



Institute of Incorporated Public Accountants

Financial Management

Module 14

May 2014

Solutions

Instructions: Answer five questions

Section A

All three questions to be attempted

Section B

Two of the three questions to be attempted

Present Value Tables are attached to this paper.

Time Allowed: 3 Hours

Section A: All three questions to be attempted

Section A (70 marks in Total)

Question 1 Part (a)

5 marks for costs of the components of capital, 5 marks market value of the components of capital and 3 mark for WACC = 13 marks in total.

Calculate the cost of capital that they should use as a discount rate when appraising new marginal investment opportunities.

Costs of Capital

Cost of Equity (using CAPM) = $R_f + [B_a \times (R_m - R_f)]$

$R_f = 2\%$
 $R_m = 10\%$
 $B_a = 1.2$

$$\begin{aligned} \text{Cost of Equity (using CAPM)} &= 2\% + [1.2 \times (10\% - 2\%)] \\ &= 2\% + [1.2 \times (8\%)] \\ &= 2\% + [0.096] \\ &= \mathbf{11.60\%} \end{aligned}$$

The 6% irredeemable debentures:

The yield on this can be estimated solving for K_d in the following perpetuity formula: $P_o = I / K_d$

K_d = the after tax cost of debt

Note: tax of 12.5% must be deducted from the interest payments.

i.e. interest is €3.00 per nominal €100, every six months

Hence after tax payment = €3.00 $\times (1 - 0.125)$ = €2.63 per nominal €100,

$P_o = I / K_d$ where: $P_o = €110.0$ and $I = €2.63$

$\Rightarrow K_d = I / P_o = 2.625 / 110 = 2.39\%$ semiannual = **4.77% annually**

Cost of preference shares

Its preference shares has a €10.00 nominal value

Dividend on the preference shares is 7%

Current market price of the preference shares is €12.50

$$\begin{aligned} \text{Cost of preference shares is} &= \text{Actual Dividend} / \text{current market price} \\ &= (7\% \times €10.00) / €12.50 \\ &= (€0.70) / €12.50 \\ &= 0.056 = \mathbf{5.60\%} \end{aligned}$$

Market Values of the Capital Structure

The market value of Equity

Current cum div share price	€48.00
Current numbers of shares	500,000
Expected dividend	€3,000,000
Expected dividend per share	€6.00
Current Ex div share price	€42.00
Current Equity Market value	€21,000,000

The market value of the irredeemable Debt

= the current market price, (ex interest) per bond x # of bonds issued

The 6% irredeemable debentures

$$= €110.00 \times (€12,000,000 / 100) =$$

$$= €110.00 \times (120,000) = \mathbf{€13,200,000}$$

The market value of the Preference Shares

= the current market price, (ex div) per share x # of shares issued

$$= €12.50 \times (10,000,000 / €10.00)$$

$$= €12.50 \times (1,000,000)$$

$$= \mathbf{€12,500,000}$$

In Summary	Cost	Market Value
Ordinary Shares	11.60%	€21,000,000
Irredeemable Debt	4.77%	€13,200,000
Preference Shares	5.60%	€12,500,000
		<u>€46,700,000</u>

Hence the WACC = $K_{e_g} \times \{E / (E + D+PS)\} + K_d \times \{D / (E + D+PS)\} + K_{ps} \times \{PS / (E + D+PS)\}$

$$= 11.60\% \times (€21,000,000 / €46,700,000)$$

$$+ 4.77\% \times (€13,200,000 / €46,700,000)$$

$$+ 5.60\% \times (€12,500,000 / €46,700,000)$$

$$= 0.05216 + 0.0135 + 0.015$$

$$= 0.08063 = \mathbf{8.06\%}$$

Alternatively	After Tax Cost	Market Value	Number Issued	Total Value	Proportion	% Return
Ordinary Shares	11.60%	€42.00	500,000	€21,000,000	45%	5.22%
Irredeemable Debt	4.77%	€110.00	120,000	€13,200,000	28%	1.35%
Preference Shares	5.60%	€12.50	1,000,000	€12,500,000	27%	1.50%
				€46,700,000	100%	8.06%

Question 1 Part b (i)

2 marks for calculating the market value and 1 mark for the required return before the repurchase transaction, according to M&M = 3 marks in total.

Market value:

Before the share repurchase, the value of the firm can be found using the perpetuity formula.

Hence the market value = $EBIT/r = €3,000,000/0.10 = €30,000,000$.

Required Return:

The required return on a share in this (all-equity financed) firm in a perfect market will = the market return for firms in this industry = 10%.

Question 1 Part b (ii):

1 mark for the market value and 2 marks for the required return after the repurchase transaction, according to M&M and 2 marks for explanation = 5 marks in total.

Market value:

From M&M Prop 1 $V_U = V_L$,

Hence from part (b)(i) above, after the repurchase, just as before the firm has a market value of €30m.

Required Return:

Debt = €12,000,000 and

Equity = €18,000,000 equity, so the debt-to-equity ratio is 0.4

The new required return on equity is:

$$r_E = r_0 + D/E (r_0 - r_D)$$

$$r_E = 0.10 + 0.4 \times (0.10 - 0.05) = 0.10 + 0.02 = 0.12 \text{ or } 12\%.$$

Explanation: cost of equity has increased because of the additional risk placed on shareholders due to the increased leverage.

Question 1 Part b (ii):

2 marks for how M&M changed their conclusion regarding capital structure choice and 2 marks for explaining the difference in value between levered and unlevered firms = 4 marks in total.

Corporate taxes provide an advantage to corporate debt financing because of the tax deductibility of interest payments. Firm value increases by the value of the tax shield as the firm adds more debt to the capital structure, leading to the conclusion that a firm should have 100% debt in its capital structure. The difference between levered and unlevered firms is the value of the tax shield, T_c times the amount of debt in the capital structure.

What effect does incorporating corporate income taxation have on the M&M capital structure irrelevance hypothesis? Why?

In the no tax case, shareholders and bondholders share in the value of the firm. In the tax case, the government takes a slice of the firm in the form of taxes. The more debt, the more interest expense, the less the taxable income and the less taxes. In other words, the government's share of the firm is lower when the firm carries more debt. However, the M&M's tax case yields an equally unrealistic result – that firm's would want to have 100% debt in the capital structure. No firm could be all debt, so there must be other reasons to explain this. The existence of personal tax is one explanation

Question 2 Part (a)

5 marks for workings and 5 marks for evaluating dividend policy from a practical and 5 marks for evaluating dividend policy from a theoretical viewpoint, 15 marks in all.

Note: Candidates would only be expected to BRIEFLY DISCUSS aspects of the following!

Year End 30th April	No. Ordinary Shares in Issue '000	Profit after Tax €'000	Ordinary Dividends paid €'000	Payout Ratio	Current Div per share	Div per share with Fixed payout of say 1/3rd
2009	500	800	400	50.0%	€0.80	€0.533
2010	500	600	450	75.0%	€0.90	€0.400
2011	600	1200	300	25.0%	€0.50	€0.667
2012	600	1500	450	30.0%	€0.75	€0.833
2013	1100	2400	1100	45.8%	€1.00	€0.727
Average	660	1300	540	45.2%	€0.79	€0.632
Growth	120%	200%	175%	-8%	25%	36%
Average annual Growth	30%	50%	43.75%	-2.08%	6.25%	9.09%

- There appears to be no stable dividend policy in existence.
- Payout ratio has fluctuated between 25% and 75%
- Dividend per share fluctuated between 50c and €1
- We have not been told above capital investment in this firm but the above suggests that dividends are viewed as a residual.
- To pay out a fixed % of profits each year would still result in an unstable dividend. Taking a payout ratio of 1/3rd yields a dividend per share of between 40 and 83 cent per share.
- Fluctuating dividends are unlikely to be popular with shareholders.
- Research shows that a stable and predictable payout is welcomed by shareholders
- The signalling effect of dividends refers to the information contained in dividend increases and reductions. This must be borne in mind when deciding on a dividend policy.
- The Chairperson is probably misguided when he/she suggests that the dividend policy need not be changed.

Dividend policy is concerned with financial policies regarding paying cash dividend in the present or paying an increased dividend at a later stage. Whether to issue dividends, and what amount, is determined mainly on the basis of the company's unappropriated profit (excess cash) and influenced by the company's long-term earning power. When cash surplus exists and is not needed by the firm, then management is expected to pay out some or all of those surplus earnings in the form of cash dividends or to repurchase the company's stock through a share buyback program.

If there are no NPV positive opportunities, i.e. projects where returns exceed the hurdle rate, and excess cash surplus is not needed, then – finance theory suggests – management should return some or all of the excess cash to shareholders as dividends. This is the general case, however there are exceptions. For example, shareholders of a "growth stock", expect that the company will, almost by definition, retain most of the excess earnings so as to fund future growth internally. By withholding current dividend payments to shareholders, managers of growth companies are hoping that dividend payments will be increased proportionality higher in the future, to offset the retainment of current earnings and the internal financing of present investment projects.

Management must also choose the form of the dividend distribution, generally as cash dividends or via a share buyback. Various factors may be taken into consideration: where shareholders must pay tax on dividends, firms may elect to retain earnings or to perform a stock buyback, in both cases increasing the value of shares outstanding. Alternatively, some companies will pay "dividends" from stock rather than in cash. Financial theory suggests that the dividend policy should be set based upon the type of company and what management determines is the best use of those dividend resources for the firm to its shareholders. As a general rule, shareholders of growth companies would prefer managers to have a share buyback program, whereas shareholders of value or secondary stocks would prefer the management of these companies to payout surplus earnings in the form of cash dividends.

Coming up with a dividend policy is challenging for the directors and financial manager a company, because different investors have different views on present cash dividends and future capital gains. Another confusion that pops up is regarding the extent of effect of dividends on the share price. Due to this controversial nature of a dividend policy it is often called the dividend puzzle.

Various models have been developed to help firms analyse and evaluate the perfect dividend policy. There is no agreement between these schools of thought over the relationship between dividends and the value of the share or the wealth of the shareholders in other words.

One school consists of people like James E. Walter and Myron J. Gordon (see Gordon model), who believe that current cash dividends are less risky than future capital gains. Thus, they say that investors prefer those firms which pay regular dividends and such dividends affect the market price of the share. Another school linked to Modigliani and Miller holds that investors don't really choose between future gains and cash dividends

Dividend irrelevance comes from Modigliani-Miller's capital irrelevance model, which works under specific market conditions–no taxes, no transaction costs, and

no flotation costs. Investors and firms must have identical borrowing and lending rates and the same information on the firm's prospects.

Firms that pay more dividends offer less stock price appreciation. However, the total return from both dividends and capital gains to stockholders should be the same, so stockholders would ultimately be indifferent between the two choices.

If dividends are too small, a stockholder can simply choose to sell some portion of their stock for cash and vice versa. Therefore, if there are no tax advantages or disadvantages involved with these two options, stockholders would ultimately be indifferent between returns from dividends or returns from capital gains.

Question 2 Part (b)

4 marks for workings and 2 marks for each of the three methods, 10 marks in all.

Note 1: Candidates would only be expected to BRIEFLY DISCUSS aspects of the following!

Note 2: Candidates should be able to justify and explain which ever valuation method they choose and show the necessary calculations where valuations are used.

Note 3: The following calculations are shown for exemplary purposes only and only represent the many permutations that could be used here!

$$PV = C1 / r - g$$

$$C1 = C0 \times (1+g)$$

	Per share	Total Dividends	Profits
C1 =	1 x (1 + 0.0625)	1100 x (1 + 0.4375)	2400 x (1 + 0.5)
C1 =	1 x (1.0625)	1100 x (1.4375)	2400 x (1.5)
	1.0625	1581.25	3600
r =	12%	12%	12%
g =	5%	5%	5%
PV = C1 / r - g	1.0625 / (0.12 - 0.0625)	1581.25 / (0.12 - 0.05)	3600 / (0.12 - 0.05)
PV = C1 / r - g	1.0625 / 0.0575	1581.25 / 0.07	3600 / 0.07
PV = C1 / r - g	€18.48	22589.28571	51428.57143
Total Value	€20,326,086.96	€22,589,285.71	€51,428,571.43

P:E ratio of Similar listed firm = 18

Latest Earnings = €2,400,000

Total Value = €43,200,000

$$r_f = 2.0\%$$

$$r_m = 7.0\%$$

$$B_i = 1.5$$

$$CAPM: E(r_i) = r_f + B_i(E(r_m) - r_f) = 9.5\%$$

Business valuation is a process and a set of procedures used to estimate the economic value of an owner's interest in a business.

Financial analysis

The financial statement analysis generally involves common size analysis, ratio analysis (liquidity, turnover, profitability, etc.), trend analysis and industry comparative analysis.

Income, asset and market approaches

Income approach

The income approach relies upon the economic principle of expectation: the value of business is based on the expected economic benefit and level of risk associated with the investment. Income based valuation methods determine fair market value by dividing the benefit stream generated by the subject or target company times a discount rate.

In DCF valuations, the discount rate, often an estimate of the cost of capital for the business is used to calculate the net present value of a series of projected cash flows. The discount rate can also be viewed as the required rate of return the investors expect to receive from the business enterprise, given the level of risk they undertake.

There are several different methods of determining the appropriate discount rate.

Alternatively the appropriate discount rate can be found using the Capital Asset Pricing Model (CAPM) or the Weighted Average Cost of Capital ("WACC") method.

Once the discount rate is determined, it must be applied to an appropriate economic income stream: pretax cash flow, aftertax cash flow, pretax net income, after tax net income, excess earnings, projected cash flow, etc. The result of this formula is the indicated value before discounts. Before moving on to calculate discounts, however, the valuation professional must consider the indicated value under the asset and market approaches.

Careful matching of the discount rate to the appropriate measure of economic income is critical to the accuracy of the business valuation results. Net cash flow is a frequent choice in professionally conducted business appraisals.

Asset-based approaches

The value of asset-based analysis of a business is equal to the sum of its parts. That is the theory underlying the asset-based approaches to business valuation. The asset approach to business valuation is based on the principle of substitution: no rational investor will pay more for the business assets than the cost of procuring assets of similar economic utility.

The value of a company's intangible assets, such as goodwill, is generally impossible to determine apart from the company's overall enterprise value. For this reason, the asset-based approach is not the most probative method of determining the value of going business concerns.

In these cases, the asset-based approach yields a result that is probably lesser than the fair market value of the business. In considering an asset-based approach, the valuation professional must consider whether the shareholder whose interest is being valued would have any authority to access the value of the assets directly. Shareholders own shares in a corporation, but not its assets, which are owned by the corporation. A controlling shareholder may have the authority to direct the corporation to sell all or part of the assets it owns and to distribute the proceeds to the shareholder(s). The non-controlling shareholder, however, lacks this authority and cannot access the value of the assets. As a result, the value of a corporation's assets is not the true indicator of value to a shareholder who cannot avail himself of that value

Adjusted net book value may be the most relevant standard of value where liquidation is imminent or ongoing; where a company earnings or cash flow are nominal, negative or worth less than its assets; or where net book value is standard in the industry in which the company operates. The adjusted net book value may also be used as a "sanity check" when compared to other methods of valuation, such as the income and market approaches...

Market approaches

The market approach to business valuation is rooted in the economic principle of competition: that in a free market the supply and demand forces will drive the price of business assets to a certain equilibrium. Buyers would not pay more for the business, and the sellers will not accept less, than the price of a comparable business enterprise.

The market price of the stocks of publicly traded companies engaged in the same or a similar line of business, whose shares are actively traded in a free and open market, can be a valid indicator of value when the transactions in which stocks are traded are sufficiently similar to permit meaningful comparison.

The difficulty lies in identifying public companies that are sufficiently comparable to the subject company for this purpose. Also, as for a private company, the equity is less liquid (in other words its stocks are less easy to buy or sell) than for a public company, its value is considered to be slightly lower than such a market-based valuation would give.

Guideline Public Company method

Guideline Public Company method entails a comparison of the subject company to publicly traded companies. The comparison is generally based on published data regarding the public companies' stock price and earnings, sales, or revenues, which is expressed as a fraction known as a "multiple." If the guideline public companies are sufficiently similar to each other and the subject company to permit a meaningful comparison, then their multiples should be similar. The public companies identified for comparison purposes should be similar to the subject company in terms of industry, product lines, market, growth, margins and risk.

Pre-IPO studies

Another approach to measure the marketability discount is to compare the prices of stock offered in initial public offerings (IPOs) to transactions in the same company's stocks prior to the IPO. Companies that are going public are required to disclose all transactions in their stocks for a period of three years prior to the IPO. The pre-IPO studies are the leading alternative to the restricted stock stocks in quantifying the marketability discount. The pre-IPO studies are sometimes criticized because the sample size is relatively small, the pre-IPO transactions may not be arm's length, and the financial structure and product lines of the studied companies may have changed during the three year pre-IPO window.

Studies confirm what the marketplace knows intuitively: Investors covet liquidity and loathe obstacles that impair liquidity. Prudent investors buy illiquid investments only when there is a sufficient discount in the price to increase the rate of return to a level which brings risk-reward back into balance. The referenced studies establish a reasonable range of valuation discounts from the mid-30's% to the low 50's%. The more recent studies appeared to yield a more conservative range of discounts than older studies, which may have suffered from smaller sample sizes.

Question 3:

7 marks for main characteristics of forward exchange contracts and currency options and explain the main advantages and disadvantages of each and the relevance of the “expectations theory of exchange rates” to the decision to hedge or not; 9 marks for showing the effects of each of the three options and 4 marks for discussing the results = 20 marks in all.

Taybells plc

SOLUTION

The answer should be in a report type manner. Hence it should be addressed to the board, have an outline of its terms of reference, an introduction, main body and summary / conclusions / recommendations etc.

It should include a discussion of:

(i) Currency options are designed to reduce the exposure of a business to adverse movements in exchange rates. It provides the option holder with the right to buy or sell one currency in exchange for another currency at some point in the future at a specified rate of exchange. The option holder is not obliged to take up the option and so retains the opportunity to benefit from favourable movements in exchange rates.

Currency options are particularly useful where there is some uncertainty over the timing or amounts of foreign currency receipts or payments. If the foreign exchange transaction does not take place the option can still be sold or exercised if it has any value. However, the premium cost of the option can make this a relatively costly hedging instrument and the option must be paid immediately it is taken out. Some stock exchanges trade in currency options but not all currencies can be traded in this way. Furthermore, currency options that are tailored to the particular needs of the option buyer cannot usually be traded.

Forward exchange contracts are binding agreements to buy or sell a specified amount of foreign currency at an agreed rate of exchange at some time in the future. The contract, which is often between a bank and its customer, may specify a particular future date for settlement of the contract or may allow settlement to take place, at the option of the customer, between two agreed dates. A forward exchange contract locks the customer into a fixed rate of exchange and protects against ‘downside’ risk. However, it also prevents the customer from any ‘upside’ potential arising from favourable exchange rate movements.

The “expectations theory of exchange rates” states that the expected spot rate will equal the forward rate. In this case it says that the difference between the six month forward rate and the spot rate $£0.7428 - £0.7538 = - £0.0100$ will equal the expected change in the spot rate over the six months. Thus Tom has misunderstood the implication of the “expectations theory of exchange rates”. Rather than say NOT to take out a forward contract it says that you can trust forward rates and hence in this situation the firm should take out a forward contract!

(ii) Forward exchange contract

As they will be selling sterling the forward rate is the higher rate that must be handed over to obtain 1 Euro i.e. 0.7538:

As this is a forward contract, once entered into, they must take this rate. So no matter the actual spot rate in six months' time, (a) €1 = £0.7200 or (b) €1 = £0.7600, they must take €1 = £0.7538.

The amount in Euro using the forward contract will be £15,000,000 / 0.7538 = €19,899,177.50

Currency option

The results for both of the spot rates in six months' time are as follows:

	(a)	(b)
Exchange rate	£0.7200	£0.7600
Exercise price	£0.7400	£0.7400
Option	Lapse	Exercise
Euro receipts		
€15,000,000 / 0.7200	€20,833,333.33	
€15,000,000 / 0.7400 (NOT 0.7600!)		€ 20,270,270.27
Option premium [(£15m/£100) x €1·10]	(165,000.00)	
(165,000.00)		
	-----	-----
	€20,668,333.33	€20,105,270.27
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To do nothing

Euro receipts for each of the spot rates in six months' time are as follows:

Exchange rate	£0.7200	£0.7600
€15,000,000 /0.7200	€20,833,333.33	
€15,000,000/0.7600		€19,736,842.11
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Summary:

The results for both of the spot rates in six months' time are as follows:

Exchange rate	(a) £0.7200		(b) £0.7600	
Forward (0.7538)	€19,899,177	Worst option	€19,899,177	
Option (0.7400)	€20,668,333.33		€20,105,270.27	Best option
Do Nothing	€20,833,333.33	Best option	€19,736,842.11	Worst option

(iii) Discussion should centre on the above results.

As can be seen the do nothing option is the most risky, with both the best and worst result depending on the rate of exchange that will apply in six months' time. These results show that if the spot rate is €1 = £0.7200 in six months' time, the best option would have been to do nothing. In this case, the hedging instruments provide no real benefit. The forward exchange contract is based on a less advantageous exchange rate than the exchange rate in six months' time and the currency option will incur a significant premium cost even though the option will not be exercised.

If, however, the spot rate is €1 = £0.7600 in six months' time, the best option would have been to use a currency option. Despite the significant premium cost, the exercise price on the currency option in six months' time is more advantageous than both the spot rate in six months' time and the forward exchange contract rate. In this case, the forward exchange contract rate provides a better outcome for the company than simply doing nothing showing that while it may not be the best option here it does reduce the currency risk.

From the above numbers the currency option dominates the forward rate (although this would not be the case if the actual exchange rate in six months' time was closer to €1 = £0.7400). Hence if we just looked at the two rates in the question then this would leave the choice to just between the more risky "do nothing" option and the less risky "currency option".

Section B

Question 4 Part (a):

From a (financial) risk management perspective explain the term “overtrading”.

2 marks for explanation, 2 marks for correct diagnosis, 2 marks for misdiagnosis, and 2 marks for possible cures = 8 marks

Explanation: overtrading refers to a situation where turnover is increased without a matching increase in equity or other long-term sources of funds; as a result, a company which is earning good profits can run into a liquidity crisis and default in payment of its current liabilities.

The financial backers of the tenanted-pub firms might have noticed the following symptoms;

- The increased investment in current assets needed to support the increased sales are financed mainly from short-term sources like creditors and bank overdraft, resulting in a declining current ratio and quick ratio.
- Sales tend to increase very quickly in relation to equity, resulting in sharp increases in the ratio of sales to equity.
- The increase in debt would lead to higher gearing ratios.
- The net working capital will tend to decline, and may even become negative. A negative net working capital implies a current ratio less than unity (current assets less than current liabilities), and a business in such a position is likely to face considerable difficulty in meeting its current liabilities. Even where the current ratio is satisfactory, any erosion of net working capital would worsen the liquidity of the business and make it more vulnerable to cyclical risk.

However over trading is not the only cause of these symptoms:

Situations similar to overtrading can be caused due to other reasons as well:

- It is not only physical increase in sales that can strain liquidity. In periods of high inflation, sales turnover and the corresponding working capital requirements can increase very sharply in nominal terms, resulting in the symptoms of overtrading.
- Repayment of a loan without raising sufficient long-term funds (either in the form of profit accruals or a fresh loan) can drain cash from the firm, creating the symptoms.
- Excessive dividend payout can result in depressing the equity and creating similar symptoms.
- Using short-term sources of funds to finance long-term investments will depress net working capital, resulting in overtrading symptoms.

However if the management of the firm feels that overtrading is the root cause of their condition then they must as a matter of urgency tackle the situation.

The instant solution for an overtrading situation is to take more trade credit and bank overdraft finance; however this is likely to be only a short-term fix that ultimately exacerbates the situation and worsens the liquidity crisis.

Better short-term solutions would be to either restrict the growth in turnover to manageable proportions; or improve working capital management so that the investment in current assets required to support the level of sales is reduced (i.e. better inventory control, credit policy and debt collection).

The long-term solution is to provide more long-term funds for working capital purposes - i.e. improve the Net Working Capital position of the firm.

Question 4 Part (b):

From a (financial) risk management perspective explain the term “the operating cash cycle”.

2 marks for explanation, 2 marks for importance, 1 mark for ways to reduce it, and 2 marks for problems trying = 7 marks

“The operating cash cycle” can be described as the time from the initial outlay of cash for the purchase of the raw materials etc. required to make a good to the time when the cash from sales is received. In its simplest form if we consider a firm that simply sells on a finished product then the operating cash cycle can be found by calculating: the average stock turnover period + the average settlement period for debtors – the average settlement period for creditors.

It is important from a (financial) risk management perspective because financing the operating cash cycle can be one of the most important financing needs of a business. Therefore by reducing the operating cash cycle, a firm can reduce its financing requirements and hence its financial risk.

A firm can reduce the operating cash cycle by maximising the amount of trade credit it receives and / or keeping trade debtors and / or levels of stock low.

However in trying to reduce the cycle the operating cash cycle a number of difficulties can arise. By maximising the amount of trade credit it receives a firm may lose out on discounts for early settlement. Further it could also result in losing the goodwill of its creditors.

Keeping trade debtors low by not extending or tightening credit could result in both lost sales and a loss of customer goodwill. So individual circumstances will dictate whether this will be cash flow positive or negative. Alternatively offering increased discounts for early settlement results in a reduction in overall margin and is a cost to the business.

Finally by attempting to reduce the cash cycle by keeping stock levels low could result in both a reduction in the range of products offered and stock outs. Also if individual orders are smaller there may be negative cost implications in terms of a loss of quantity discounts and higher stock ordering and processing costs.

Question 5 Part (a)

With the aid of examples describe how managers of firms that have debt outstanding and face financial distress might jeopardise the investments of creditors with the “games” of asset substitution and under-investment.

3 marks for explaining managerial reasons for asset substitution and under-investment, 2 marks for examples, 5 marks in all.

Managers of financially distressed firms will have an incentive to gamble with bondholders’ money. This concept is sometimes referred to as the ‘Agency Cost of debt’.

If little value will accrue to shareholders in the event of a liquidation, management, while still in control of the distressed company, may invest in highly risky projects (asset substitution) that have a small probability of a large payoff and a high probability of a zero or low payoff.

This may give shareholders a small probability of increasing their wealth at the expense of bondholders.

Shareholders also have little to no incentive to invest more equity into a failing business.

Question 5 Part (b)

With the aid of examples describe the important direct and indirect costs of bankruptcy? Which of these costs discourage very high levels of debt use by corporate managers?

2 marks for explaining the important direct and indirect costs of bankruptcy, 2 marks for examples, 1 mark for why they discourage very high levels, 5 marks in all.

Direct costs of bankruptcy are out-of-pocket cash expenses directly related to bankruptcy filing and administration. Empirical research indicates that direct costs are much too small, relative to the pre-bankruptcy market value of large firms, to truly discourage the use of debt financing.

Indirect bankruptcy costs are economic losses that result from bankruptcy but are not cash outlays spent on the process itself.

Indirect bankruptcy costs are inherently difficult to measure but empirical research clearly suggests they are significant—significant enough, in many cases, to lessen the incentive for corporate managers to employ financial leverage

Question 5 Part (c)

Critically discuss which factors will influence a company to finance a takeover by either a share for share offer or a cash offer financed by the issue of bonds or a combination of both.

5 marks for discussing the factors, 5 marks in all.

- The tax position of the target company's shareholders. If they are tax exempt they may prefer a cash offer, as they will not incur capital gains tax. If they are liable for capital gains, they may prefer a share-for-share offer. If there is a range of investor's indifferent tax paying positions, a mixed bid may be more appropriate.
- The bidding company's level of liquidity and its ability to borrow more funds will determine whether it will be able to find sufficient funds in order to make a cash offer. If it is short of liquidity and is already highly geared, a cash offer may be out of the question.
- The bidding company's share price will also be a major factor. If it is relatively high compared to the target company's share price, the bidding company will be able to make a share-for-share offer with fewer shares, therefore, reducing any potential dilution of EPS and control for the existing shareholders.
- The combined preferences of both bidding company and Target Company shareholders are also very important. The shareholders of the bidding company may not want it to borrow in order to make a cash offer because this may increase the financial risk beyond a level they are prepared to tolerate. A cash offer may be unattractive to target company shareholders because they no longer have a participating interest in the company that they originally bought share.

Question 6 Part (a):

Important factors that will affect the ability of an entrepreneur to raise capital for a new business from external sources of finance.

5 marks for explaining the important factors, 5 marks in all.

It is usually not an easy task to raise capital for new business.

Financial projections in the business plan

There is no doubt that an effective business plan is needed to successfully raise capital. Included in a business plan should be a financial worksheet which outlines all the various categories of costs that can accrue monthly. By using a financial worksheet, the new business owner can provide lenders and investors three very important financial measures in order to raise capital - the income statement, cash flow statement, and balance sheet. The income statement is probably the most important component of the three to raise capital. It includes a projected cost report, which provides projected revenues and the expected income for the new business owner in the next 3 to 5 years. Providing such financial predictions will enable the new business owner will gain credibility from their financial lenders. It also gives them an assertive edge to raise capital from additional sources.

Professionalism

Whether an entrepreneur decides to raise capital from traditional bank loans or from angel investors, new business owners will first have to impress them with their business plan. New business owners should be aware that despite the possibility of multiple rejections, they must not be discouraged and always keep a positive, professional attitude. If an entrepreneur strongly believes in their project, then they will seek any and all means to raise capital. If an investor or financial lender sees potential in an entrepreneur's new business ideas, then they will strongly consider the opportunity to enable the new business owner to raise capital and provide funding for their new business endeavour.

Good credit vs. bad credit

Credit rating has become a very significant component when a new business owner decides to raise capital. This policy holds true for every financial lender: the higher the credit score, the lower the interest rates. If a new business owner has bad credit ratings, then they will most likely not be able to effectively raise capital since there is a high probability that their loan application will be denied. The entrepreneurs that seek to raise capital for their new business in large amounts and are planning to borrow this money from a bank should try to monitor their credit score and fix their credit history beforehand so that they can get new business loans at favourable rates. There is no doubt that a high credit score is a vital component to raise capital for a new business.

There are multiple credit rating agencies that diligently analyse the new business owner's credit score before granting capital. For a new business to effectively raise capital, the new business owner must have a good credit rating.

The credit score agencies can determine the credit ratings of an entrepreneur by collecting information on the new business and analysing the details, such as the borrower's current income level, payment and debt history, and other important financial facts that may be useful in the process to raise capital.

After credit agencies obtain a detailed report on the borrower, this information is sold to loan providing organisations, which further determine the amount of capital to be allocated. Whether an entrepreneur is seeking funding from a private investor or lending institution, their credit history will be investigated before they are able to raise capital for their new business.

Question 6 Part (b) Invoice Factoring

5 marks for showing understanding of Invoice Factoring, 5 marks in all.

Invoice Factoring

- Factoring is generally but not exclusively used by companies that are smaller than those that use invoice discounting, but some factors will consider start-ups and businesses with a small turnover.
- The credit control function in a factoring facility is outsourced, thus the client has little control over their sales ledger
- The factoring facility is disclosed i.e. the debtor will know that you are using a disclosed factoring facility
- Spot factoring is offered by some factoring firms and allows clients to selectively factor their invoices. As opposed to the more usual whole turnover facility.

Question 6 Part (c) Invoice Discounting

5 marks for showing understanding of Invoice Discounting, 5 marks in all.

Invoice Discounting

- Invoice discounting is usually used by companies that are larger than those that use factoring.
- Different invoice discounters will have different entry requirements but typically revenues must be over £500,000 and in some cases £1 million.
- Invoice discounting helps you keep control and confidentiality over your own sales ledger operations
- Whole invoice discounting and selective invoice discounting products can be made available by finance providers, however it is a policy of many of the traditional factors to not allow the entire sales ledger to have finance, despite the fact that fees are charged against the entire turnover of their client.

Question 6 Part (d) Advantages of budgeting and budgetary control

5 marks for advantages to budgeting and budgetary control, 5 marks in all

- Compels management to think about the future, which is probably the most important feature of a budgetary planning and control system. Forces management to look ahead, to set out detailed plans for achieving the targets for each department, operation and (ideally) each manager, to anticipate and give the organisation purpose and direction.
- Promotes coordination and communication.
- Clearly defines areas of responsibility. Requires managers of budget centres to be made responsible for the achievement of budget targets for the operations under their personal control.
- Provides a basis for performance appraisal (variance analysis). A budget is basically a yardstick against which actual performance is measured and assessed. Control is provided by comparisons of actual results against budget plan. Departures from budget can then be investigated and the reasons for the differences can be divided into controllable and non-controllable factors.
- Enables remedial action to be taken as variances emerge.
- Motivates employees by participating in the setting of budgets.
- Improves the allocation of scarce resources.
- Economises management time by using the management by exception principle.

Question 6 Part (e) Problems in budgeting

5 marks for problems in budgeting, 5 marks in all

Whilst budgets may be an essential part of any business activity they do have a number of disadvantages, particularly in perception terms.

- Budgets can be seen as pressure devices imposed by management, thus resulting in:

- a) bad labour relations
- b) inaccurate record-keeping.

- Departmental conflict arises due to:

- a) disputes over resource allocation
- b) departments blaming each other if targets are not attained.

- It is difficult to reconcile personal/individual and corporate goals.

- Waste may arise as managers adopt the view, "we had better spend it or we will lose it". This is often coupled with "empire building" in order to enhance the prestige of a department.

Responsibility versus controlling, i.e. some costs are under the influence of more than one person, e.g. power costs.

- Managers may overestimate costs so that they will not be blamed in the future should they overspend.

Question 6 Part (f) Characteristics of a good budget

5 marks for Characteristics of a good budget, 5 marks in all

A good budget is characterised by the following:

- Participation: involve as many people as possible in drawing up a budget.
- Comprehensiveness: embrace the whole organisation.
- Standards: base it on established standards of performance.
- Flexibility: allow for changing circumstances.
- Feedback: constantly monitor performance.
- Analysis of costs and revenues: this can be done on the basis of product lines, departments or cost centres.