

B202 - Understanding Business Functions

TMA06 - A FINANCIAL RATIO ANALYSIS



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INTRODUCTION

In response to your request to investigate and analyse one of our major competitors; the Associated British Food plc, and as a financial analyst of Tesco plc, I will be comparing and analysing the financial statements for the two companies in terms of:

- Profitability,
- Liquidity, and
- Assets management.

I will be examining the areas where Tesco seem to outperform our competitor based on the available financial statements; the Income Statement and the Balance Sheet Statement reported in 2006 annual reports through a financial ratio analysis. I will also outline how these ratios have changed over the two-year period. A summary is presented at the end of this report.

A COMPARISON BETWEEN TESCO AND ABF FOR THE YEAR 2006

PROFITABILITY RATIOS:

These ratios tell us whether a business is making profits - and if so whether at an acceptable rate.

Return on Ordinary Shareholders' Funds (ROSF):

From the equation hereunder we notice that TESCO's ROSF of 16.69% is higher than ABF's of 7.4%. This indicates that the amount of profit for the period available to the owners with the owners' stake in the business is better at TESCO. In simple words, the amount of profit available to the owners is better at TESCO than it is at ABF.

Profitability Ratios		YEAR 2006			
		TESCO [%]		ABF [%]	
Return on ordinary shareholders' fund (ROSF)	$= \frac{\text{Net profit after taxation and preference dividend}}{\text{Ordinary share capital plus reserves}} \times 100$	16.69	$= \frac{\$1,576}{\$9,444}$	7.4	$= \frac{\$308}{\$4,182}$

Return on Capital Employed (ROCE):

This ratio, which reveals the business performance, taking into account the long-term capital invest and the profit generated, is calculated as per the following equation:

Profitability Ratios		YEAR 2006			
		TESCO [%]		ABF [%]	
Return on capital employed (ROCE)	$= \frac{\text{Net profit before interest and taxation}}{\text{Share capital + Reserves + Long term loans}} \times 100$	14.86	$= \frac{\$2,235}{\$15,045}$	11.8	$= \frac{\$570}{\$4,819}$

The ROCE, which is the percentage obtained from the net profit before interest and taxation divided by the capital employed, expresses the relationship between the net profit generated by the business and the long-term capital invested in the business. Therefore, and as per the percentages above, we notice that TESCO with 14.86% has outperformed ABF by 3.06%. Since ROCE is considered by many to be a primary measure of profitability and performance, we conclude that TESCO had better profitability and higher performance in 2006 than ABF.

Net profit margin:

This measure of the relationship of one output “sales” to another “profit” is most effective when compared to other businesses in the same industry, as follows:

Profitability Ratios		YEAR 2006					
		TESCO [%]		ABF [%]			
Net Profit Margin =	$\frac{\text{Net profit before interest and taxation}}{\text{Total Sales}} \times 100$	5.66	=	\$2,235	9.51	=	\$570
				\$39,454			\$5,996

And since both TESCO and ABF are almost in the same industry we notice that the net profit margin – net profit before any expenses of servicing long-term finance subtracted by sales – of TESCO (5.66%) is lower than that of ABF (9.51%).

From the above figures, we notice that TESCO generates almost 4 times net profit before interest and taxation than ABF. At the same time TESCO generates about 6.5 times total sales than ABF. Nevertheless, ABF generates higher net profit margin than TESCO due to obviously good operational management, where total sales are generated just enough, resulting in a relatively high net profit margin.

Gross Profit Margin:

Slightly similar to the above ratio, this ratio relates the gross profit of the business to the sales generated for the same period. It tells us something about the business's ability to consistently control its production costs or to manage the margins it makes on products it buys and sells.

Profitability Ratios		YEAR 2006					
		TESCO [%]		ABF [%]			
Gross Profit Margin =	$\frac{\text{Gross profit}}{\text{Total Sales}} \times 100$	7.67	=	\$3,028	4.25	=	\$255
				\$39,454			\$5,996

From the percentages above, it is clear that TESCO's gross profit margin of 7.67% is higher than that of ABF's 4.25%. In this equation sales value and volumes of TESCO are still 6.5 times higher than that of ABF, but here, TESCO's gross profit is almost 12 times higher than ABF, thus the higher gross profit margin.

Therefore, TESCO outperforms ABF in this area, since a small increase (or decrease) in profit margin, can produce a substantial change in overall profits.

EFFICIENCY RATIOS

These ratios give us an insight into how efficiently the business is employing the resources invested in fixed assets and working capital.

Average stock turnover period:

Stock turnover indicates in simple words the average period for which stocks are being held, thus, how much money is tied up in inventory.

Asset Ratios	YEAR 2006	
	TESCO [days]	ABF [days]
$\text{Stock turnover period} = \frac{\text{Average stock held}}{\text{Cost of sales}} \times 365$	$14.67 = \frac{1,464}{36,426}$	$56.05 = \frac{\$681}{\$4,435}$

ABF's stock is being turned over every 56.05 days, while at TESCO every 14.67 days. This may indicate that ABF has poorer stock management than TESCO. ABF definitely has more funds tied up in stocks and cannot be used for other purposes than TESCO.

Average settlement period for debtors:

The "debtor days" ratio indicates whether debtors are being allowed excessive credit. It calculates how long on average credit customers take to pay the amounts that they owe to the business. A high figure may suggest general problems with debt collection or the financial position of major customers. In this case, we could not calculate the ratio of ABF since no sufficient information is available. Nevertheless, from the equation below, we notice that TESCO enjoys a relatively short settlement period of 8.94 days.

Asset Ratios	YEAR 2006	
	TESCO [days]	ABF [days]
$\text{Average settlement period for debtors} = \frac{\text{Trade debtors}}{\text{Credit sales}} \times 365$	$8.94 = \frac{892}{36,426}$	$\text{NA} = \frac{\quad}{\quad}$

Average settlement period for creditors:

Opposite to the above, this ratio measures how long on average the business takes to pay its trade creditors. It provides an average figure which, like the average settlement period for debtors' ratio, can be distorted by the payment period for one or two large suppliers.

This is a similar calculation to that for debtors, giving an insight into whether a business is taking full advantage of trade credit available to it. Trade creditors provide a free source of finance for the business. Some businesses attempt to *increase* their average settlement period for trade creditors.

Again, no sufficient information was available to measure this ratio, but it is usually measured as follows:

$$\text{Average settlement period for creditors} = \frac{\text{Trade creditors}}{\text{Credit purchases}} \times 365$$

Sales to capital employed:

This ratio is a measure of total asset utilisation; it helps to answer the question - what sales are being generated by each Dollar's worth of assets invested in the business. It examines how effectively the assets of the business are being employed in generating sales revenue.

Asset Ratios	YEAR 2006			
	TESCO [times]		ABF [times]	
$\text{Sales to capital employed} = \frac{\text{Total sales}}{\text{Long term capital employed}}$	3.02	$= \frac{39,454}{13,043}$	1.24	$= \frac{\$5,996}{\$4,819}$

From the above, we notice that TESCO has an asset turnover ratio of 3.02 times, which is higher than ABF's of 1.24 times. TESCO's higher ratio suggests that assets are being used more productively in the generation of revenue.

Sales per employee:

This ratio relates sales generated to a particular business resource. It provides a measure of the productivity of the workforce.

Asset Ratios	YEAR 2006			
	TESCO [\$]		ABF [\$]	
$\text{Sales per employee} = \frac{\text{Total sales}}{\text{Number of employees}}$	0.15	$= \frac{\$39,454}{261,142}$	0.13	$= \frac{\$5,996}{46,703}$

In our cases, and since both TESCO and ABF enjoy a large number of employees, we notice a relatively low ratio of sales per employee. Nevertheless, it is obvious that TESCO, again, outperforms ABF here.

LIQUIDITY RATIOS

These are accounting ratios that relate to the financial resources of a business. Liquidity ratios indicate how capable a business is of meeting its short-term obligations as they fall due.

Current ratio:

This kind of ratio shows the size of the relationship between current assets (cash and assets which would become cash in a short time) and current liabilities (creditors falling due within one year), enhancing the comparability between firms. The result of the division expresses the times that the current assets would cover the current liabilities.

Liquidity Ratios	YEAR 2006			
	TESCO [times]		ABF [times]	
$\text{Current Ratio} = \frac{\text{Current Assets}}{\text{Current Liabilities}}$	0.50	$= \frac{3,751}{7,432}$	1.3	$= \frac{2,100}{1,673}$

The ratio of TESCO reveals that the current assets covers the current liabilities by 0.5 times, while the ratio of ABF is 1.3 times. In manufacturing business a high current ratio is good, but since this is a food business, the current ratio is relatively low as it will hold only fast-moving stocks of finished goods (food) and will generate mostly cash sales.

And while the notion of an ideal current ratio of 2:1 is suggested for businesses, ABF's current ratio is better than TESCO's. The higher the ratio, the more liquid the business is considered to be, and liquidity is of vital importance to the survival of a business.

Acid Test ratio:

It is another reflection of the liquidity of a business. It indicates if the business could meet its current obligations with quickly convertible assets. This ratio is the same as the current ratio without including inventory. Some inventory is not easy to sell, so this ratio is seen as the better measure of relative "liquidity".

Liquidity Ratios	YEAR 2006	
	TESCO [times]	ABF [times]
$\text{Acid Test} = \frac{\text{Current Assets excluding stock}}{\text{Current Liabilities}}$	$0.31 = \frac{3,751 - 1,464}{7,432}$	$0.8 = \frac{2,100 - 681}{1,673}$

In both companies, we can see that the 'liquid' current assets (0.31 times and 0.8 times) do not quite cover the current liabilities, and so the business may be experiencing some liquidity problems. Nevertheless, ABF outperforms TESCO in this respect as its ratio is closer to the ideal (1:1) than that of TESCO. ABF is more capable of paying its current liabilities without relying on the sale of inventory.

Operating cash flows to maturing obligations:

This ratio compares the operating cash flows with the current liabilities of the business. It provides a further indication of the ability of the business to meet its maturing obligations.

Liquidity Ratios	YEAR 2006	
	TESCO [times]	ABF [times]
$\text{Operating cash flows to maturing obligations} = \frac{\text{Operating cash flows}}{\text{Current Liabilities}}$	$0.35 = \frac{2,619}{7,432}$	$0.3 = \frac{419}{1,673}$

While both companies have low ratios that indicate that the operating cash flows for the period are not sufficient to cover the current liabilities at the end of the period, and from the above figures, we notice that TESCO enjoys a slightly better liquidity of the business than ABF.

As this might contradict with the result in the Acid Test Ratio, this ratio has the advantage that the operating cash flows for a period usually provide a more reliable guide to the liquidity of a business than the current assets held at the balance sheet date.

HOW THE RATIOS HAVE CHANGED OVER THE TWO-YEAR PERIOD

TESCO – A COMPARISON BETWEEN YEAR 2006 AND YEAR 2005:

Profitability Ratios	2006 [%]	2005 [%]
Return on ordinary shareholders' fund (ROSF)	16.69	15.57
Return on capital employed (ROCE)	14.86	13.08
Net Profit Margin	5.66	5.59
Gross Profit Margin	7.67	7.78

The gross profit margin shows a slight decrease in 2006 over the previous year. This may be due to a number of reasons, such as a decrease in selling prices and an increase in the cost of sales. However, the net profit margin has shown an increase over the period from 2005 to 2006. This means that operating expenses are absorbing less proportion of sales income in 2006 than in the previous year. As a result, both the ROSF and the ROCE have risen slightly over the period, providing slightly better return.

Efficiency Ratios	2006	2005
Stock turnover period	14.67 days	15.3 days
Average settlement period for debtors	8.94 days	8.99 days
Sales to capital employed	3.02 times	3.05 times
Sales per employee	\$ 0.15	\$ 0.13

The comparison of the efficiency ratios, above, between the two years provides a positive indication. The average settlement period for debtors has slightly reduced. The reduction may have been the result of some policy decisions, such as a slightly tighter credit control for debtors. Nevertheless, it's good that this ratio has not increased. The stock turnover period has shown a slight but not significant decrease from 2005 to 2006. There has been an increase in the sales per employee and a decrease in sales to capital employed. Overall, this is a good indication of good control as well as performance improvement over time.

Liquidity Ratios	2006	2005
Current Ratio	0.50	0.57
Acid Test (Quick Ratio)	0.31	0.34
Operating cash flows to maturing obligations	0.35	0.38

The table above reveals a decrease in both the current ratio and the acid test ratio from 2005 to 2006. These changes suggest a weakening liquidity position for the business. The company must monitor its liquidity carefully and be alert to any further deterioration in these ratios. The operating cash flows to maturing obligations has also decreased over the period. This ratio is very low and reveals that the cash flows for the period do not cover the maturing obligations. This ratio should give some cause for concern.

ASSOCIATED BRITISH FOODS PLC. – A COMPARISON BETWEEN YEAR 2006 AND YEAR 2005:

Profitability Ratios	2006 [%]	2005 [%]
Return on ordinary shareholders' fund (ROSF)	7.4	10.0
Return on capital employed (ROCE)	11.8	14.1
Net Profit Margin	9.51	11.81
Gross Profit Margin	4.25	6.71

The gross profit margin shows a decrease in 2006 over the previous year. This may be due to a number of reasons, such as a decrease in selling prices and an increase in the cost of sales. Moreover, the net profit margin has also shown a decrease over the period from 2005 to 2006. This means that operating expenses are absorbing more proportion of sales income in 2006 than in the previous year. These decreases should give some cause for concern.

Worse, the ROSF and the ROCE have both decreased over the period, providing worse return. Overall, ABF obviously did not enjoy better profitability in 2006 than in 2005.

Efficiency Ratios	2006	2005
Stock turnover period	56.05 days	50.06 days
Sales to capital employed	1.24 times	1.2 times
Sales per employee	\$ 0.13	\$ 0.13

The comparison of the efficiency ratios between the two years provides a mixed picture. The stock turnover period has shown an increase from 2005 to 2006, which means more funds were tied up in stocks in 2006. Careful management of stock is necessary for the coming years. There has been an increase in sales to capital employed, and since a higher asset turnover ratio is preferred to a lower one, this increase suggests that assets are being used more productively in the generation of revenue. On the other hand, the sales per employee remained the same, meaning the productivity of the workforce remained the same.

Liquidity Ratios	2006	2005
Current Ratio	1.3	1.8
Acid Test (Quick Ratio)	0.8	1.4
Operating cash flows to maturing obligations	0.3	0.4

The table above reveals a decrease in both the current ratio and the acid test ratio from 2005 to 2006. These changes suggest a weakening liquidity position for the business. The company must monitor its liquidity carefully and be alert to any further deterioration in these ratios. The operating cash flows to maturing obligations has also decreased over the period. This ratio is very low and reveals that the cash flows for the period do not cover the maturing obligations. This ratio should give some cause for concern.

A SUMMARY REPORT

RATIOS	TESCO		ABF plc.	
	Year 2006	Year 2005	Year 2006	Year 2005
Liquidity Ratios				
Current Ratio	0.50	0.57	1.3	1.8
Acid Test (Quick Ratio)	0.31	0.34	0.8	1.4
Operating cash flows to maturing obligations	0.35	0.38	0.3	0.4
Efficiency Ratios				
Stock turnover period	14.67	15.30	56.05	50.06
Average settlement period for debtors	8.94	8.99	NA	NA
Sales to capital employed	3.02	3.05	1.24	1.20
Sales per employee	0.15	0.13	0.13	0.13
Profitability Ratios				
Return on ordinary shareholders' fund (ROSF)	16.69	15.57	7.4	10.0
Return on capital employed (ROCE)	14.86	13.08	11.8	14.1
Net Profit Margin	5.66	5.59	9.51	11.81
Gross Profit Margin	7.67	7.78	4.25	6.71

The table above demonstrates an overall view of the financial status of the two companies. In short, we can conclude the following:

PROFITABILITY:

Generally speaking, TESCO's profitability is better than that of ABF, but needs to increase its net profit margin.

- The ROSF is better at TESCO than it is at ABF.
- TESCO had better profitability and higher performance in 2006 than ABF.
- TESCO outperforms ABF with its Gross Profit Margin.
- ABF generates higher net profit margin than TESCO.

EFFICIENCY:

TESCO's efficiency is higher than that of ABF.

- TESCO has better stock management than ABF.
- TESCO enjoys a relatively short settlement period for debtors.
- TESCO has a higher asset turnover than ABF's.
- TESCO, again, outperforms ABF in its sales per employee.

LIQUIDITY:

TESCO needs to work on its liquidity deficiencies; this is the main field where ABF manages its liquidity better than TESCO.

- ABF's current ratio is better than TESCO's, thus TESCO's liquidity is poorer than that of ABF.
- ABF outperforms TESCO in the Acid Test ratio ABF is more capable of paying its current liabilities without relying on the sale of inventory.
- TESCO enjoys a slightly better liquidity of the business than ABF only when it comes to the operating cash flows to maturing obligations.

REFERENCES:

Artrill & McLaney, (2001) Accounting and Finance for Non-Specialists, Chapter 6, pp. 140-158.

Associated British Foods plc 2006 annual report:

http://ft.ar.wilink.com/asp/P003_search_results_ENG.asp?descrip=A&Select_Reports=1&page=repselect&session_ID=0139F9FCDFD84EE9 [accessed: 25/11/07]

TESCO's 2006 annual report:

http://ft.ar.wilink.com/asp/P003_search_results_ENG.asp?sort1=Food+Manufacturing+%26+Products&session_ID=2D0B54D3C2514173&Select_Reports=1&page=repselect [accessed: 25/11/07]

TESCO's detailed income statement and balance sheet:

<http://www.tescocorporate.com/annualreview06/o/downloadcentre.html> [accessed: 25/11/07]

Interpretation of Ratio Analysis:

http://www.tutor2u.net/business/accounts/ratio_analysis.htm [accessed: 30/11/07]

Operating costs and gross profit

<http://www.abf.co.uk/investors/reports.asp>, 2006 Report / 2. Operating costs and gross profit / page 61 [accessed: 30/11/07]

Average number of employees

<http://www.abf.co.uk/investors/reports.asp> [2006 Report / 3. Employees / page 62]

Financial ratios analysis

<http://www.smallbusinessnotes.com/operating/finmgmt/financialstmts/financialratios.html> [accessed: 05/12/07]

<http://www.netmba.com/finance/financial/ratios/> [accessed: 05/12/07]