shares in issue : **1484.743m**

Market Capitalisation on 10-Jan-2000 : **£6852m**

1.2 Scottish Power PLC

Power, water, the Internet, and radios are all in the purview of Scottish Power, ye ken. The company's power stations generate electricity, which it wholesales, with gas, to utilities. Scottish Power, which transmits and distributes electricity to about 1.8 million customers in Scotland, also owns Manweb, a regional electricity company serving 1.3 million customers in England and Wales. It also runs a UK network of consumer electronics retail stores. Following deregulation, the company billed itself as a multi-utility: It offers water and wastewater services through Southern Water, and its telecom unit owns a leading Internet provider. In 1998 Scottish Power agreed to acquire US utility PacifiCorp.

The ScottishPower group supplies energy to millions of business and domestic customers across the UK and the Western United States. Its combined sales total nearly £6.5 billion (\$11 billion).

ScottishPower's ten-year record since privatisation has included significant organic growth as well as key acquisitions in the UK and US utility sectors.

Milestones included the acquisition of the electricity supply company Manweb in 1995. Manweb's operations are based in Merseyside, Cheshire, and North and Mid-Wales.

Southern Water, the water and wastewater services company based in the South East of England, was acquired in 1996.

These companies provided additional platforms for ScottishPower to roll out new services in electricity and gas in parallel with the liberalisation of utility markets in the UK. ScottishPower achieved its growth success by building on its core skills of efficient management of its electricity operations.

Customer relationships are the key to ScottishPower's success. Every activity is focused principally on our 7 million customers in the US and UK. Many UK customers in both residential and business sectors now take more than one utility service from the group, and this ability to 'cross sell' offers significant future growth

potential.

The group employs 24,000 people, and places great emphasis on their training and development. ScottishPower Learning is a pioneering programme which offers development at all levels to employees, their families, and the communities it serves.

GROUP PROFIT AND LOSS ACCOUNT	Mar.99	Mar.98	Mar.97
All amounts in millions of pounds.			
Turnover	3,242.3	3,128.2	2,940.7
Operating Profit	802.8	785.1	663.9
Operating Margin	24.8%	25.1%	22.6%
Profit for the Financial Year	502.1	170.1	421.1
Profit Margin	15.5%	5.4%	14.3%
Earnings/Share	--	0.14	0.38

BALANCE SHEET	Mar.99	Mar.98	Mar.97
All amounts in millions of pounds.			
Fixed Assets	6,232.1	5,576.8	4,848.0
Current Assets	792.0	791.0	778.2
Cash	106.9	155.5	41.7
Trade Debtors	559.3	531.3	622.8
Stocks	125.8	144.2	113.7
Creditors: Due within 1 year	2,176.4	2,432.0	2,249.1
Short-Term Debt	843.6	1,035.7	1,137.1
Net Current Assets/Liabilities	(1,384.4)	(1,641.0)	(1,470.9)
Creditors: Due beyond 1 yr.	2,109.8	1,435.1	1,075.8
Long-Term Debt	1,684.5	1,032.4	694.9
Net Assets	1,945.9	1,709.7	1,523.1
Shareholders Funds	1,945.9	1,709.7	1,523.1
Number of Shares	--	1,196.8	1,177.4

Closing Share price on 10-Jan-2000 : **501p**

No of shares in issue : **1873.580m**

Market Capitalisation on 10-Jan-2000 : **£9396m**

2. The Financial statements

There are two traditional types of financial statements, the balance sheet and the income statement. Of the two traditional types of financial statements, the balance sheet relates to an entity's position, and the income statement relates to its activity.

The balance sheet

The balance sheet provides information about an organization's assets, liabilities, and owners' equity as of a particular date (such as the last day of the accounting or fiscal period). The format of the balance sheet reflects the basic accounting equation: Assets equal equities. Assets are economic resources that provide potential future service to the organization. Equities consist of the organization's liabilities together with the equity interest of its owners.

Assets

Assets are categorized as current or long-lived. Current assets are usually those that management could reasonably be expected to convert into cash within one year; they include cash, receivables, merchandise inventory, and short-term investments in stocks and bonds. Long-lived assets encompass the physical plant—notably land, buildings, machinery, motor vehicles, computers, furniture, and fixtures. Long-lived assets also include real estate being held for speculation and intangibles such as patents and trademarks.

Liabilities

Liabilities are obligations that the organization must remit to other parties, such as creditors and employees. Current liabilities usually are amounts that are expected to be paid within one year, including salaries and wages, taxes, short-term loans, and money owed to suppliers of goods and services. Noncurrent liabilities are usually debts that will come due beyond one year—such as bonds, mortgages, and long-term loans. Whereas liabilities are the claims of outside parties on the assets of the organization, the owners' equity is the investment interest of the owners in the organization's assets. When an enterprise is operated as a sole proprietorship or as a partnership, the balance sheet may disclose the amount of each owner's equity. When the organization is a corporation, the balance sheet shows the equity of the owners—that is, the stockholders—as consisting of two elements: (1) the amount originally invested by the stockholders; and (2) the corporation's cumulative reinvested income, or retained earnings (that is, income not distributed to stockholders as dividends), in which the stockholders have equity.

The income statement excludes the amount of assets withdrawn by the owners; in a corporation such withdrawn assets are called dividends. A separate activity-oriented statement, the statement of retained earnings, discloses income and redistribution to owners.

Income Statement

Income Statement is the traditional activity-oriented financial statement issued by business enterprises. Prepared for a well-defined time interval, such as three months or one year, this statement summarizes the enterprise's revenues, expenses, gains, and losses. Revenues are transactions that represent the inflow of assets as a result of operations—that is, assets received from selling goods and rendering services. Expenses are transactions involving the outflow of assets in order to generate revenue, such as wages, rent, interest, and taxes.

A revenue transaction is recorded during the fiscal period in which it occurs. An expense appears in the income statement of the period in which revenues presumably resulted from the particular expense. To illustrate, wages paid by a merchandising or service company are recognized as an immediate expense because they are presumed to generate revenue during the same period in which they occurred. If, however, the wages are paid to process merchandise that will not be sold until a later fiscal period, they would not be considered an immediate expense. Instead, the cost of these wages will be treated as part of the cost of the resulting inventory asset; the effect of this cost on income is thus deferred until the asset is sold and revenue is realized.

In addition to disclosing revenues and expenses (the principal components of income), the income statement also lists gains and losses from other kinds of transactions, such as the sale of plant assets (for example, a factory building) or the early repayment of long-term debt. Extraordinary—that is, unusual and infrequent—developments are also specifically disclosed.

Cash flows

A third important activity-oriented financial statement is the statement of cash flows. This statement provides information not otherwise available in either an income statement or a balance sheet; it presents the sources and the uses of the enterprise's funds by operating activities, investing activities, and financing activities. The statement identifies the cash generated or used by operations; the cash exchanged to buy and sell plant and equipment; the cash proceeds from stock issuances and long-term borrowings; and the cash used to pay dividends, to purchase the company's outstanding shares of its own stock, and to pay off debts.

3. Ratios analysis

1.ROCE (Return on Capital Employed)

This is a fundamental measure of business performance and expresses the relationship between the net profit generated by the business and the long term capital invested in the business (**Peter Atrill et al, 1996**). It is the indicator of the investment profit.

$$ROE = \frac{\text{Net profit before interest and taxation}}{\text{Capital Employed (Total Assets - Current Liability)}} \times 100$$

<i>a.Scottish Power</i>	
1999	1998
$\frac{805.1 \times 100}{4,055.7} = \mathbf{19.85\%}$	$\frac{787.0 \times 100}{3,144.8} = \mathbf{25\%}$

<i>b.National Grid</i>	
1999	1998
$\frac{1284.6 \times 100}{3470.5} = \mathbf{37\%}$	$\frac{572.6 \times 100}{2325.1} = \mathbf{24.6\%}$

- The ROCE ratio of Scottish Power has drastically fallen more than 6% from last year performance. That means the long term capital invested didn't quite succeed the company's expectation and the return was less than 1998. From the figures it is clear that the net profit was more than 1998 but the Capital employed in 1999 was nearly £1000 m more that is way the profitability was less.
- National Grid had managed to increase their ratio by doubling the Capital Employed in 1999 and at the same time have a similar increase to the net profit by one third and at the same time have the half net profit in comparison to 1998 achievement.
- A comparison of the companies ratios shows that they use the same strategies. Scottish power decided to invest more and took less and National Grid spent more to but also earn more. That means that National Grid made better investments or more careful.

2. Return on Owner's Equity

This ratio compares the amount of profit for the period available to the owners to the owner's stake in the business. This indicates the ratio of profitability for the owners in relation to the assets invested in the company. That means the return which ordinary(equity) shareholders received from their investment in the business. (Peter Atrill et al, 1996).

$$\text{Return on Owner's Equity} = \frac{\text{Net Profit after taxation and preference dividends (if any)}}{\text{Ordinary share capital plus reserves}} \times 100$$

<i>a.Scottish Power</i>	
1999	1998
$\frac{502.2 \times 100}{2176.4} = 23\%$	$\frac{171.0 \times 100}{2432.0} = 07\%$

<i>b.National Grid</i>	
1999	1998
$\frac{1001.5 \times 100}{1414.9} = 70.8\%$	$\frac{439.1 \times 100}{1097.1} = 40\%$

- The figures shows that in 1999 although the ordinary share capital was slightly dropped the net profit was nearly triple from 1998 and that is way the ratio was in result more than triple. That means that share capital was better explode than the capital employed in 1999.
- The share capital was almost doubled and the net profit slightly doubled ,too. The result was the 1998 ratio from 40% to become 70% in 1999. That means that the company used the share capital successfully 1999 and achieved their expectations.
- A comparison between the two companies will show that they both had the same result but with different way. The first reduce their share capital to achieve their goals while National Grid invest more.

3. Gross Profit Margin

This ratio relates the gross profit of the business to the sales generated for the same period. This measure is a measure of profitability since gross profit is the difference between sales and cost of sales. It is important that this ratio is quite high since it is a major indicator of profitability and profits are the generator of every business(Peter Atrill et al, 1996)

$$\text{Gross Profit Margin} = \frac{\text{Gross Profit}}{\text{Sales (excluding VAT and Sales Tax)}} \times 100$$

<i>a.Scottish Power</i>	
1999	1998
$\frac{1381.8 \times 100}{3242.3} = \mathbf{42.6\%}$	$\frac{1277.5 \times 100}{3128.2} = \mathbf{40.8\%}$

b.National Grid	
1999	1998
$\frac{582.6 \times 100}{1514.2} = \mathbf{38.5\%}$	$\frac{568.4 \times 100}{1519.3} = \mathbf{37.5\%}$

- Despite the differences between the two previous ratios the gross profit which is the indicator of profitability remained the same with a narrow increase. That was due to the fact that the increase of the gross profit was more than the increase of sales in 1999.
- The same result was for the second company in 1999 but with a small fall in sales and a bigger increase in gross profit.
- The two companies had the same result of increase in 1999. The thing to watch is that the figures of the first company used for the calculation of the ratios are two times more than the second.

4. Net Profit Margin

This ratio relates the net profit for the period to the sales during that period. It is one of the most important ratios understanding the profitability of the company. It is the most appropriate measure of operational performance. (Peter Atrill et al, 1996)

$$\text{Net Profit Margin} = \frac{\text{Net Profit Before Interest and Taxation}}{\text{Sales (excluding VAT and Sales Tax)}} \times 100$$

<i>a.Scottish Power</i>	
1999	1998
$\frac{805.1 \times 100}{3242.3} = \mathbf{25\%}$	$\frac{787.0 \times 100}{3128.2} = \mathbf{25\%}$

b.National Grid	
1999	1998
$\frac{1284.6 \times 100}{1514.2} = \mathbf{85\%}$	$\frac{572.6 \times 100}{1519.3} = \mathbf{38\%}$

- It will be useful to make at this point a comparison between the company's gross profit. In 1999 the net profit of the company was twice as many as the 1998 net profit and 1999, 1998 gross profit, too. At the same time the sales remained the same. The conclusion is that the company found a way of cutting the cost for their remarkable benefit.
- The figures of the second company are equal between the two years.

- c. A comparison between the two companies at this point is very informative because although National Grid had the half sales of Scottish power managed to overtake the net profit of N.Grid. it clear now, that they better how to make investment that pay back.

5.Asset Turnover Ratio

It indicates the effectiveness of the company's assets of the business by examining the assets employed in generating sales revenue. The higher the ratio the more sales are being generated by the assets employed. (Peter Atrill et al, 1996)

$$\text{Asset Turnover Ratio} = \frac{\text{Sales}}{\text{Total Assets Employed}}$$

<i>a.Scottish Power</i>	
1999	1998
$\frac{3242.3}{5440.1 + 792.0} = 0.52 \text{ times}$	$\frac{3128.2}{4791.2 + 785.6} = 0.56 \text{ times}$

<i>b.National Grid</i>	
1999	1998
$\frac{1514.2}{3139.1 + 1746.3} = 0.31 \text{ times}$	$\frac{1519.3}{3038.3 + 384} = 0.44 \text{ times}$

- there is a narrow fall to this ratio in 1999 but it is due to the bigger increase of fixed assets comparing to the smaller increases in sales and current assets.
- There is a significant fallen in 1999 due to the six times increase of the current assets from 1998. Comparing that to the figure of sales and fixed assets which remained nearly the same it will give the reason for the drop consider that a lot of funds were tied up.
- Both the companies had a fall in 1999 but it seems that the first company used the assets employed better. Of course with an enormous figure of fixed assets.

6. Stock Turnover Period

The Average stock turnover period measures the average period for which stocks are being held. (Peter Atrill et al, 1996)

$$\text{Stock Turnover Period} = \frac{\text{Average Stock Held}}{\text{Cost of Sales}} \times 365$$

a. Scottish Power	
1999	1998
$\frac{125.8 + 144.2}{2} \times 365 = 140 \text{ Days}$	
1860.5	

b. National Grid	
1999	1998
$\frac{12.7 + 12.5}{2} \times 365 = 29.5 \text{ Days}$	
931.6	

c. Comparing these ratios we realize that there is a huge difference between the companies. First of all the first one had two times more cost of sales than the second and then held the stock ten times more. That means that funds were tied up could be used for profitable purposes

7. Average Settlement Period For Debtors

The Average Settlement Period for Debtors calculates how long, on average, credit customer take to pay the amounts which they owe to the Business (Peter Atrill et al, 1996).

$$\text{Average Settlement Period} = \frac{\text{Trade Debtors}}{\text{Total Accs Payable}} \times 365$$

a. Scottish Power	
1999	1998
$\frac{260.1 \times 365}{3242.3} = 29.28 \text{ Days}$	$\frac{255.5 \times 365}{3128.2} = 29.81 \text{ Days}$

b. National Grid	
1999	1998
$\frac{62.9 \times 365}{1514.2} = 15.16 \text{ Days}$	$\frac{70.0 \times 365}{1519.3} = 16.81 \text{ Days}$

C. For both the companies these ratios almost remained the same from 1998 to 1999. The only thing to consider is that National Grid's credit customer take less days by half to pay the amounts they own.

8. Average Settlement Period For Creditors

This ratio measures how long, on average, the business takes to pay its trade creditors (**Peter Atrill et al, 1996**).

$$\text{Average Settlement Period for Creditors} = \frac{\text{Trade Creditors}}{\text{Credit Purchases}} \times 365$$

a. Scottish Power	
1999	1998
$\frac{181.4 \times 365}{1860.5} = \mathbf{35 \text{ Days}}$	$\frac{204.6 \times 365}{1850.7} = \mathbf{40 \text{ Days}}$

b. National Grid	
1999	1998
$\frac{308.3 \times 365}{931.6} = \mathbf{120 \text{ Days}}$	$\frac{357.4 \times 365}{1069.4} = \mathbf{122 \text{ Days}}$

c. the Scottish Power ratios remained the same and it is a reasonable number that shows constituency considering the kind of industry that represents. The National Grid ratios it quite impressive but it is common sometimes in this kind of industries. Of course a very high ratio can result in a loss of good will by suppliers and a delay in future supplies loss of discounts etc.

9. Current Ratio

This ratio compares the 'liquid' assets of the business with the short-term liabilities (**Peter Atrill et al, 1996**). An ideal ratio will be two times.

$$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities (Creditors due within one year)}}$$

a. Scottish Power	
1999	1998
$\frac{792.0}{2176.4} = \mathbf{0.37 \text{ Times}}$	$\frac{785.6}{2432.0} = \mathbf{0.32 \text{ Times}}$

b.National Grid	
1999	1998
$\frac{1746.3}{1414.9} = 1.23 \text{ times}$	$\frac{384.0}{1097} = 0.35 \text{ Times}$

c. For the first company this ratio remained the same with a slight increase from 1998 to 1999. National Grid on the contrary had an remarkable increase (4 times more) due to the fact that the current assets was five times more in 1999 and this may suggest that there was a lack of cash or other liquid assets.

10. Acid Test Ratio

This test represents as more stringent test of liquidity, since it omits stocks from the equation. (Peter Atrill et al, 1996)

$$\text{Acid Test Ratio} = \frac{\text{Current Assets (excluding stock)}}{\text{Current Liabilities (Gross due within one Year)}}$$

a.Scottish Power	
1999	1998
$\frac{792.0 - 125.8}{2176.4} = 0.30 \text{ Times}$	$\frac{785.6 - 144.2}{2432.0} = 0.30 \text{ Times}$

b.National Grid	
1999	1998
$\frac{1746.3 - 12.7}{1414.9} = 1.22 \text{ Times}$	$\frac{384.0 - 12.5}{1097} = 0.34 \text{ Times}$

c. The facts here are the same with the previous ratios. This ratio must always be considered along the stock turnover period because some times like from National Grid's 1999 ratio it seems that there is a problem with liquidity but it depends on the kind of industry and the stock turnover ratio for a stock-in-hand to be converted quickly in cash.

11. Operating cash flows to Maturing obligations

This ratio compares the operating cash flow to the current liabilities of the business. It provides a further indication of the ability of the business to meet its maturing obligations the higher this ratio is the better is the liquidity of the company. (Peter Atrill et al, 1996)

$$\text{Operating Cash Flow to Maturing Obligations} = \frac{\text{Operating Cash flows}}{\text{Current liabilities}}$$

<i>a.Scottish Power</i>	
1999	1998
$\frac{949.9}{2176.4} = 0.43 \text{ Times}$	$\frac{1014.1}{2432.0} = 0.41 \text{ Times}$

b.National Grid	
1999	1998
$\frac{605.9}{1414.9} = 0.43 \text{ Times}$	$\frac{627.2}{1097} = 0.57 \text{ Times}$

- a. From this low ratio and the two previous, both for 1999 and 1998 it is clear that the first company is facing a liquidity problem. In this particular ratio it is clear a fall both in current liabilities and operating cash flows figures.
- b. National Grid seem to face a problem with liquidity, too as there was a big increase in 1999 to the current liabilities.

12.Gearing Ratio

This ratio measures the contribution of long-term lenders to the long term capital structure of a business. It is a very useful ratio for the managers which managers has to consider when making financing decisions. The relationship between the amount of the business and the amount contributed by outsiders has an important effect on the degree of the risk associated with business. (Peter Atrill et al, 1996).

$$\text{Gearing Ratio} = \frac{\text{Long Term Liabilities}}{\text{Share Capital Reserves} + \text{Long Term Liabilities}} \times 100$$

<i>a.Scottish Power</i>	
1999	1998
40 %	158 %

b.National Grid	
1999	1998
124 %	114%

- a. Scottish Power made a great improve of the borrowing strategy in 1999 although the ratio is still high and still depend a lot on borrowing fund. This ratio has an effect on the returns equity ratios which was on the contrary increased three times more since 1998.
- b. National Grid on the contrary increased their high ratio in 1999 and that may be an indication that a borrowing cut will lead to problem ensuring the continuing

operation. This high ratio is also a result of the long period politics of the company pay back to debtors.

- c. There is a big difference in 1999 borrowing strategy for the companies . Scottish Power seems to make Remarkable steps to improve their borrowing position on the contrary National Grid is worsen their position but counts on the big increase of equity returns.

13. Interest Cover Ratio

This ratio measures the amount of profit available to cover interest payable.

$$\text{Interest Cover Ratio} = \frac{\text{Profit Before Interest and Tax}}{\text{Interest Payable}}$$

<i>a.Scottish Power</i>	
1999	1998
4.2Times	7.1 Times

b.National Grid	
1999	1998
5.0Times	5.3Times

- c. Both companies have low ratio that indicate a difficulty of repaying their loan.

14. Dividend Per Share

The dividend per share ratio relates the dividends announces during a period to the number of shares in issue during that period. (Peter Atrill et al, 1996)

$$\text{Dividend per Share} = \frac{\text{Dividend announced during the period}}{\text{No of shares in Issue}}$$

<i>a.Scottish Power</i>	
1999	1998
13.07 p	12.07p

b.National Grid	
1999	1998
22.50P	20.40p

15. Earnings per Share

The earnings per share of a company relates the earnings generated by the company during a period, and available to shareholders, to the number of shares in issue (Peter Atrill et al, 1996)

$$\text{Earnings per Share} = \frac{\text{Share Earnings available to ordinary equity shareholders}}{\text{No of ordinary shares in issue}}$$

a.Scottish Power	
1999	1998
68.3p	26.0p

b.National Grid	
1999	1998
42.42P	14.41p

C Both companies had an significant increase of the ratio in 1999 which will help to assess the investment potentials of a company's share.

16. Price Earning Ratio

The price earning ratio relates the market value of a share to the earnings per share (Peter Atrill et al, 1996).

$$\text{Price Earning Ratio} = \frac{\text{Price per Share}}{\text{Earnings per Share}}$$

a.Scottish Power	
1999	1998
$\frac{501}{42.42} = 11.8 \text{Times}$	

b.National Grid	
1999	1998
$\frac{462}{68.3} = 6.76 \text{Times}$	

c. this ratio reflects that the capital value of the share is 11.8 times higher than its current level of earnings for the first company and 6.76 for the second.

4. Additional Information that Would have been of Use

1. pricing policies were not provided. Such information would indicate if there were any changes in pricing that would have resulted in lowering sales volume and profitability

2 inflation rates were not available. Such information is important for understanding profit, and adjusting figures to reflect the rate of inflation during the period in question. What might appeared as good growth if compared with inflation rate might appeared a decline.

3 the number of share in issue ratio which would have provide an indication of the cash return which an investor receives from holdings company's shares .

Financial ratios calculations**1. Overall performance**

1.R.O.C.E =	$\frac{\text{Net profit before interest \& taxes}}{\text{Capital employed}} \times 100$
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*capital employed = total assets – current liabilities

Scottish Power	
1999	1998
$\frac{805.1 \times 100}{4,055.7} = \mathbf{19.85\%}$	$\frac{787.0 \times 100}{3,144.8} = \mathbf{25\%}$

National Grid	
1999	1998
$\frac{572.6 \times 100}{2325.1} = \mathbf{37\%}$	$\frac{1284.6 \times 100}{3470.5} = \mathbf{24.6\%}$

2. Return of owner's equity=	$\frac{\text{Net profit after taxation \& p.d* (if any)}}{\text{Ordinary share capital + reserves}} \times 100$
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p. d = preference dividend

Scottish Power	
1999	1998
$\frac{502.2 \times 100}{2176.4} = \mathbf{23\%}$	$\frac{171.0 \times 100}{2432.0} = \mathbf{07\%}$

National Grid	
1999	1998
$\frac{1001.5 \times 100}{1414.9} = \mathbf{70.8\%}$	$\frac{439.1 \times 100}{1097.1} = \mathbf{40\%}$

2. Profitability

3. Gross profit margin =	$\frac{\text{Gross profit} \times 100}{\text{Sales (excluding VAT \& Sales Taxes)}}$
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Scottish Power	
1999	1998
$\frac{1381.8 \times 100}{3242.3} = \mathbf{42.6\%}$	$\frac{1277.5 \times 100}{3128.2} = \mathbf{40.8\%}$

National Grid	
1999	1998
$\frac{582.6 \times 100}{1514.2} = \mathbf{38.5\%}$	$\frac{568.4 \times 100}{1519.3} = \mathbf{37.5\%}$

4. Net profit margin =	$\frac{\text{Net profit before interest \& taxes}}{\text{Sales} \times 100}$
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Scottish Power	
1999	1998
$\frac{805.1 \times 100}{3242.3} = \mathbf{25\%}$	$\frac{787.0 \times 100}{3128.2} = \mathbf{25\%}$

National Grid	
1999	1998
$\frac{1284.6 \times 100}{1514.2} = \mathbf{85\%}$	$\frac{572.6 \times 100}{1519.3} = \mathbf{38\%}$

3. Efficiency

5. Assets turnover =	$\frac{\text{Sales}}{\text{Total assets employed}}$
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<i>Scottish Power</i>	
1999	1998
$\frac{3242.3}{5440.1 + 792.0} = \mathbf{0.52 \text{ times}}$	$\frac{3128.2}{4791.2 + 785.6} = \mathbf{0.56 \text{ times}}$

<i>National Grid</i>	
1999	1998
$\frac{1514.2}{3139.1 + 1746.3} = \mathbf{0.31 \text{ times}}$	$\frac{1519.3}{3038.3 + 384} = \mathbf{0.44 \text{ times}}$

6. Stock turnover period =	$\frac{\text{Average stock held}}{\text{Cost of sales}} \times 365$
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<i>Scottish Power</i>	
1999	1998
$\frac{125.8 + 144.2}{2} \times 365 = \mathbf{140 \text{ Days}}$ 1860.5	

<i>National Grid</i>	
1999	1998
$\frac{12.7 + 12.5}{2} \times 365 = \mathbf{29.5 \text{ Days}}$ 931.6	

7.Average settlement period for debtors=	$\frac{\text{Trade debtors} \times 365}{\text{Credit sales}}$
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Scottish Power	
1999	1998
$\frac{260.1 \times 365}{3242.3} = \mathbf{29.28 \text{ Days}}$	$\frac{255.5 \times 365}{3128.2} = \mathbf{29.81 \text{ Days}}$

National Grid	
1999	1998
$\frac{62.9 \times 365}{1514.2} = \mathbf{15.16 \text{ Days}}$	$\frac{70.0 \times 365}{1519.3} = \mathbf{16.81 \text{ Days}}$

8.Average settlement period for creditors =	$\frac{\text{Trade creditors} \times 365}{\text{Credit sales}}$
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Scottish Power	
1999	1998
$\frac{181.4 \times 365}{1860.5} = \mathbf{35 \text{ Days}}$	$\frac{204.6 \times 365}{1850.7} = \mathbf{40 \text{ Days}}$

National Grid	
1999	1998
$\frac{308.3 \times 365}{931.6} = \mathbf{120 \text{ Days}}$	$\frac{357.4 \times 365}{1069.4} = \mathbf{122 \text{ Days}}$

4. Liquidity

9 .Current assets =	$\frac{\text{Current assets}}{\text{Current liabilities}^*}$
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Creditors due with in one year

Scottish Power	
1999	1998
$\frac{792.0}{2176.4} = \mathbf{0.37 \text{ Times}}$	$\frac{785.6}{2432.0} = \mathbf{0.32 \text{ Times}}$

National Grid	
1999	1998
$\frac{1746.3}{1414.9} = \mathbf{1.23 \text{ times}}$	$\frac{384.0}{1097} = \mathbf{0.35 \text{ Times}}$

10. Acid test ratios =	$\frac{\text{Current assets}^*}{\text{Current liabilities}}$
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* excluding stock

Scottish Power	
1999	1998
$\frac{792.0 - 125.8}{2176.4} = \mathbf{0.30 \text{ Times}}$	$\frac{785.6 - 144.2}{2432.0} = \mathbf{0.30 \text{ Times}}$

National Grid	
1999	1998
$\frac{1746.3 - 12.7}{1414.9} = \mathbf{1.22 \text{ Times}}$	$\frac{384.0 - 12.5}{1097} = \mathbf{0.34 \text{ Times}}$

4.Capital structure (Risk ratio)

11. Operating cash flows to maturing obligations =	$\frac{\text{Operating cash flows}}{\text{Current liabilities}}$
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<i>Scottish Power</i>	
1999	1998
$\frac{949.9}{2176.4} = 0.43 \text{ Times}$	$\frac{1014.1}{2432.0} = 0.41 \text{ Times}$

National Grid	
1999	1998
$\frac{605.9}{1414.9} = 0.43 \text{ Times}$	$\frac{627.2}{1097} = 0.57 \text{ Times}$

12. Gearing ratios =	$\frac{\text{Long term liabilities} \times 100}{\text{share capital} + \text{reserves} + \text{term liabilities}}$
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<i>Scottish Power</i>	
1999	1998
40 %	158 %

National Grid	
1999	1998
124 %	114%

13. Interest cover =	$\frac{\text{profit before interest \& taxes}}{\text{interest payable}}$
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<i>Scottish Power</i>	
1999	1998
4.2Times	7.1 Times

National Grid	
1999	1998
5.0Times	5.3Times

5. Investment ratios

14. Dividend per share =	$\frac{\text{Dividends announced during the period}}{\text{Number of shares in issue}}$
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<i>Scottish Power</i>	
1999	1998
13.07 p	12.07p

National Grid	
1999	1998
22.50P	20.40p

15. Earnings per share=	$\frac{\text{Earnings}^*}{\text{Num. of ord. equity shareholder in issue}}$
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*available to ordinary equity shareholders

<i>Scottish Power</i>	
1999	1998
68.3p	26.0p

National Grid	
1999	1998
42.42P	14.41p

16. Price earnings =	$\frac{\text{Price per share}}{\text{Earnings per share}}$
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<i>Scottish Power</i>	
1999	1998
$\frac{501}{42.42} = 11.8 \text{ Times}$	

National Grid	
1999	1998
$\frac{462}{68.3} = 6.76 \text{ Times}$	

5. Financial statement overview

	Scottish Power PLC		The National Grid PLC	
	1999	1998	1999	1998
Overall Performance				
Return on Capital Employed	19.85%	25%	37%	24.6%
Return on Owners Equity	23%	07%	70.8%	40%
Efficiency				
Asset Turnover Ratio	0.52 times	0.56 times	0.31 times	0.44 times
Stock Turnover Period	140 Days	Data not Found	29.5 Days	Data not found
Average Settlement Period for debtors	29.28 Days	29.81 Days	15.16 Days	16.81 Days
Average Settlement Period for Creditors	35 Days	40 Days	120 Days	122 Days
Liquidity				
Current Assets	0.37Times	0.32 Times	1.23 times	0.35 Times
Acid Test Ratio	0.30 Times	0.30 Times	1.22 Times	0.34Times
Operating Cash flows to maturing obligations	0.43 Times	0.41 Times	0.43Times	0.57Times
Capital Structure				
Gearing Ratio	40 %	158 %	124 %	114%
Interest Cover Ratio	4.2Times	7.1 Times	5.0Times	5.3Times
Investment Ratios				
Dividend per Share	13.07 p	12.07p	22.50P	20.40p
Earnings per Share	68.3p	26.0p	42.42P	14.41p
Price Earning Ratio	11.8Times	Times	6.76Times	Times
Profitability				
Gross Profit Margin	42.6%	40.8 %	38.5 %	37.5 %
Net Profit Margin	25 %	25 %	85 %	38 %

6.Reference:

Peter Atrill and al, *Financial Accounting for Non Specialists*, Pr. Hall, London, 1996
Hoover online