

# Instructor's Manual

## Corporate Finance Principles and Practice

**Seventh Edition**

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**GUIDELINE ANSWERS  
TO  
QUESTIONS FOR REVIEW  
AND  
QUESTIONS FOR DISCUSSION**

# THE FINANCE FUNCTION

## Questions for review

### Question 1

The definition of wealth is not straightforward, but one method is to consider the returns that investors expect in becoming shareholders. Such returns will be in the form of dividends and any capital gain made on selling the shares, i.e. the returns will be either revenue or capital in nature. The objective of maximising shareholder wealth then becomes the objective of maximising these returns to the shareholder, i.e. maximising the value of dividends paid to shareholders over time, before shareholders receive any gains made on disposal.

Since investors have a required return, which is the opportunity cost of investing in a given company rather than investing elsewhere, future cash flows will need to be discounted. If disposal of the security is distant, we can ignore it, recognising that discounted distant returns are less valuable than those received in the near future. Maximisation of shareholder wealth then becomes maximisation of the present value of the stream of future dividends, and as Gordon and others have shown, the present value of future dividends can be equated to the current ex-dividend share price. Maximisation of the company's share price can therefore be used as a surrogate objective.

### Question 2

The maximisation of sales has a number of problems as a measure of maximisation of shareholder wealth:

- Sales are measured in revenue rather than cash terms, so maximising sales may not result in cash inflows for a company.
- Sales may be maximised by offering goods on extended credit terms or by making sales to disreputable companies who may default on payment.
- Sales is an historical measure and not necessarily a guide to expected future cash flows.
- Sales may be maximised but on mispriced goods, leading to losses.
- Sales are in theory maximised when marginal revenue is equal to marginal cost, but how do we know when this has occurred?

Sales maximisation is therefore a subjective measure. In contrast, a company's ordinary share price is an objective yardstick provided by the capital markets. It is independent of the company, forward-looking and reflects an assessment of the company's prospects in both financial and strategic terms.

### Question 3

You should discuss the following points:

- Divergence of ownership and control.
- Divergence of goals between principal and agent.
- Asymmetry of information.
- Managers' personal goals may not lead to maximisation of shareholder wealth.
- Conflict between investors and managers in terms of investment decisions and risk.
- Ways in which principals can monitor the activities of agents.
- Agency costs, including monitoring costs, the free-rider problem and contract costs.
- Optimal contracts and other ways of encouraging goal convergence.

### Question 4

(a) Agency implies that managers (as agents) maximise their own wealth rather than that of their shareholders (the principals) due to asymmetry of information, differing objectives and divorce of ownership and control. Hence, we need to look for clear signs that agency problems are present.

The first thing to note is that the company has diversified its activities across a range of different industries. This is often justified in the name of reducing risk for shareholders, but shareholders should have already diversified themselves through the portfolios they hold. Companies tend to diversify their activities for managerial motives, such as to increase job security by diversifying unsystematic risk.

Second, the company is maintaining a gearing ratio significantly below the industrial average. This is another example of the agency problem as shareholders prefer higher levels of debt because of the cheaper cost of debt finance and are prepared to accept higher levels of financial risk because they have a diversified portfolio. Managers, however, prefer equity finance as too high a level of financial risk could jeopardise their job security.

A more obvious example of agency problem is that the directors' average salaries are above the industry norm and they have five-year contracts, contravening corporate governance directives such as the Greenbury Report. Managers are likely to become complacent with contracts of such length. There is also a problem with the use and terms of the share options. Given the historical growth rate in share price of 5 per cent, the company's share price five years ago when the directors were given the share options would have been approximately £1.83. For the share price to climb above £2 in less than five years represents a very unchallenging target.

If managers were to exercise the options in a year's time, their gain would be:

$$(2.34 \times (1.05) - 2.00) \times 100,000 = £45,700$$

This is a big reward for underperforming the sector share price growth rate of 9 per cent.

(b) Given the company appears to have major agency and corporate governance problems, these could be reduced by some of the following actions:

- Get managers to refocus the business in one area of specialisation and realise economies of scale and operation.
- Instruct managers to increase the level of debt finance as the current level of gearing is unlikely to minimise the company's cost of capital.
- Restructure share options so that gains are achievable if managers stretch themselves.
- Monitor managers to ensure they are not maximising their own wealth. The degree of success depends on the monitoring method used and the structure of the company's shareholders as someone must pay for monitoring to take place.
- Reduce salaries back in line with industry averages and tie part of the salary to a performance-related variable (e.g. company share price relative to the sector). Introduce one-year rolling contracts to keep managers on their toes.
- Examine the constitution of the remuneration committee and the backgrounds of non-executive directors, and make appropriate changes where necessary.

Ultimately, the shareholders might want to exercise their right to vote out directors at the AGM if they think that their performance has been poor.

## Questions for discussion

### Question 1

There are a number of ways of seeking to optimise managerial behaviour in order to encourage goal congruence between shareholders and managers. One way is for shareholders to monitor the actions of managers. There are several potential monitoring devices that could be used, but they will all incur costs in terms of both time and money. These devices include:

- independently audited accounting statements;
- government regulation;
- legal system;
- cash dividends;
- reputation;
- information disseminated as a result of new external financing.

The costs of monitoring must be weighed against the benefits accruing from a decrease in sub-optimal managerial behaviour. One difficulty here is the existence of free riders; investors who allow larger shareholders to incur monitoring costs while reaping the benefits of the corrected management behaviour.

Alternatively, shareholders can try and incorporate clauses into managerial contracts which are intended to reduce the agency problem and encourage goal congruence. Such clauses may formalise constraints, incentives and punishments. In this way, agency costs are reduced. An optimal contract is one which minimises agency costs, while reflecting the needs of individual companies. For example, if monitoring is difficult or costly, the contract could include bonuses for good performance.

It is also possible to discuss here the following points:

- The right of shareholders to appoint and remove directors.
- Incentives (performance-related pay, share options, etc.).
- The right of shareholders to sell their shares in the capital markets.
- Competition in the market for managerial control.

## Question 2

There is a difference between short- and long-term objectives. In the short-term, profits and cash flow must be enough to ensure the survival of the company, but owners will want to receive dividends. The need to strike a balance between short-term and long-term objectives could lead to conflicts between objectives even within the objective of maximising shareholder wealth.

Although shareholder wealth maximisation is the primary financial objective, most companies will usually have other objectives as well. In addition to responsibilities to shareholders, companies will have responsibilities to employees, trade payables, suppliers, the government and the general public. The diverse interests of these stakeholders will influence corporate objectives and act as a restraint on the objective of shareholder wealth maximisation. Other corporate objectives could include:

### *Providing for the welfare of managers*

Managers may seek to improve their own personal wealth, status or working conditions. For example, managers may pay themselves high salaries under generous employment contracts, or they may resist a takeover bid because they wish to protect their jobs rather than recommending an attractive bid to shareholders.

### *Providing for employee welfare*

Employees must be paid attractive wages and work under good conditions of employment. In the short-term, providing for employee welfare appears to conflict with the objective of shareholder wealth maximisation, because paying higher wages means that profits will be lower. In the long-term, however, employees who are well-paid and who are satisfied with their working conditions may work more efficiently and effectively, contributing to increased profits. In this case, there is no conflict between the objective of providing for employee welfare and the objective of shareholder wealth maximisation.

### *Providing for the welfare of society as a whole*

Companies have obligations to society as a whole. Many companies spend heavily on measures promoting social welfare, even though this may reduce profitability. Such measures include environmental protection measures, supporting community programmes, and giving to charities. However, failure to take environmental protection measures may lead to their imposition through legislation, and customer buying patterns may be negatively influenced if a company acquires a reputation as uncaring and environmentally irresponsible. Undertaking measures promoting social welfare may, therefore, not be inconsistent with shareholder wealth maximisation.



### Question 3

There have been many reports into corporate governance since the seminal Cadbury Committee Report in 1992, including those by Greenbury (1995), Hampel (1997), Turnbull (1999), Higgs (2003), Smith (2003) and Tyson (2003) and, more recently, several reviews by the Financial Reporting Council. The recommendations of these reports and subsequent reviews have been incorporated into the Combined Code on Corporate Governance, or the Corporate Governance Code as it is now known.

The Cadbury Report put forward a number of proposals for increasing board accountability to shareholders. It recommended a greater role for non-executive directors on remuneration committees, a voluntary Code of Best Practice, an improved information flow to shareholders and a strengthening of independence of auditors. The Code of Best Practice required that the board have at least three non-executive directors: that directors' service contracts be not more than three years in duration; and that the chief executive officer and the chairman be different post-holders.

Many commentators, in being critical of effectiveness of the Cadbury Report, focused on the market-based nature of the proposed self-regulation system and the failure of this system to involve shareholders in the governance process. Others argued that, while the Cadbury Report concentrated on monitoring, checking and controlling board activities, it failed to address the question of future company strategy.

Further measures to tackle corporate governance problems were introduced following the subsequent reports by Greenbury, Hampel, Turnbull, Higgs, Smith and Tyson. The integration of these recommendations into the Corporate Governance Code (overseen by the London Stock Exchange and the UK Listing Authority) has certainly had a favourable effect on the effectiveness of corporate governance in the UK. There is still some way to go before corporate governance problems are a thing of the past, however, as shown by the failure of Enron in 2002. The bankruptcy of Lehman Brothers in 2008, the resulting financial crisis and subsequent issues surrounding the governance of some of the UK's major banking institutions ensure that corporate governance and the problem of agency remain an important and topical issue.

### Question 4

The failures of Enron and WorldCom had a dramatic effect on both UK and US corporate governance, with both governments and investors taking corporate governance more seriously. However, historically there have been and continue to be significant differences between the approaches of the two countries to the governance problem. Traditionally, the UK system has been based on a series of best practice guidelines that have been progressively developed over time and integrated into the UK Corporate Governance Code. These guidelines are non-statutory and are not enshrined in law, but require compliance (or an explanation, if otherwise) from self-regulatory organisations such as the London Stock Exchange. The current version of Corporate Governance Code, introduced in 2010, is now overseen by the Financial Reporting Council (FRC). It stands alongside the Stewardship Code, also introduced in 2010 and specifically directed towards institutional investors.

In contrast to this, the US system is far more legalistic in nature, with the Securities and Exchange Commission (SEC) playing a principal role in the regulation process. The regulatory framework was significantly bolstered after Enron (2002) with the introduction of the Sarbanes-Oxley Act. This takes a regulatory and legislative approach to corporate governance and disclosure of financial and other information, and contrasts with the UK best practice approach,

regarded by many as more flexible and effective. The Sarbanes-Oxley Act introduced sweeping corporate governance reforms, requiring personal certifications of disclosure from both chief executive and financial officers. Their written statements must certify that the report fully complies with SEC requirements aim to ensure that a company fairly presents the results of both the operational and financial condition of the company. Significant criminal penalties exist for false certification.

The Act also effectively requires all companies listed in the US to have fully independent audit committees. It prohibits auditors from providing an audit client with any non-audit services, apart from a small number of exceptions. The compliance burden is far more onerous than faced by UK companies and only time will tell if this more legalistic approach to corporate governance is successful.

# 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.