

CAPITAL MARKETS, MARKET EFFICIENCY AND RATIO ANALYSIS

Questions for review

Question 1

The capital markets are markets for trade in long-term negotiable financial securities or instruments. There are essentially three kinds of securities traded on the capital markets: company securities, such as ordinary shares and bonds; public sector securities, such as Treasury bills and gilts; and Eurobonds.

The primary or new issues market enables firms to raise new finance by issuing new shares and debentures. The secondary market is where dealing takes place in previously issued securities. The secondary market plays a very important role in corporate finance, because this market:

- increases the liquidity of the shares and so increases their value;
- increases primary market efficiency by providing pricing information;
- provides a measure of company performance and also of industrial and commercial performance as a whole (FTSE 100, FT All-Share index, etc.).

The stock exchange consists of the 'full' market, the Alternative Investment Market (AIM) and the gilts market.

The desirable characteristics of a primary capital market are as follows:

- All transaction costs in primary markets should be as low as possible.
- Primary markets should have allocational efficiency, which means that they should direct funds to their most productive uses.
- Activity in the primary market should have only a minimal effect on prices in the secondary market.

Secondary markets will encourage investment if they provide liquidity and flexibility, reduce price volatility and are operationally and allocationally efficient:

- Price volatility is reduced by having an active market with 'depth' and 'breadth'.
- Operational efficiency means that transaction costs should be low.
- Allocational efficiency requires both operational and pricing efficiency.

Pricing efficiency will only occur if the prices of securities reflect available information, i.e. if markets are informationally efficient.

Question 2

The solution to this question is given in Section 2.3.6.

Question 3

Hoult is experiencing deteriorating profitability, liquidity, trade receivables', current and quick ratios, and has a growing reliance on short-term funding. These are signs of overtrading (see Section 3.4). The main reason appears to be erosion of the company's capital base due to repayment of the bonds. If this had not been happening, even if fixed asset investment had been occurring, it is likely that the overdraft would have been much lower, a small cash surplus might have arisen and lower interest payments would have led to increased profitability. Overall profitability would still have been low, but management action to improve profitability might have been possible if the focus of the company's activity had not been on redeeming the debentures.

If only long-term debt is considered, gearing is falling due to repayment of the bonds. However, if both short-term debt and long-term debt are considered, the fall in gearing is marginal. Including short-term debt gives a better indication of the financial risk of Hoult in this case. The Year 3 dividend payment cannot be justified in profitability terms. Is the company hoping to influence shareholders prior to a rights issue?

	Year 1	Year 2	Year 3
Overall profitability			
ROCE (%)	8.0	8.6	10.3
Net profit (%)	3.1	2.8	2.7
Net asset turnover (n:1)	2.6	3.1	3.8
Gross profit (%)	30	28	27
EBITDA/capital employed (%)	12.8	12.3	13.8
Working capital management			
Current ratio (n:1)	2.5	2.4	1.9
Quick ratio (n:1)	1.1	1.1	1.0
Inventory turnover (days)	109	98	93
Trade receivables days (days)	61	61	75
Trade payables days (days)	41	37	60
Sales/working capital (n:1)	4.5	4.7	5.5
Financial risk			
Total debt/capital employed (%)	51	46	47
Long-term debt/capital employed (%)	32	23	13
Total debt/equity (%)	75	59	54

Interest cover (n:1)	2.3	2.1	1.8
Investor ratios			
Dividend cover (n:1)	–	–	3.5
Increase in turnover (%)		+12.5	+13.0
Increase in overdraft (€000)		10	30

Question 4

The solution to this question is given in Section 2.3.3.

Question 5

The solution to this question is given in Section 2.4.10.

Questions for discussion

Question 1

(a) A good answer will discuss the various kinds of efficiency:

- Operational efficiency, in terms of transaction costs and market access.
- Allocational efficiency, in terms of economic efficiency and optimum resource utilisation.
- Informational efficiency, where information is available to the majority at low cost.
- Pricing efficiency, in relation to market breadth and depth, liquidity, full reflection of information and no individual dominating the market.

(b) The answer should build on points mentioned in the answer to (a). With respect to the Alternative Investment Market:

- It is used by young, dynamic companies or those not wanting a full listing.
- It is likely to have sufficient depth and breadth.
- The question of whether a market is efficient must be addressed by empirical research rather than speculation.

(c) Following on from part (b), the answer should:

- distinguish between and discuss weak form, semi-strong form and strong form efficiency;
- explain and discuss weak form tests (serial correlation, run tests and filter tests);
- explain and discuss semi-strong form tests (event studies relating to stock splits, response to Annual Reports and so on);
- discuss tests for strong form efficiency.

Question 2

The efficient market hypothesis (EMH) describes an efficient market as one where the prices of securities fully, fairly and quickly reflect all available information. The EMH is therefore, concerned with information and pricing efficiency. Any new information that becomes available is quickly and accurately absorbed by participants in the market and through their actions is reflected in changes, if such are necessary, in the traded values of affected securities. The efficiency of the market is a result of market participants actively competing against each other. The three forms of market efficiency mentioned in the question refer to the types of information shown to be reflected in security prices.

(a) *Weak form efficiency*

Security prices fully and fairly reflect all relevant past information. Future prices cannot therefore, be predicted from historical data alone and trading rules based only on such price and volume data (i.e. technical analysis or chartism) cannot consistently produce excess returns if the weak form hypothesis holds true. The statement is therefore, false.

(b) *Semi-strong form efficiency*

Here, the prices of securities reflect all publicly available information. Reaction to public announcements will not deliver excess returns, as the information within the announcements is reflected in the prices of securities. If the semi-strong form of the EMH is true, fundamental analysis, which seeks to establish the intrinsic or fundamental value of a share and compare it with its market value, cannot lead to abnormal gains. The statement is therefore, false.

(c) *Strong form efficiency*

Here, the prices of securities reflect all information, whether publicly available or not. If this form of efficiency were to hold, no investor could earn above average returns using such information. It would rule out gains made by investors using inside information. The statement is, therefore, true.

Question 3

(a) *Shareholders concerned about the maximisation of their wealth*

Because of the vague and intangible nature of shareholder wealth, the market price of a company's shares is taken as a surrogate measure. Whether the market price of a company's shares represents an accurate and appropriate measure of a shareholder's wealth depends heavily on the efficiency of the markets in which the shares are traded. Therefore, the efficient market hypothesis has an important role to play with respect to shareholders and the maximisation of their wealth. It provides the vital link between the overall value of a company and the market price of its shares, which in turn is taken as a measure of shareholder wealth.

(b) *Corporate financial managers making capital investment decisions*

If the efficient market hypothesis is assumed to hold, it implies that good management decisions with respect to investment and financing will be quickly and accurately reflected in a company's share price. It also implies that financial manipulation such as creative accounting is a waste of time as the market will see through such actions. Another implication is that, as the market price

of an ordinary share always represents a fair price, the timing of new issues and rights issues is not critical.

(c) Investors analysing the annual reports of listed companies

The implication of the efficient market hypothesis for investors is that studying company accounts to try to make abnormal returns (fundamental analysis) is pointless. No bargains exist on the stock exchange, as share prices change quickly and accurately to reflect new information as it becomes available. The best strategy when managing a portfolio of shares is therefore, to buy and hold, rather than to switch investment between shares.

Question 4*

(a) Shareholder wealth maximisation and shareholder return

Shareholders' wealth increases through receiving dividends and increases in share prices. Nominal dividend per share has increased every year by 7 per cent. This is less than the 10.9 per cent average growth in revenue and less than the 8.0 per cent average growth in EPS.

Average share price growth of 24 per cent per year appears to be acceptable, but this will need to be compared to the general trend of share prices within the business sector of Tor plc in order to confirm historical performance. Share price growth in 20X9 at 37 per cent is higher than the 30.8 per cent (35%–4.2%) of the sector overall. The share price has increased every year and shareholders have therefore, experienced a capital gain every year.

Nominal dividend yield has declined every year, from 5.4 per cent in 20X6 to 3.5 per cent in 20X9, since growth in share prices has been much greater than growth in dividends per share. The dividend yield of Tor plc needs to be compared with the average dividend yield for the sector over the period for further insight into the historical trend in dividend yield. Dividend yield in 20X9 at 3.5 per cent is less than the 4.2 per cent average for the sector.

Total shareholder return reflects both dividend and share price changes, and increasing share price has more than compensated for the declining dividend yield. Total shareholder return was a comparatively modest 14.0 per cent in 20X6, but rose to 36.6 per cent in 20X7, 35.3 per cent in 20X8 and 40.5 per cent in 20X9. Total shareholder return in 20X9 is certainly higher than the average return of 35 per cent for the sector, more than compensating for the shortfall in dividend yield. The relative growth in the share price compared to the sector (and hence the value of the price/earnings ratio relative to the sector) suggest that the market anticipates increased dividends in the future.

Tor plc has achieved its stated target of a 15 per cent per year return to shareholders during the period under review, apart from in the first year, 20X6. The average return is above the stated target value.

Analysis of real dividends

Real dividend growth has declined each year during the period under review, from 4.3 per cent in 20X6 to 3.8 per cent in 20X9. Real dividend growth in the last year has been less than the declared growth target of 4 per cent per year.

Conclusion

As far as shareholder return is concerned, Tor plc has achieved its target of a 15 per cent per year apart from in 20X6. As far as real dividend growth is concerned, Tor plc has achieved its stated target of 4 per cent per year in 20X6 and 20X7, but not in 20X8 and 20X9. It is not possible to say if shareholder wealth increase has been 'maximised', but shareholder return in 20X9 compared to the sector is certainly encouraging.

Financial analysis					
	20X5	20X6	20X7	20X8	20X9
Share price (£)	3.74	4.06	5.33	6.98	9.56
Capital gain		8.6%	31.3%	31.0%	37.0%
Dividend yield		5.4%	5.3%	4.3%	3.5%
TSR		14.0%	36.6%	35.3%	40.5%

In nominal terms:					
	20X5	20X6	20X7	20X8	20X9
Revenue growth		2%	19%	5%	19%
EPS growth		8%	5%	1%	19%
DPS growth		7%	7%	7%	7%

$$\text{Average revenue growth} = (218/144)^{0.25} - 1 = 10.9\%$$

$$\text{Average EPS growth} = (63.7/46.8)^{0.25} - 1 = 8.0\%$$

In real terms:					
	20X5	20X6	20X7	20X8	20X9
Revenue (£m)	144	143	166	169	195
Revenue growth		-1%	16%	2%	15%
DPS (pence)	18.7	19.5	20.3	21.1	21.9
DPS growth		4.3%	4.1%	3.9%	3.8%
Payout ratio	40%	39%	40%	43%	39%

(b) The agency problem arises when managers, as agents of the shareholders, act in sub-optimal ways so that shareholder wealth is not maximised. Students could discuss several ways of reducing this problem, including:

- monitoring;
- performance-related pay;

- share option schemes;
- optimal contracts.

Each way should be explained, and advantages and disadvantages of each way should be discussed.

The information in the question has several features that can be used to illustrate mitigation of the agency problem:

- The CEO has 17 per cent of the issued share capital and 63 per cent of the share capital owned by the board. He owns three times as many shares as the MD. He may be able to exert a significant amount of power over company affairs.
- UK institutional shareholders own 44 per cent of the issued share capital and so will have considerable influence over the company's direction and policies.
- If foreign institutional investors join forces with UK institutional investors, they would together own 54 per cent of the issued share capital.
- Small shareholders are probably ineffective in mitigating agency problems within Tor plc, due to their relatively small and the fragmented nature of individual shareholdings.