

Financial Decision Making

Sample paper

Suggested answers

Important notice

When reading these answers, please note that they are not intended to be viewed as a definitive 'model' answer, as in many instances there are several possible answers/approaches to a question. These answers indicate a range of appropriate content that could have been provided in answer to the questions. They may be a different length or format to the answers expected from candidates in the examination.

- Ibrox plc ('Ibrox')** is a manufacturer of electronic surveillance equipment. The company has an active research and development programme and has recently developed a closed-circuit television camera with night vision. The camera, which was developed at a cost of £8.4 million, is designed to enable businesses and other organisations to monitor their premises more effectively. Ibrox commissioned a market survey, at a cost of £0.8 million, to assess likely demand for the new camera. The market survey report has recently been submitted and reveals that the camera project is likely to have a life of four years. It is estimated that 9,000 cameras per year will be sold throughout the life of the project and that potential customers will accept a selling price of £2,500 for each camera.

In order to manufacture the camera, equipment costing £11.5 million must be acquired immediately. This equipment will be depreciated evenly over the project's four-year life, and will be sold at the end of the project for an estimated £3.5 million. Total manufacturing, marketing and distribution costs are estimated at £25.5 million per year. This includes depreciation for the equipment as well as an apportionment of £4.5 million per year, which is designed to represent a fair share of total head office costs.

Ibrox is financed by a mixture of equity and debt. The company's equity shares are listed on the London Stock Exchange and have a beta of 1.6. The market rate of return is 7% and the risk-free rate of return is 2%. The debt consists of 6% irredeemable loan notes, which are currently trading at a cost of £120 per £100 nominal. The company maintains a capital structure of 60% equity and 40% debt.

Required

Taxation should be ignored and workings should be in £ millions and to one decimal place.

- (a) Produce a schedule of net relevant cash flows and calculate the net present value of the camera project.

(10 marks)

Suggested answer

To produce a schedule of cash flows, the operating cash flows should first be calculated. These are as follows:

	£m
Sales (9,000 x £2,500)	22.5
Manufacturing, marketing and distribution costs [£25.5m – (£2.0m + £4.5m)*]	19.0
	3.5

* The annual depreciation charge is £11.5m - £3.5m/4 = £2.0m per year. This must be deducted, along with the general apportionment for head office costs of £4.5m, to derive the net operating cash outflows.

To calculate the relevant discount factor, the weighted average cost of capital must be calculated. The cost of equity (K_e) can be calculated using the formula for the capital asset pricing model (CAPM), which is:

$$\begin{aligned} K_e &= K_{RF} + b(K_m - K_{RF}) \\ &= 2\% + 1.6(7.0\% - 2.0\%) \\ &= \underline{10\%} \end{aligned}$$

The cost of irredeemable debt (K_d) can be calculated as follows:

$$\begin{aligned} K_d &= \frac{I}{P_d} \\ &= (6/120) \times 100\% \\ &= \underline{5.0\%} \end{aligned}$$

The weighted average cost of capital is therefore: [(0.60 x 10%) + (0.40 x 5.0%)] = 8.0%

The schedule of net relevant cash flows will take account of the initial cost of the equipment and its residual value as well as the net operating cash flows. The net present value (NPV) of the proposal is as follows:

The NPV of the project is:

Year	0	1	2	3	4
	£m	£m	£m	£m	£m
Net cash flows	(11.5)	3.5	3.5	3.5	7.0
Discount rate (8%)	1.0	0.926	0.857	0.794	0.735
Present value	(11.5)	3.2	3.0	2.8	5.1
NPV	2.6				

- (b) Prepare a briefing paper for a non-executive director on the benefits of sensitivity analysis in the current turbulent economic climate. As part of your briefing, undertake sensitivity analysis to show by how much each of the following would have to change before it becomes no longer worthwhile to produce the new camera:
- (i) The cost of the equipment.
 - (ii) The net annual operating cash flows.

(9 marks)

Suggested answer

To: Non-executive director

From: A Candidate

Benefits of sensitivity analysis

The current turbulent economic climate has added greatly to the risk and uncertainty associated with investment decisions. This, in turn, has given added impetus to the need to employ techniques that take account of these factors when evaluating investment decisions. Sensitivity analysis involves taking a single variable in the investment appraisal calculations and examining the effect of changes to this variable on the final outcomes. Thus, a common form of sensitivity analysis examines the change required before the investment results in a zero net present value. The aim is to help managers to gain a better 'feel' for the effect of forecast inaccuracies on the results. However, sensitivity analysis only considers one variable at a time. In practice, it is possible that changes to a number of variables will occur simultaneously.

The point at which a change will result in a zero NPV for the proposal is calculated below:

- (i) The equipment cost would have to rise by £2.6m, which is the amount of the NPV. This would represent a rise of almost 23% (£2.6m/£11.5m) in the equipment cost.
- (ii) The decrease in net annual operating cash flows (N) needed to make the project no longer worthwhile is calculated as follows:

$$\begin{array}{rcl}
 (N \times \text{annuity factor for a four-year period}) - \text{NPV} & = & 0 \\
 (N \times 3.312) - £2.6\text{m} & = & 0 \\
 N & = & £2.6\text{m}/3.312 \\
 N & = & \underline{£0.79\text{m}}
 \end{array}$$

This represents a decrease of approximately 23% (£0.79m/£3.5m) in the estimated figure.

- (c) Comment on the findings contained in your answers to (a) and (b), above, and identify any further information which may be useful before a final decision is made. (6 marks)

Suggested answer

The calculations in (a) and (b), above, ignore two costs that have already been incurred: research and development costs and market survey costs. As these represent sunk costs, they are not relevant to the decision. However, if the calculations had been made before these costs were incurred, the NPV outcome would have been significantly different.

The calculations above show that producing the new camera will yield a positive NPV. This means that, by accepting the proposal, it is estimated that shareholder wealth will be enhanced. This is normally assumed to be the key objective of a company and so the decision rule is that the proposal should go ahead where there is a positive NPV.

The calculations in (b), above, indicate that the two variables examined are not sensitive to change. Net operating cash flows would require a fall of almost 23% and the cost of the equipment would require a rise of nearly 23% before a zero NPV is produced. Sensitivity analysis does not provide an insight to the probability of these changes occurring and it would be useful to discover this information before a final decision is made. It may also be useful to examine the sensitivity of other key variables, such as the life of the project and the discount rate. This may reveal more sensitive variables that require further investigation.

2. **Trafford plc ('Trafford') operates a large chain of pizza restaurants. In recent years, the company has expanded its operations and is seeking opportunities to expand further through a policy of acquisition. To this end, the directors of Trafford have identified Stamford plc ('Stamford'), which owns a chain of hamburger restaurants. The directors of Trafford believe that this restaurant chain would fit well within their existing business. Abridged financial statements for both companies appear below.**

Statement of financial position as at 30 April 2010

	Trafford	Stamford
	£m	£m
ASSETS		
Non-current assets	66.5	38.2
Current assets	16.4	11.9
Total assets	82.9	50.1
EQUITY AND LIABILITIES		
£1 Ordinary shares	50.0	15.0
Retained earnings	10.4	8.6
	60.4	23.6
Non-current liabilities	13.0	14.0
Current liabilities	9.5	12.5
Total equity and liabilities	82.9	50.1

Income statement for the year ended 30 April 2010

	Trafford	Stamford
	£m	£m
Revenue	182.4	104.7
Operating profit	21.2	12.5
Interest payable	(0.6)	(0.8)
Profit before taxation	20.6	11.7
Tax	(4.1)	(2.5)
Profit for the period	16.5	9.2

The directors of Trafford wish to acquire Stamford using a share-for-share exchange. They have offered 2 shares in Trafford for every 3 shares held in Stamford.

The price/earnings ratio of Trafford is 16 times and for Stamford it is 9 times. The directors of Trafford believe that it is possible to achieve a price/earnings ratio of 15 times in the enlarged company by ensuring that the restaurants formerly owned by Stamford adopt more efficient practices and better marketing techniques. Annual, after-tax cost savings of £2.5 million per year are expected from the acquisition of Stamford.

Required

- (a) Calculate the total value of the proposed bid by Trafford and the expected earnings per share following a successful takeover of Stamford.

(7 marks)

Suggested answer

The number of shares offered as bid consideration are: $\frac{2}{3} \times 15\text{m} = 10\text{m}$

The earnings per share of Trafford is: $\frac{£16.5\text{m}}{50\text{m}} = 33\text{p}$

The value of each share is = P/E ratio x EPS
= $16 \times 33\text{p}$
= $£5.28$

The total value of the proposed bid is, therefore = $£5.28 \times 10\text{m}$
= £52.8m

The after-tax earnings following takeover are expected to be:

	£m
Earnings of Trafford	16.5
Earnings of Stamford	9.2
Cost savings	2.5
	<u>28.2</u>

Shares in issue following takeover = $50\text{m} + 10\text{m}$
= 60m

EPS following takeover = $\frac{£28.2\text{m}}{60\text{m}}$
= 47p

- (b) Assess the likely implications of a successful bid for the wealth of shareholders in Trafford and in Stamford and discuss any issues that are critical to this assessment.

(10 marks)

Suggested answer

Share price following takeover = P/E Ratio x EPS
= $15 \times 47\text{p}$
= £7.05

From the perspective of shareholders in Trafford, the proposed bid appears to be worthwhile. Shares are currently trading at £5.28 and are expected to rise to £7.05 following the takeover. This represents a rise of approximately 34%.

Shareholders of Stamford, on the other hand, have little to celebrate. The value of a share in Stamford is currently worth £5.52 ($£0.613 \times 9$). A 2-for-3 offer would involve exchanging shares worth £16.56 ($3 \times £5.52$) for shares worth £14.10 ($2 \times £7.05$). This represents a fall of approximately 15%. Unless the benefits from the proposed takeover are more evenly shared between the two groups of shareholders, there is little incentive for the shareholders in Stamford to accept the bid.

The above calculations are dependent on the company achieving the cost savings mentioned. In practice, this may be difficult to achieve. It is also dependent on maintaining the price/earnings (P/E) ratio of Trafford at 15 times. If the market does not share the confidence of the Trafford

directors concerning the benefits of the takeover, the P/E ratio may fall further, which would make the bid much less attractive for both groups of shareholders. The basis for assuming that the P/E ratio will be maintained at 15 times should, therefore, be carefully examined.

- (c) Explain, for a new non-executive director, the use of a share-for-share exchange as a means of bid consideration from the perspective of shareholders in both Trafford and in Stamford.**

(8 marks)

Suggested answer

The new non-executive director should be made aware that the real benefit of a share-for-share exchange, from the perspective of Trafford shareholders, is that it will provide the opportunity to acquire Stamford without incurring any strain on liquidity. However, this benefit must be weighed against the costs. A share-for-share exchange will lead to a dilution of control. In this case, 20% more shares would be in issue following a takeover. It may also add to the uncertainty of the proposed takeover. Share prices fluctuate over time and there is always a risk that a fall in share prices could undermine the chances of acceptance. It should also be borne in mind that equity shares are an expensive form of long-term funding as they represent the risk capital of the business. Future service costs are, therefore, likely to be high.

For the shareholders of Stamford, the receipt of shares would mean that their investment portfolio would retain an equity element, which may be desirable. The shareholders would also avoid any liability to capital gains tax, which may arise where cash is offered in exchange for shares. However, the shares received may not have the same risk/return profile as those exchanged. Thus, they may not fit the particular investment portfolio that is required. Shareholders may also find it more difficult to evaluate a bid offer in the form of shares, rather than cash, as share prices tend to fluctuate.

- 3. The efficiency of stock markets has important implications for managers. Where stock markets are efficient, managers must learn important lessons on how to manage their business.**

Required

- (a) Explain what is meant by the term 'efficient markets' and outline the three major forms of market efficiency.**

(7 marks)

Suggested answer

The term 'efficient markets' refers to the manner in which information provided to stock market participants is processed. In an efficient stock market, participants will process information quickly and accurately so that share prices are adjusted to represent all relevant information that is available. This means that share prices will provide the best estimate of the 'intrinsic value' of a share.

Three forms of market efficiency have been identified. These are:

- Weak form efficiency – This form of efficiency occurs when past information, such as the trend of share prices and rates of return, are quickly and accurately incorporated within the current share price. The consequence of this is that past information has no influence on future share prices. In other words, future share price movements are not linked to past share price movements. This means that any attempt to detect underlying share price patterns will fail.

- Semi-strong efficiency – This extends the notion of efficiency by stating that all publicly-available information, such as published financial statements and company announcements, is quickly and accurately incorporated within the current share price. This means that studying publicly-available reports and other information will not enable investors to make abnormal gains on a consistent basis.
- Strong-form efficiency – This extends the notion of efficiency even further by stating that all information, whether or not it is in the public domain, will be fully incorporated within the current share price. This means that even those with ‘inside’ information will be unable to make abnormal gains on a consistent basis.

Each level of efficiency incorporates the features of the level(s) below it. Thus, the strong-form efficiency incorporates the features of both the weak form and the semi-strong form. Although the evidence concerning the efficiency of stock markets is, almost inevitably, mixed, there is persuasive evidence that leading stock markets are efficient, at least in the semi-strong form.

(b) Identify and discuss six important implications of market efficiency for managers.
(18 marks)

Suggested answer

The notion of stock market efficiency has the following important implications for managers.

- The first implication is that managers should be wary of trying to identify takeover targets by seeking out companies with undervalued shares. If the market reflects strong-form efficiency, share prices will already reflect the best estimate of the true worth of a company. If the market reflects semi-strong form efficiency, managers would need information not available to the market to make such a strategy worthwhile.
- The second implication is that substance is more important than form when releasing new information to investors. Some managers may believe that, by presenting information in a certain way, investors will view the company in a better light. For example, a decision may be made to change accounting policies in order to boost profits. However, the evidence shows that investors will see through any attempts at ‘window dressing’ and will price shares according to the underlying economic substance.
- The third implication is that any investment plans and decisions made by managers will be assessed by investors and this will be reflected in the share price. Thus, a fall in share price following an important investment decision will provide managers with the market’s judgement, which is objective and informed. Managers may, therefore, wish to review their decisions following this judgement.
- The fourth implication is that the timing of new share issues may not be of critical importance. If the market is efficient, there is no optimal point for an issue. Even when share prices are low, it will still reflect the market’s view of future share returns and there are no grounds for assuming future improvement. However, if the market was efficient in the semi-strong form, managers may have ‘inside information’ which, when released to the market, would result in an upward revision in the share price.
- The fifth implication is that stock market investors determine the level of risk associated with a particular investment and, therefore, the required level of return. This cannot be changed by managers and will apply to whichever business undertakes the investment.
- The final implication is that, where managers adopt policies that seek to maximise shareholder wealth, this will be reflected in the share price. Not only should this benefit shareholders, but it may also benefit managers.

4. Hampden plc ('Hampden') produces ready-cooked meals that are supplied to supermarkets and to airlines. Sales, which are all on credit, have been stable for the past three years at £180 million and are expected to remain at this level in future years. Hampden has recently appointed a new chief executive, who is concerned about its trade receivables' collection procedures. One area of concern is the time taken to dispatch statements to credit customers. The terms of credit require payment to be made within 30 days of receiving the statement. The chief executive instigated a study, which revealed that the time taken to dispatch statements to customers was currently as follows:

Statement dispatch times (days)	Percentage of credit customers issued with statements
7	30
8	30
9	20
10	20

The chief executive regards this as unacceptable and has asked the credit control manager to aim to send out 50% of statements after 2 days, 40% after 3 days and the remainder after 4 days. The credit control manager believes that this could only be achieved if an additional two, part-time, members of staff were recruited. While this may help Hampden to receive the money owed more quickly, it would result in an additional cost of £20,000 per year for each member of staff.

The chief executive is also concerned about the time taken to collect the amounts due from credit customers and its impact on Hampden's cash flow. She is considering whether debt factoring or invoice discounting would be appropriate for the company. At the moment, Hampden has a large bank overdraft and the bank has asked for this to be reduced. The chief executive is, therefore, looking for ways in which this might be achieved. Interest on the overdraft is at the rate of 10% per year.

Required

- (a) Prepare the business case for improving statement dispatch times by employing new staff, and state whether two new members of staff should be employed for this purpose.

(9 marks)

Suggested answer

The business case will involve a comparison of the savings in finance costs with the costs of employing additional staff.

The current expected delay in providing statements to customers is as follows:

Statement dispatch times (days)	Percentage of credit customers invoiced	Expected delay (days)
7	30	2.1
8	30	2.4
9	20	1.8
10	20	2.0
		<hr/> 8.3 <hr/>

The target expected delay in providing statements is as follows:

Invoice dispatch times (days)	Percentage of credit customers invoiced	Expected delay (days)
2	50	1.0
3	40	1.2
4	10	0.4
		2.6

The reduction in the expected times is $(8.3 - 2.6) = 5.7$ days.

The expected annual savings in financing costs from such a reduction is:

$$[(£180m \times 10/100) \times (5.7/365)] = £281,096$$

The annual net savings will be as follows:

	£
Savings in financing costs	281,096
Cost of additional credit control staff (2 x £20,000)	(40,000)
	241,096

The calculations suggest that employing additional staff could lead to significant cost savings. Thus, they should be employed.

(b) Compare the main features of debt factoring and invoice discounting and suggest possible reasons why invoice discounting is a more popular form of asset-based finance than debt factoring.

(16 marks)

Suggested answer

Debt factoring involves a financial institution (a factor) taking over the collection of the trade receivables of a business. This will normally involve invoicing the customer, sending out statements and reminders, and collecting and recording the amounts received. Additional services may include credit investigations and protection for approved credit sales. To help liquidity, a factor will normally advance up to 80% of approved trade receivables to the business, which is then recouped when the credit customers finally pay. The costs of these services vary but a charge of 2 – 3% of the annual credit sales revenue, along with an interest charge on any amounts advanced, is quite common. There are significant set-up costs involved in factoring agreements and so they are usually long-term arrangements.

Factoring provides a business with greater certainty over cash flows. Furthermore, these cash flows will rise in line with the increased level of sales activity. Factoring also provides expertise in credit management and the opportunity for a business to dispense with a separate credit control function. These advantages can be particularly useful for small businesses that may not possess expertise in credit control and where the time of key managers may be taken up by chasing outstanding debts.

Factoring is not usually available for small businesses because of the relatively high set-up costs. It is also not available in certain types of industry where there is a tradition of trade disputes (such as certain building trades).

Invoice discounting involves a financial institution making an advance to a business based on a proportion of the value of trade receivables outstanding. The amount advanced is normally up to 80% of the face value of the approved sales invoices. The arrangement will normally require the

business to repay the advance within 60 – 90 days and this must be repaid irrespective of whether the amounts due from trade receivables have been collected. Unlike factoring, responsibility for the management of trade receivables remains with the business. This means that the set-up costs are relatively small and so invoice discounting can be a short-term arrangement.

In recent years, invoice discounting has become a far more important source of finance to businesses than debt factoring. There are various reasons for this. One reason is that many businesses prefer to keep control of all aspects of their relationships with customers and there is always a risk that a debt factor could upset a customer. Another reason is that invoice discounting can be kept confidential and credit customers will not be aware of the financing arrangement. Finally, invoice discounting tends to be a much cheaper form of financing, largely because it does not offer the same range of services. Thus, a service charge of 0.2 – 0.3% of annual credit sales revenues plus an interest charge on amounts advanced is quite common.

5. **Maine plc is a large retail chain that is quoted on the London Stock Exchange. The company has 80 million shares in issues, which are currently trading at £8.50 per share. The most recent income statement of the company is as follows:**

Income statement for the year ended 30 April 2010

	£m
Revenue	485.2
Operating profit	65.5
Interest charges	(12.6)
Profit before taxation	52.9
Tax	(10.9)
Profit for the year	42.0

The directors of the company have recently decided to expand the business by opening a number of new outlets in France. To finance this expansion, a 1-for-4 rights issue will be made at a discount of 40% on the current share price.

Required

- (a) Calculate the theoretical ex-rights price per share and the value of the rights per existing share.

(5 marks)

Suggested answer

The theoretical ex-rights price per share is calculated as follows:

	£m
Current market value of 4 shares in Maine plc at £8.50 per share	34.00
Rights share (£8.50 x 0.60)	5.10
	39.10
Theoretical ex-rights value per share (£39.10/5)	7.82

The value of the rights per existing share is calculated as follows:

	£m
Theoretical ex-rights value per share	7.82
Cost of 1 rights share	5.10
Rights value	2.72
Rights value per existing share (£2.72/4)	0.68

(b) With regard to the rights issue, evaluate each of the options available to a shareholder owning 10,000 shares in Maine plc.

(6 marks)

Suggested answer

The following options are available to the investor:

	£
<i>To take up the rights shares</i>	
Value of holding after the rights issue [(10,000 + 2,500) x £7.82]	97,750
Cost of rights shares (2,500 x £5.10)	12,750
	85,000
<i>To sell the rights shares</i>	
Value of holdings after the rights issue (10,000 x £7.82)	78,200
Proceeds from the sale of rights shares (2,500 x £2.72)	6,800
	85,000
<i>To let the rights offer lapse</i>	
Value of holdings after the rights issue (10,000 x £7.82)	78,200

The calculations above reveal that the shareholder would have the same total wealth under the first two options but would be worse off if the rights offer was allowed to lapse. However, in practice a company would normally sell the rights shares not taken up and pass the proceeds on to the shareholders. The shareholder would then be in the same position as that shown in the second option.

(c) Calculate the market value per share following the rights issue, if the expansion strategy leads to an increase in after-tax profits of £4.6 million and to an increase in the price/earnings ratio of 20%.

(6 marks)

Suggested answer

The market value per share resulting from the expansion strategy can be calculated as follows:

Current earnings per share (£42.0m/80m)	52.5p
Current P/E ratio (£8.50/52.5p)	16.19 times
Post-expansion earnings per share (£46.6.0m/100m)	46.6p
Post-expansion P/E ratio [16.19 + (20% x 16.19)]	19.43 times
New market value per share (19.43 x 46.6p)	£9.05

- (d) Prepare a briefing paper for a non-executive director, setting out possible reasons why rights issues are a popular form of share issue and discuss how critical the pricing of shares is to the success of the issue.**

(8 marks)

Suggested answer

To: Non-executive director
From: A Candidate

Paper on the benefits and pricing of rights issues

A rights issue may offer a number of important advantages over other forms of share issue. It is fairly cheap to administer and involves less cumbersome issue procedures. As the new shares are offered to existing shareholders, it can help ensure that there is no dilution of ownership. It may also provide a better chance of successful share issue: a willingness to hold shares in the company may indicate a willingness to subscribe to a new share issue. In the UK, company law provides shareholders with 'pre-emptive rights'. This means that, where there is an issue of shares for cash, existing shareholders must be given first refusal. These rights must be waived by shareholders before an issue of shares can be made to the general public.

Rights issues are normally priced at a significant discount to the market price. This will allow the company a 'margin of safety' in case there is a fall in share price. It is critical for the rights price to be below the market price at the time the rights are to be taken up. Unless this occurs, there is no incentive for shareholders to take up the rights issue. Providing the rights price remains below the current market price, the pricing of rights shares is not important. In the question, a 1-for-4 issue was made at a rights price of £5.10 in order to raise a total of £102 million (20m x £5.10). The same amount could have been raised by making a 1-for-2 issue at £2.55, a 1-for-5 issue at £6.38 and so on.

- 6. Upton plc ('Upton') provides refuse disposal services for a large number of city councils. The company has been trading for five years and is currently owned by a large conglomerate. It has recently been decided to demerge the company and for Upton then to seek a listing on a leading stock market. The directors of Upton are currently preparing for the listing and are debating an appropriate dividend policy for the demerged company. Some directors take the view that the dividend policy adopted is critical to the success of the listing, whereas other directors believe that it is not important as the pattern of dividends has no effect on shareholder wealth.**

Required

- (a) Critically appraise the conflicting views of the directors and provide reasons why, in practice, the pattern of dividends is normally considered to be important.**

(15 marks)

Suggested answer

The argument that the pattern of dividends is important was first raised in the early literature on dividend policy. It rests on the assumption that investors would prefer to receive a certain amount of money today rather than have this amount re-invested in the business. This is because investors value certainty: they view amounts received today more highly than amounts to be received in the future. Future dividends are uncertain and so will be discounted to reflect this uncertainty. If this argument is accepted by the directors of Upton, the dividend policy should be to distribute as much as possible in order to maximise shareholder wealth.

Miller and Modigliani (MM) rejected this view of dividends. Starting from the assumption of perfect and efficient markets, they argued that the pattern of dividends will have no effect on shareholder wealth. It will simply represent a movement of cash from inside to outside the

business. They argued that the value of a business is determined by the investments that it undertakes. To maximise shareholder wealth, a business must seek out profitable opportunities and accept all those that yield a positive net present value. The way in which the benefits of these investments are allocated between retention and distribution will have no effect on shareholder wealth. Thus, the dividend decision does not matter. MM point out that if investors wish to receive dividends, they can create their own dividend policy by selling a portion of the shares held. Although the logic of the MM position is compelling, their argument rests on a number of restrictive assumptions. In particular, it assumes a world where there are no share transaction costs, no share issue costs and no taxation.

In the real world, there is little doubt that the pattern of dividends is regarded by investors and directors as important. One possible explanation is the 'clientele effect'. It is argued that investors will seek out companies with dividend policies that are in line with their needs. Thus, a business with a high dividend policy may attract investors that require dividends to supplement their income. On the other hand, a business that pays very low, or no dividends, may attract investors who prefer capital gains to dividend income. This may be because, in some countries, capital gains are treated differently for tax purposes than dividends. In the UK, for example, only capital gains beyond a threshold of £10,100 (2009/10) are liable to taxation. This may be of particular value to high-rate taxpayers.

A further possible reason is that the directors of a company may have information relating to the future prospects of the business that shareholders do not have. The directors may wish to transmit this information indirectly through the dividends announced. Hence, confidence in future profitability may be signalled by an increase in the level of dividends announced. Although this is an expensive method of signalling confidence in the future, it is more likely to be taken seriously by shareholders than announcements to this effect. Research studies that monitor the reaction of share prices to changes in dividend policy suggest that these changes are interpreted as important signals regarding future prospects. Share prices rise or fall depending on whether increases or decreases in dividends are announced.

(b) Assuming that the business decides to pay dividends, identify and discuss five factors influencing the amount of dividends that it may decide to pay.

(10 marks)

Suggested answer

In practice, the amount paid out by a business in dividends may be determined by various factors, including the following:

- Market expectations – Investors may develop expectations concerning the amount of dividends that a business will pay each year. These expectations may be formed by earlier announcements or by the pattern of dividends that has occurred in the past. If these expectations are not fulfilled, there may be a loss of investor confidence leading to serious repercussions.
- Legal restrictions – To protect creditors, the law sets out the maximum of amount that can be distributed by a business in the form of dividends. For example, a UK private limited company can only pay dividends out of realised profits.
- Earnings stability – Where a business has a stable and predictable pattern of earnings over time, it should be better placed to make higher dividend distributions than a business with unstable and unpredictable earnings. This is partly because there will be less need to retain earnings to allow for unexpected events.
- Financing options – In certain situations, such as an economic recession, it may be difficult to raise finance from external sources. Where this is the case, a business may have to rely on retained earnings to fund new investment opportunities. As a result, the amounts available for dividends will be restricted.

- Loan covenants – Where a business has loan capital, conditions may be contained within the loan agreement that restrict the amount of dividend to be paid during the period of the loan. Such restrictions are designed to protect the interests of the lenders.

The scenarios included here are entirely fictional. Any resemblance of the information in the scenarios to real persons or organisations, actual or perceived, is purely coincidental.