

MGT201::Final Term Subjective

Why firms not prefer Debt financing

Based on CORPORATE TAXES, FIRMS should prefer to raise Capital using DEBT Financing rather than equity as there is saving associated with capital raised through this source.

WHY WE USE WACC?

It is the best way to calculate the net present value of a project because it takes into consideration all the sources of capital. For example, for a project to be desirable it has to first need to satisfy the desired rate of return of different fund providers. But we know that there are different sources of funds. It doesn't just come from one source. We know that NPV/Initial Cost Outlay = % rate of return. A project may for example provide a 10% rate of return. The company's banker may nod on it if its minimum rate of return before it lends the company some money is only 5%. But how about if the stockholders want as much as 15%? WACC based on market value is the best way to solve these variations in interests and costs of providing funds. If you use WACC, you are deemed to consider both the cost of debt and equity. So in a way your question is wrong.

WHAT IS MERGER? IS IT HARMFUL OR BENEFICIAL? EXPLAIN AND JUSTIFY. STRATEGIES TO PROTECT FIRM FROM EXCHANGE RATE RISK

Definition of 'Merger'

The combining of two or more companies, generally by offering the stockholders of one company securities in the acquiring company in exchange for the surrender of their stock.

Basically, when two companies become one. This decision is usually mutual between both firms

Question No: 52 (Marks: 5)

Firm A has to decide whether to maintain large amount of current assets or small amount. What can be the possible benefits the firm can enjoy from both of these?

Advantages of Large Current Assets: less risk of shortages & interruptions and less loss of sales due to availability of funds for loan payments and purchases and inventory. High Liquidity so better CREDIT Rating.

Advantages of Small Current Assets: Less investment in current assets means less amount of money tied to the assets which are generating no return. So lower Opportunity Cost of Capital.

Split from dividend stock=3

When a company decides to issue a stock split (or stock dividend), a couple of possibilities could occur concerning what would happen to an upcoming cash dividend. The most important factors are the time the stock split happens and the time of the cash dividend's record date. Typically, a cash dividend will not be issued to new shares that were created from a stock split if the split date occurs after the dividend's date of record. This is similar to how an investor does not receive dividends for stocks that he purchased after the dividend's record date.

Difference between Capital Market and Money Market. 3 Marks

Capital Markets:

These are the markets for the long term debt & corporate stocks.

Money Markets

Money market generally is a market where there is buying and selling of short term liquid debt instruments. (Short term means one year or less). Liquid means something which is easily en-cashable; an instrument that can be easily exchanged for cash.

Discuss one of the financial instruments "Option". 3 Marks

Gives the buyer the right, but not the obligation, to buy or sell an asset at a set price on or before a given date. Investors, not companies, issue options. Buyers of call options bet that a stock will be worth more than the price set by the option (the strike price), plus the price they pay for the option itself. Buyers of put options bet that the stock's price will drop below the price set by the option. An option is part of a class of securities called derivatives, which means these securities derive their value from the worth of an underlying investment.

Business converts from old to new capital structuring and tax shield. What affect of this tax shield on following:

- **Earning before interest and Tax (EBIT)**
- **Net Income**

Advantage of Financial lease respective of lessee. (5 Marks)

- If factory needs to buy new machine urgently and does NOT have enough finances.
- Leased Assets (and lease liabilities) can sometimes be treated OFF THE BALANCE SHEET ITEMS. Accounting Standards (i.e. FASB USA) in some countries restrict this so generally speaking, Lease DOES affect DEBT RATIO & Capital Structure in similar way as Loan on Balance Sheet.
- If Company can NOT justify an increase in Assets on the Balance Sheet based on historical earnings. Capital expenditure in Leased Asset can be “Expensed” out gradually.
- Lease Rental is a TAX-DEDUCTIBLE EXPENSE just like interest payments.
- As long as IRR from leased equipment is higher than cost of lease financing.

Question No: 53 (Marks: 5)

Differentiate forward market and future market.

The *forward market* is the over-the-counter financial market in contracts for future delivery, so called forward contracts. Forward contracts are personalized between parties (i.e., delivery time and amount are determined between seller and customer). The forward market is a general term used to describe the informal market by which these contracts are entered into. Standardized forward contracts are called futures contracts and traded on a futures exchange.

A *futures market* or derivatives exchange is a central financial exchange where people can trade standardized futures contracts; that is, a contract to buy specific quantities of a commodity or financial instrument at a specified price with delivery set at a specified time in the future.

Question No: 55 (Marks: 3)

Calculate tax shield from the given information.

Corporate tax rate is 35% and amount of debt is Rs. 20, 000 and rate of return is 8%.

$$\text{Tax Shield} = (\text{income} - (\text{debt} * \text{interest rate})) * \text{tax rate}$$

$$\begin{aligned} \text{Tax shield} &= (20,000 * 8\%) * 35\% \\ &= 560 \text{ Rs} \end{aligned}$$

Question No: 56 (Marks: 5)

How can a manager calculate the opportunity cost of capital for a project? Give answer in bulleted form only.

- The opportunity cost of capital is the return that investors give up by investing in the project rather than in securities of equivalent risk.
- Financial managers use the capital asset pricing model to estimate the opportunity cost of capital
- The company cost of capital is the expected rate of return demanded by investors in a company.

Question No: 57 (Marks: 5)

Suppose you are a financial manager of XYZ Corporation and you have been assigned the task to calculate the numerical value of your firm's WACC (Weighted Average Cost of Capital), what procedure would you follow keeping in mind that the firm is using NOI (Net Operating Income) approach?

Question No: 55 (Marks: 3)

Tax shield for the calculation of cost of debt but not for the calculation of the equity stock. Why? Give reason.

Because you can get tax exemption on the interest payment, in case of debt financing. But you are not entitled for any Tax shield in case of equity. $R_d(1 - T)$

Question No: 56 (Marks: 5)

Ahsan Enterprises, an all-equity firm, is considering a proposal of new capital investment. Analysis has indicated that the proposed investment has a beta of 0.5 and will generate an expected return of 7%. The firm currently has a required return of 10.75% and a beta of 1.25. The investment, if undertaken, will double the firm's total assets.

Requirement:

If rRF is 7% and the market risk premium is 3%, should the firm undertake the investment?

Beta = .5

Expected Rate of return = 7%

Required rate of return = 10.75

Beta = 1.25%

Ahsan Enterprises uses only equity capital, so its cost of equity is also its corporate cost of capital, or WACC. WACC = 10.75 %

“The investment, if undertaken, will double the firm's total assets” tell us that exactly same amount will be injected. So after the injection of new investment with beta of .5, impact on overall beta will be

$$.5 * (1.25) + .5*(.5) = .875$$

Now we will calculate the Required Rate of return with new beta

$$RR = WACC = \text{risk free rate of return} + (\text{Market rate of return} - \text{risk free rate of return}) * \text{beta}$$

$$WACC = 7\% + (7\% - 3\%) * .875 = 10.50\%$$

$$= .5 * 10.50 + .5 * 7 =$$

Due to new investment cost of capital reduced from 10.75% to 10.50%

Overall expected rate of return must be more than 10.50% but new investment is giving us the expected rate of return of 7%

Now we will see expected return after injection of new investment

$$.5(10.75) + .5(7) = 8.87\% \text{ as it is less than } 10.50 \text{ so we should drop it.}$$

Question No: 57 (Marks: 5)

Mergers can be classified in two broad categories i.e. Financial and Operating merger. Differentiate between these two.

Financial Merger	Operating Merger
The operations remains independent	The operations are integrated and changed and synergies expected.

Question No: 58 (Marks: 10)

Using the Capital Asset Pricing Model (CAPM), determine the required return on equity for the following situations:

Situations	Expected return on market portfolio	Risk-free rate	Beta
1	16%	12%	1.00
2	18%	8%	0.80
3	15%	14%	0.70

What generalization can you make?

Required Rate of return = risk free rate of return + (market return- risk free rate)* beta

1. = 12% + (16%-12%)*1 = 16%
2. = 8% + (18%-8%)*.8 = 16%
3. = 14% + (15%-14%)*.7 = 14.7%

Generalization: as beta of 1 in case of our security No.1 It is fully diversified and its return is 16% which exactly equal to market portfolio return. Any value of beta above the 1 can increase the rate of return but same it will increase the Risk as well.

Question No: 59 (Marks: 10)

What are stock dividends and stock splits? Explain with the help of examples and how do these affect stock prices? (3+3+4 marks)

Stock Dividend: They are used to control the share price if it rises too fast. They bring share price down to within an optimal price range so that more investors can afford to trade in it and trading volume rises.

Example: Company offers 10% stock dividend to all shareholders. It means that if you own 100 shares than company will give you 10 more shares free of cost. Number of shares increases but total value of firm is unchanged.

Stock Split: They are used to share price if it rises too fast. Number of share outstanding increase. They are used to increase Float.

Example: Company with 1000 shares outstanding to outside shareholders declares 2-for-1 stock split. Means that the number of shares outstanding will increase to 2000 shares (i.e. 100% increase). Number of shares rises but firm value unchanged.

Effect of Stock Dividend and Stock Splits on prices:

Prices rises immediately afterwards because investors take them to be positive signals about the company's future. But if company does not declares higher earnings and dividends in near future, price will come back down again.

Question No: 41 (Marks: 5)

What are the real markets effects of leverage on WAAC? (Answer the question in bulleted form only).

- Increase in leverage causes a a large increase in cost of equity
- Increase in leverage causes relatively small increase in cost of debt as compared to cost of equity
- As leverage increases WACC 1st falls because of tax saving shield.
- With further increase in leverage WACC fall to its minimum point which is the optimal point for capital structure
- Further increase in leverage causes increase in WACC because of bankruptcy risk

Question No: 42 (Marks: 5)

Suppose a Firm ABC has Total Assets of Rs.1000 and is 100% Equity based (i.e. Un-levered). There were 10 equal Owners and 5 of them want to leave. So the Firm takes a Bank Loan of Rs.500 (at 10%pa Mark-up) and pays back the Equity Capital to the 5 Owners who are leaving. Now, half of the Equity Capital has been replaced with a Loan from a Bank (i.e. Debt). What impact does this have on ROE?

As the firm replaces equity with debt it is increasing financial leverage which is a cause of financial risk. The impact of debt on ROE is that ROE will increase but with the greater uncertainty hence greater will be the risk.

Question No: 43 (Marks: 10)

Stock X has a beta of 0.5, stock Y has a beta of 1.0, and stock Z has a beta of 1.25. The risk free rate is 10% and the expected market return is 18%.

a. Find the expected return on stock X

b. Find the expected return on stock Y

c. Find the expected return on stock Z

d. Suppose that you construct a portfolio consisting of 40% X, 20% Y and 40% Z. What is the beta of the portfolio?

a. $r_M = 18\%$

$r_{RF} = 10\%$

$\beta = 0.5$

$r = r_{RF} + (r_M - r_{RF}) \beta$

$= 10\% + (18\% - 10\%) 0.5$

$= 10\% + 4\%$

$= 14\%$

b. $r_M = 18\%$

$r_{RF} = 10\%$

$\beta = 1.00$

$r = r_{RF} + (r_M - r_{RF}) \beta$

$= 10\% + (18\% - 10\%) 1.00$

$= 10\% + 8\%$

$= 18\%$

c. $r_M = 18\%$

$r_{RF} = 10\%$

$\beta = 1.25$

$r = r_{RF} + (r_M - r_{RF}) \beta$

$= 10\% + (18\% - 10\%) 1.25$

$= 10\% + 10\%$

$= 20\%$

d. Beta of portfolio $= \beta_P = X \beta_X + Y \beta_Y + Z \beta_Z$

$= (40/100)0.5 + (20/100)1.0 + (40/100)1.25$

$= 0.4 \times 0.5 + 0.2 \times 1.0 + 0.4 \times 1.25$

$= 0.2 + 0.2 + 0.5$

$= 0.9$

Question No: 55 (Marks: 3)

If interest tax shields are valuable, why don't all taxpaying firms borrow as much as possible?

Tax shield give us benefit up to certain level but as leverage increases Firm becomes more Risky so Lenders and Banks Charge Higher Interest Rates and Greater Chance of Bankruptcy.

Question No: 56 (Marks: 5)

There are different methods to raise capital within the organization. Briefly explain the advantages of equity financing into the business.

Equity financing gives the flexibility we don't need to pay fix amount. In case of bond or debt we need to pay fixed interest in case of failure there is threat of Defaulter. Mostly the advantages of equity finance are reaped by the small business enterprises. In some case debt rate is too high that time equity help you to get cheaper capital financing.

Question No: 57 (Marks: 5)

What is long-term financing? Explain the factors that can affect the decision of a manager while deciding about long term financing?

Long term financing is a kind of financing which is provided for a period of more than one year.

Permanent Financing comes in two forms:

- Long-term Loans - Bonds It has Low Risk for Firm but has High Cost normally more than one year.
- Common Equity or Stock its Less Risk for Firm but Highest Cost.

If a company is using long-term financing it has higher cost of financing due high interest cost of long term loans despite high cost we have low risk, due to surety of access to money for a longer period. Current liabilities as a source of financing are not reliable as you have no surety whether you will have same amount of money available next month for financing or not.

Question No: 55 (Marks: 3)

If capital structure changes from equity to debt then what will be the effect on capital structure.

Firm will become leveraged firm. Debt equity ratio will increase earning per share is also increase. There will be a tax saving on interest expenses payable on debt.

Question No: 56 (Marks: 5)

How are dividends paid, and how do companies decide on dividend payments?

Dividend are paid in the following ways

1) Declaration date

Dividend Declare in two ways

- Stable dividend per share policy
- Constant dividend payout ratio

2) Date of record

3) Ex –dividend date

4) Date of payment

Decision on dividend payment

- Cash dividend: if funds are available with the company then dividend paid in cash
- Stock dividend : if the funds are not available with the company then stock dividend is paid to shareholders in the form of additional shares

Question No: 57 (Marks: 5)

Write a note on capital structure of organizations and cost of capital.

Capital structure of the company comprises on the following components

1. equity capital
2. debt
3. preferred shares
4. retained earning

Cost of capital comprises of the following

1. cost of equity capital i.e. K_e
2. after tax cost of debt i.e K_d
3. cost of preference share i.e K_p
4. cost of retained earning i.e. K_r

When multiply these costs of capital with their weights and add up, its becomes weighted average cost of capital

Question No: 55 (Marks: 3)

Write a short note on real asset markets and also give some examples.

The real asset market where the real physical asset are traded .for example, you have wheat market, cotton market, where real material change hands.

Examples: Gold Market, Property (land, house)

Question No: 56 (Marks: 5)

Company XYZ wants to issue more Common Stock of Face Value Rs 12. Next Year the Dividend is expected to be Rs. 3 per share assuming a Dividend Growth Rate of 10% pa. The Lawyer's fee and Stock Brokers' Commissions will cost Rs 1 per share. Investors are confident about Company ABC so the Common Share is floated at a Market Price of Rs 18 (i.e. Premium of Rs 6). If the Capital Structure of Company ABC is entirely Common Equity, then what is the Company's WACC? Use New Stock Issuance Approach to calculate the results.

$$DIV1 = 2$$

$$G = 10\%$$

$$\text{Lawyer fee and comm.} = 1 \text{ Rs}$$

$$P_0 = 16$$

Capital structure is equity base 100%

As company is 100 equity it means Unleveraged Company so its WACC will be required rate of return on equity.

Required ROR for Common Stock using Gordon's Formula

$$r = (DIV1/P_0) + g$$

$$P_0 = \text{market price} = 18$$

$$Div1 = \text{Next Dividend} = 3$$

$$G = \text{growth rate} = 10\%$$

$$r = (3/18) + 10\% = 26.66\%$$

Now If company wanted to issue the stock via new float then it has to pay the lawyer fee and broker commission which 1 Rs.

$$\text{Net proceed} = 18 - 1 = 17$$

$$r = (3/17) + 10\% = 27.64\%$$

Question No: 57 (Marks: 5)

Why may payout decisions be used by management to signal the prospects of the firm? Give answer in bulleted form.

- If a company selected the high pay out policy without the cash flow to back it up.
- They will find that it ultimately has to either reduce the investments or turn to capital markets for additional debt or equity financing.
- As it is costly, managers will not increase dividends unless they are confident that the firm will get enough cash to pay them.
- It is main reason that we say that there is an information signal attached to dividends payout policy.
- So any change in the dividend payout policy send signals of a change in the firm's prospects.
- Investors take it positively that a company plans to repurchase its stock.
- If they are worried that the company has more cash than it can profitably employ, they may be pleased to see the cash given back to the shareholders.

Question No: 50 (Marks: 3)

Management Buyouts is a form of buyouts. Explain this term in your own words.

Management buyouts are similar in all major legal aspects to any other acquisition of a company. The particular nature of the MBO lies in the position of the buyers as managers of the company, and the practical consequences that follow from that. In particular, the due diligence process is likely to be limited as the buyers already have full knowledge of the company available to them. The seller is also unlikely to give any but the most basic warranties to the management, on the basis that the management know more about the company than the sellers do and therefore the sellers should not have to warrant the state of the company.

Question No: 51 (Marks: 5)

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$$DIV_1 = 3$$

$$P_0 = 18$$

$$g = 10\%$$

$$r = (DIV_1/P_0) + g$$

$$r = 3/18 + 0.10$$

$$r = 0.1666 + 0.1$$

$$r = 0.2666 * 100$$

$$r = 26.67\%$$

$$\text{Net Proceeds} = \text{Flotation Price} - \text{Flotation Costs}$$

$$\text{Net Proceeds} = 18 - 1$$

$$\text{Net Proceeds} = 17$$

$$DIV_1 = 3$$

$$NP = 17$$

$$g = 10\%$$

$$r = (DIV_1/NP) + g$$

$$r = 3/17 + 0.10$$

$$r = 0.176 + 0.1$$

$$r = 0.276 * 100$$

$$r = 27.64\%$$

Question No: 52 (Marks: 5)

What is the purpose of residual dividend model and what is the procedure to be followed while using this model?

Residual Dividend Model

• Residual Dividend Model: Best Practical Model for numerical calculations of optimal Dividend Policy. Sets Long-Term Target Dividend Payout Ratio from which to back-calculate short-term Dividends.

Steps in Residual Dividend Model (RDM):

- Forecast Capital Budget, Earnings, Cash Flows (for next 5 years)
- Conservatism: To be on safe side, underestimate the Free Cash Flows
 - Determine Target optimal Capital Structure (or Practically Speaking, “Range” for Debt Ratio) and forecast required Equity (for next 5 years)
 - Use Retained Earnings (internal capital) to finance most of the required Equity because
 - RE is less costly than external financing (higher transaction costs). Retained earnings cost less than loans to acquire finance.
 - Leftover or “Residual” Earnings can be safely paid Out as Dividends in Long Term.
 - Then divide this into Small Yet Regular (may be quarterly) and Steadily Increasing Dividend Payouts.

Question No: 49 (Marks: 3)

Why do firms need to invest in net working capital?

There is a need to invest in net working capital because net working capital represents the surplus working capital left with the company after payment of current liabilities; hence more net working capital means company has surplus money for its day to day operations

Question No: 50 (Marks: 3)**What kind of dividend policy is the best one for a firm? (Give answer in bulleted form only)**

Most managers believe the best dividend policy is one that minimizes the weighted average cost of capital.

- This policy should provide stable payments.
- This policy should maintain investor's confidence.
- This policy should give good signals to investors about the ability of the firm to maintain and increase its wealth
- It should be conservative enough to hold the uncertainty of future payments to a minimum. Cyclical firms should pay low dividends regularly, and an "extra dividend" when economic conditions are favorable and profits are high

Question No: 51 (Marks: 5)**What are the advantages and disadvantages of raising capital through equity financing?****Advantages**

The right business angels or venture capitalists can lead and steer the business to profits and growth. They can add precious value to the existing project and with their expertise and experience they can provide valuable suggestions and advice not to mention the contacts. They can aid in decision making and planning of strategies. The investors would be equally concerned and responsible since it is their money at stake and any progress would reflect in their equity value.

Disadvantages

Raising of equity finance is a time consuming task and also very expensive. All in all you need to spend valuable time satisfying their background checks, project understanding and convincing them to risk their capital in your business. Moreover, once they are in they exercise certain control over the management of the business mostly due to their investment rights in the business. Equity finance leads to dilution of ownership and the legal and regulatory rules associated with finance is very cumbersome and delicate. You need to allocate precious time into explaining the progress of your business to the financiers so that they can monitor it.

Question No: 53 (Marks: 5)**Economists categorize mergers into four types. Explain these types with the help of examples.****4 Specific Types of Mergers:**

- Horizontal Merger: merger of 2 competitors - can lead to Monopoly
- Vertical Merger: merger of a supplier with a buyer
- Co generic Merger: merger of firms in same industry
- Conglomerate Merger: merger of firms in unrelated industries

Question No: 55 (Marks: 3)**If interest tax shields are valuable, why don't all taxpaying firms borrow as much as possible?**

Tax shield give us benefit up to certain level but as leverage increases Firm becomes more Risky so Lenders and Banks Charge Higher Interest Rates and Greater Chance of Bankruptcy.

Question No: 49 (Marks: 3)**Where do firms invest excess funds until they are needed to pay bills?**

Solution:-

Firms can invest idle cash in the money market, the market of short term finance assets. These assets tend to be short term, low risk, and highly liquid, making them ideal instruments in which to invest funds for short period for the time before cash needed.

Question No: 50 (Marks: 3)**What problems a firm can face if it faces a shortfall or surplus of inventories.**

Following are the Problems related to shortfall and surplus of inventories faces by any firm.

- Shortfall in Inventories: interruptions in production and loss or sales orders
- Surplus Inventories: high carrying costs, wastage, and depreciation

Question No: 51 (Marks: 5)

Compare aggressive working capital financing with conservative working capital financing.

Aggressive

- Maximum Short-term financing at low cost (but risk of non-renewal)
- Use short-term financing for Temporary Current Assets and even partly to buy Permanent Current Inventory

– Conservative

- Maximum Long-term financing. Safe but higher interest costs.
- Use long-term financing for Fixed Assets, entire Permanent Assets, and even part of Temporary Current Assets

Question No: 52 (Marks: 5)

Ahmad Corporation, a small business man, provided the following information about the production level: Fixed operating cost = Rs. 2,500, Sale price per unit is Rs.10 and its operating variable cost per unit is Rs. 5.

- You are required to calculate the breakeven quantity from the above information.**
- If variable cost has changed and it is increased up to Rs. 6 then what will be the effect of this change on Break even quantity.**

a) Sales per unit - variable per unit = Contribution margin per unit
 $10 - 5 = \text{Contribution margin per unit}$
 Contribution margin in units = 5

Break even in unit = Fixed Cost / Contribution margin per unit
 $\text{Break even in units} = 2500 / 5$
 Break even in units = 500

b) Sales per unit - variable per unit = Contribution margin per unit
 $10 - 6 = \text{Contribution margin per unit}$
 Contribution margin in units = 4

Break even in unit = Fixed Cost / Contribution margin per unit
 $\text{Break even in units} = 2500 / 4$
 Break even in units = 625

Question No: 53 (Marks: 5)

ABC Corporation expects to have the following data during the coming year.

Assets Rs.	200,000	Interest rate	8%
Debt/Assets, book value	65%	Tax rate	40%
EBIT Rs.	25,000		

Required:

What is the firm's expected ROE?

Return on equity = net profit / equity
 As debt / asset = 65%
 So 65% = debt / asset
 $\text{Debt} = 65\% * 200,000 = 130,000$

If debt (130,000) is 65% then 35% would be equity
 $(130,000 / 0.65) * 0.35 = 70,000 = \text{equity}$

EBIT	=	25000
Less interest payment 8% of 130,000	=	(10400)

	14600
Less tax @40% of 14600	= (5840)
NET INCOME	= 8760

$$\text{ROE} = (8760 / 70,000) * 100$$

$$= 12.5 \%$$

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What is long-term financing? Explain the factors that can affect the decision of a manager while deciding about long term financing?

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Permanent Financing comes in two forms:

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- Common Equity or Stock its Less Risk for Firm but Highest Cost.

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Question No: 58 (Marks: 10)

What is a credit policy and what factors an organization should consider while designing its credit policy and how can a firm use 5/10, net 30 basis and carrying charges in its credit policy?

Credit Policy: It is the credit adjusted given to customer based upon payment history.

Factors considered for credit:

Assessment of Credit-worthiness of each credit customer

Minimize duration of credit and Value.

Give incentives to Customers to pay cash and to pay quickly

Suppose if someone pays later then last date of payment he/she will pay extra 1% etc.

“Sell on 5/10.net 30 basis”

30 basis Means customer will pay full cash value within 30 days. 5/10.net means 5% discount for customers who will pay within 10 days. It will be like incentive to customer who will pay early. Impost some extra charge in the form of carry charges in case of later payment

Question No: 59 (Marks: 10)

Firms A and B are identical except their use of debt and the interest rates they pay. Firm A has more debt and thus must pay a higher interest rate.

Requirement:

Based on the data given below, how much higher or lower will be the A's ROE that of B, i.e., what is ROEA - ROEB?

<u>Applicable to Both Firms</u>		<u>Firm A's Data</u>		<u>Firm LD's Data</u>	
Assets	Rs. 3,000,000	Debt ratio	70%	Debt ratio	20%
EBIT	Rs.500, 000	Int. rate	12%	Int. rate	0%

Tax rate 35%

For company A 20% leverage so equity will be 30% of 3,000,000 = 900000

EBIT =	500,000
Interest (12% of 500,000) =	(6000)
EBT	494,000
Tax (35% of EBT)	(148200)
Net income	345,800

Expected ROE (=NI/Equity) 345,800/ (900000) = 38.42%

For company B 20% leverage so equity will be 80% of 3,000,000 = 2400000

EBIT =	500,000
Interest (10% of 500,000) =	(5000)
EBT	495,000
Tax (35% of EBT)	(148500)
Net income	346,500

Expected ROE (=NI/Equity) 346500/ (2400000) = 14.43%

ROEA – ROEB = 38.42 – 14.43
= **23.99%**

Question No: 49 (Marks: 3)

"Lease is just like Collateralized Loan". Explain this statement.

It is just like a Collateralized Loan (where the leased asset is the collateral).

Lease Contract is just as serious as a loan agreement. Failure to pay lease rental is just like failure to pay interest. Can bankrupt the Lessee (Borrower). Lessor (Lender or Leasing Company) can seize the leased asset and, if the claim is larger, also demand up to 1 year lease rental.

– The two parties of lease agreement are:

- Lessor (Leasing Company)
- Lessee

Question No: 50 (Marks: 3)

From the given information calculate the Net income. EBIT is Rs. 50, 000, fraction of debt in capital structure is 20, return on debt is 10%, amount of debt is Rs. 20, 000 and tax rate is 35%.

Expected EBIT	50000
Less Interest (10% on Debt)	(2000)
EBT	48000
Less Tax (35% on EBIT)	(16800)
Net Income	<u>31200</u>

Question No: 51 (Marks: 5)

Differentiate stock splits from stock dividends.

Stock Dividends

– Used to control the share price if it rises too fast. Brings share price down to within an “Optimal Price Range” so that more investors can afford to trade in it and trading volume rises. This is a commonly held belief.

– Payment in the form of stock to existing shareholders. Can be declared frequently.

– Example: Company offers 10% stock dividend to all shareholders. Means that if you own 100 shares than company will give you 10 more shares free of cost.

Number of shares increases but Total Value of Firm is unchanged.

Stock Splits

– Also used to control share price if it rises too fast. Number of shares outstanding increase.

– Used to increase “Float”

Example: Company with 1000 shares outstanding to outside shareholders declares 2- for-1 Stock Split. Means that the number of shares outstanding will increase to 2000 shares (i.e. 100% increase). Number of shares rises but Firm Value unchanged

Question No: 52 (Marks: 5)

Aamir Corporation has a capital structure of debt and equity with the percentage of 40 and 60 respectively. Tax rate for the company is 35%. On company's outstanding bonds it pays 9%. Aamir has calculated the WACC for his company is 9.96%. What would be the cost of equity capital of Aamir Corporation?

40% Debt
60% Common equity
rd = 9%
T = 35%
WACC = 9.96%
rs = ?

$$\begin{aligned} \text{WACC} &= (wd)(rd)(1 - T) + (wc)(rs) \\ 0.0996 &= (0.4)(0.09)(1 - 0.35) + (0.6) * rs \\ 0.0996 &= 0.0234 + 0.6 * rs \\ 0.0762 &= 0.6 * rs \\ rs &= 12.7\% \end{aligned}$$

Question No: 53 (Marks: 5)

What is Operating Lease? Explain with the help of example.

Operating Lease (or Service Lease)

– Operating Lease offers Financing AND MAINTENANCE: often the Lessor is the Supplier / Vendor of the Asset i.e. IBM

– Operating Lease is NOT FULLY AMORTIZED AND IS CANCELLABLE

• Example: Car rental company (Lessor) charges you Rs.1000 per day for renting out a new Honda Civic with driver. You can lease the car for 2 days. You will pay the Lessor Rs.2000. BUT; the value of the car might be Rs.1 million. Lessor does NOT expect you to pay that entire amount for using the car for just 2 days. The car rental company will service and maintain the car in good condition so it can rent it out to other people. This way, they can recover the value of the car from 1000 days of lease rent (= value / daily rental = 1,000,000 / 1000)!! This is the Payback Period (without taking their maintenance costs and profit margin). You can Cancel the lease and return the car after 1 day.

Now you just have to pay Rs.1000.

– Other Examples of Operating Lease: IBM for Computer Hardware, Boeing for Airplanes

By not fully amortizing operating lease means the leasing company does not expect to recover the whole amount or value of asset from you.

Question No: 58 (Marks: 10)

What are the factors affecting signaling theory? (Give the answer in bulleted form only with brief description)

- This theory consider that all Investors not have equal amount of information.
- All investors are not rational.
- Insider have more information compare to general public
- A Firm's Owners & Managers (Insiders) know more about it than Ordinary outside Investors.
- When manage or owner knows that there are better chances of high cash flow or some project which can bring good profit or earning. They try to finance the capital via debt or bond. They avoid use the equity issuance. Because they don't wanted to share the profit with number share holders. They take capital via debt by paying small amount of interest by this they can earn huge profits.

- When Firm's Outlook looks bad or some risky project, then Managers will choose to raise capital by Issuing Equity by doing this they will be able to share the Likely Losses amongst more Shareholders. If they took
- Debt and couldn't repay it, they might Default and be forced to go Bankrupt.
- By doing this investor also get signal that if companies is financing its capital via debt then likely it will be some good prospect in the company.
- By looking at these practices by management we can so mangers are in a better position to decide about the firm.

Stock X has a beta of 0.5, stock Y has a beta of 1.0, and stock Z has a beta of 1.25. The risk free rate is 10% and the expected market return is 18%.

- Find the expected return on stock X
- Find the expected return on stock Y
- Find the expected return on stock Z
- Suppose that you construct a portfolio consisting of 40% X, 20% Y and 40% Z. What is the beta of the portfolio?

a.

$$\begin{aligned}
 r_M &= 18\% \\
 r_{RF} &= 10\% \\
 &= 0.5 \\
 r &= r_{RF} + (r_M - r_{RF}) \beta \\
 &= 10\% + (18\% - 10\%) 0.5 \\
 &= 10\% + 4\% \\
 &= \mathbf{14\%}
 \end{aligned}$$

b.

$$\begin{aligned}
 r_M &= 18\% \\
 r_{RF} &= 10\% \\
 &= 1.00 \\
 r &= r_{RF} + (r_M - r_{RF}) \beta \\
 &= 10\% + (18\% - 10\%) 1.00 \\
 &= 10\% + 8\% \\
 &= \mathbf{18\%}
 \end{aligned}$$

c.

$$\begin{aligned}
 r_M &= 18\% \\
 r_{RF} &= 10\% \\
 &= 1.25 \\
 r &= r_{RF} + (r_M - r_{RF}) \beta \\
 &= 10\% + (18\% - 10\%) 1.25 \\
 &= 10\% + 10\% \\
 &= \mathbf{20\%}
 \end{aligned}$$

d. Beta of portfolio = $\beta_P = X \beta_X + Y \beta_Y + Z \beta_Z$

The ABC company is in the 35% marginal tax bracket. The current market value of the firm is Rs. 12 million. If there are no costs to bankruptcy:

What will be ABC's annual tax savings from interest deductions be if it issues Rs. 2 million of five years bonds at 12 % interest rate?

What will be the value of the firm?

$$\begin{aligned}
 \text{Annual Coupon payment each yr} &= 12\% \text{ of } 2,000,000 \\
 &= 2000000 \times 12/100
 \end{aligned}$$

$$\begin{aligned}
 &= 24000 \\
 \text{Tax saving for 5 yrs} &= 5 (35 \% \text{ of } 24000) \\
 &= 5 (24000 \times 35/100) \\
 &= 5 \times 8400 \\
 &= 42000
 \end{aligned}$$

What will ABC' annual tax savings from interest deductions be if it issues Rs. 2 million of seven years bonds at 12 % interest rate? What will be the value of the firm?

$$\begin{aligned}
 \text{Annual Coupon payment each yr} &= 12\% \text{ of } 2,000,000 \\
 &= 2000000 \times 12/100 \\
 &= 240000 \\
 \text{Tax saving for 7 yrs} &= 7 (35 \% \text{ of } 240000) \\
 &= 7 (240000 \times 35/100) \\
 &= 7 \times 84000 \\
 &= 588000
 \end{aligned}$$

Question No: 55 (Marks: 3)

Tax shield for the calculation of cost of debt but not for the calculation of the equity stock. Why? Give reason.

Because you can get tax exemption on the interest payment, in case of debt financing. But you are not entitled for any Tax shield in case of equity. Rd (1- T)

Question No: 56 (Marks: 5)

Ahsan Enterprises, an all-equity firm, is considering a proposal of new capital investment. Analysis has indicated that the proposed investment has a beta of 0.5 and will generate an expected return of 7%. The firm currently has a required return of 10.75% and a beta of 1.25. The investment, if undertaken, will double the firm's total assets.

Requirement:

If rRF is 7% and the market risk premium is 3%, should the firm undertake the investment?

$$\begin{aligned}
 \text{Beta} &= .5 \\
 \text{Expected Rate of return} &= 7\% \\
 \text{Required rate of return} &= 10.75\% \\
 \text{Beta} &= 1.25\%
 \end{aligned}$$

Ahsan Enterprises uses only equity capital, so its cost of equity is also its corporate cost of capital, or WACC.

$$\text{WACC} = 10.75\%$$

“The investment, if undertaken, will double the firm's total assets” tells us that exactly same amount will be injected So after the injection of new investment with beta of .5, impact on overall beta will be

$$.5 * (1.25) + .5*(.5) = .875$$

Now we will calculate the Required Rate of return with new beta

$$\text{RR} = \text{WACC} = \text{risk free rate of return} + (\text{Market rate of return} - \text{risk free rate of return}) * \text{beta}$$

$$\begin{aligned}
 \text{WACC} &= 7\% + (7\% - 3\%) * .875 = 10.50\% \\
 &= .5 * 10.50 + .5 * 7 =
 \end{aligned}$$

Due to new investment cost of capital reduced from 10.75% to 10.50%

Overall expected rate of return must be more then 10.50% but new investment is giving us the expected rate of return of 7%

Now we will see expected return after injection of new investment

$$.5(10.75) + .5(7) = 8.87\% \text{ as it is less then } 10.50 \text{ so we should drop it.}$$

Question No: 59 (Marks: 10)

Explain the following conditions:

- $IRR < WACC$
- $IRR > WACC > SML$
- $IRR < SML$
- $IRR < WACC < SML$

IRR < WACC

You should not invest in this project as rate of return is less than WACC. In other words your returns are less than the cost of capital.

IRR > WACC > SML

We should take this project as its rate of return is higher than the WACC and it offers a better return than an efficient market offers. Due to IRR is higher than SML

IRR < SML

It is showing a rate of return which is lower than SML we should not invest in such project because it is not giving as much return as an efficient market is returning

IRR < WACC < SML

IRR lower than WACC and SML company should not invest as IRR is not enough to cover the WACC (not enough to cover the cost of capital) plus its returns are lower than returns offered by an efficient market.

BC industries have a beta of 1.5. The risk free rate is 8% and the expected return on the market portfolio is 13%. The company presently pays a dividend of \$5 a share, and investors expect it to experience a growth in dividends of 10 percent per annum for many years to come.

a. What is the stock's required rate of return according to the CAPM?

b. What is the stock's present market price per share, assuming this required return?

- A)** $\beta = 1.5$
 $R_f = 8\%$
 $R_m = 13\%$

Required rate of return = $R_f + (R_m - R_f) * \beta$

Required rate of return = $8\% + (13\% - 8\%) * 1.5 = 15.5\%$

- B)** $G = 10\%$
 $Div_1 = 5$
 $R_e = (Div_1 / P_0) + g$
 $R_e = (5 / P_0) + 10\%$
 $15.5\% - 10\% = 5 / P_0$
 $P_0 = 5 / 5.5\%$
 $= 32.50 Rs$