**MODULE 3 ASSIGNMENTS:**

1-Why is the cost of capital the minimum acceptable rate of return on an investment?

A minimum acceptable rate of return (MARR) is the minimum profit an investor expects to make from an investment, taking into account the risks of the investment and the opportunity cost of undertaking it instead of other investments, and the company is willing to accept before starting a project, given its risk and the opportunity cost of forgoing other projects

If management wants to expand: Set minimum acceptable rate of return and Encourage investment in desired areas

2. How is the Cost of Debt Capital ascertained? Give examples.

The cost of debt is not simply the cost of the company's bonds. Since the interest on the debt is tax-deductible, you must multiply the coupon rate on the company's bonds by (1 - tax rate):

**Post-tax Cost of Debt Capital = Coupon Rate on Bonds x (1 - tax rate)**

**or Post-tax Cost of Debt = Before-tax cost of debt x (1- tax rate)**

Example:

A business with a 40% combined federal and state tax rate borrows $50,000 at 5% (interest rate). The post-tax cost of debt capital is 3% (Cost of debt capital = .05 x (1-.40) = .03 or 3%). The $2,500 in interest paid to the lender reduces the company's taxable income, which results in a lower net cost of capital to the firm. The company's cost of $50,000 in debt capital is $1,500 per year ($50,000 x 3% = $1,500) .

Flotation costs, the costs of underwriting the debt, are not considered in the calculation since those costs are negligible. You generally include your tax rate because interest is tax-deductible. However, it's also possible (and sometimes useful) to calculate your pre-tax cost of debt capital:

**Before-tax Cost of Debt Capital = Coupon Rate on Bonds**

If your company is perceived as a risky bet, then it will have a higher cost of debt; the cost of debt capital reflects the risk level.

3. How will you calculate the Cost of Preferences Share Capital?

**Cost of Preference Capital = Dividend / (Market Price – Issue Cost)**

4. The following details are available:

Equity (Expected Dividend 12%) Rs. 1000000

Tax Rate 50%

10% Preference Rs. 500000

8% Loan Rs. 1500000

You are required to calculate Weighted Average Cost of Capital?

((1000000/ (1000000+1500000)\*12%) + ((1500000/ (1000000+1500000)\*8%)) \* (1-0.5)) =

7.19%

5. What is Net Present Value and how does it change by variation in discount rate.

Net present value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows over a period of time. NPV is used in [capital budgeting](https://www.investopedia.com/terms/c/capitalbudgeting.asp) and investment planning to analyze the profitability of a projected investment or project.

If the present value of inflows is greater than outflows, we get a positive NPV and if the present value of outflows is greater than inflows, we get a negative NPV. The positive NPV means a net gain in value maximization and, therefore, any project which gives a positive NPV is an acceptable project and if it gives a negative NPV, then the project should not be accepted.

Changing variation in discount rate as a higher rate will get more positive NPV rate

6. Distinguish between NPV and PI. Which of these you consider better?

Net Present Value is considered as one of the most desirable types of evaluation, analysis, and selection of great investments. However, we should note that we have to be very careful when estimating cash flows, since incorrect cash flow estimation may lead to deceptive NPV.

Another thing you should take into account is that the discount rate is the same for both cash inflows and outflows, and the thing here is that the rates are different when lending or borrowing.

Still, NPV is the first and foremost measure of investment evaluation, compared to other methods such as determining the rate of return, payback period, internal rate of return (and Profitability Index). In fact, profitability index is related to Net Present Value, where the value presents an absolute measure, and the index presents a relative measure.

Proprietors raise investors’ wealth by welcoming projects that have a higher value than they actually cost, that has a positive expected Net Present Value. Sometimes the investment can be postponed and choose a time that is the most suitable for investment, and thus improve the cash flow.

The profitability index is calculated by dividing the present value of future cash flows by the initial investment. A PI greater than 1 indicates that the NPV is positive while a PI of less than 1 indicates a negative NPV. (Weighted average cost of capital may be hard to calculate, but it's a solid way to measure investment quality

Some of the major advantages of the NPV approach include its overall usefulness and that the NPV provides a direct measure of added profitability. It allows one to compare multiple mutually exclusive projects simultaneously, and even though the discount rate is subject to change, a [sensitivity analysis](https://www.investopedia.com/terms/s/sensitivityanalysis.asp) of the NPV can typically signal any overwhelming potential future concerns. Although the NPV approach is subject to fair criticisms that the value-added figure does not factor in the overall magnitude of the project, the [profitability index](https://www.investopedia.com/terms/p/profitability.asp) (PI), a metric derived from [discounted cash flow](https://www.investopedia.com/terms/d/dcf.asp) calculations can easily fix this concern.

7. What are the limitations of using the NPV and IRR methods in practice? Give your

assessment.

Limitation with IRR

Although using one discount rate simplifies matters, there are a number of situations that cause problems for IRR. If an analyst is evaluating two projects, both of which share a common discount rate, predictable cash flows, equal risk, and a shorter [time horizon](https://www.investopedia.com/terms/t/timehorizon.asp), IRR will probably work. The catch is that discount rates usually change substantially over time. For example, think about using the rate of return on a T-bill in the last 20 years as a discount rate. One-year T-bills returned between 1% and 12% in the last 20 years, so clearly the discount rate is changing.

Without modification, IRR does not account for changing discount rates, so it's just not adequate for longer-term projects with discount rates that are expected to vary.

Another type of project for which a basic IRR calculation is ineffective is a project with a mixture of multiple positive and negative cash flows. For example, consider a project for which the marketing department must reinvent the brand every couple of years to stay current in a trendy market.

Limitation with NPV

NPV estimates a company's future cash flows of the project. It then discounts them into [present value](https://www.investopedia.com/terms/p/presentvalue.asp) amounts using a discount rate representing the project's capital costs as well as its risk. The investment's future positive cash flows are then reduced into a single present value figure. This number is deducted from the initial amount of cash needed for the investment. In short, the net present value is the difference between the project cost and the income it generates.

The NPV method is inherently complex and requires assumptions at each stage such as the discount rate or the likelihood of receiving the cash payment.

Both IRR and NPV can be used to determine how desirable a project will be and whether it will add value to the company. While one uses a percentage, the other is expressed as a dollar figure. While some prefer using IRR as a measure of capital budgeting, it does come with problems because it doesn't take into account changing factors such as different discount rates. In these cases, using the net present value would be more beneficial.

8. What purpose do capital markets serve?

Capital markets serve two purposes. Firstly, they bring together investors holding [capital](https://investinganswers.com/node/5749) and companies seeking capital through [equity](https://investinganswers.com/node/5038) and [debt](https://investinganswers.com/node/5752) instruments. Secondly, and almost more importantly, they provide a secondary [market](https://investinganswers.com/node/3609) where holders of these securities can exchange them with one another at market prices. Without the [liquidity](https://investinganswers.com/node/5295) created by a secondary market, investors would be less inclined to purchase equity and debt instruments for fear of being unable to unload them in the future.

9. What are the factors that would go into deciding whether a company should resort to debt or equity for financing its requirement of long-term funds?

Investment, financed by issuance of debt or equity is likely to follow. Exactly when, investment and issuance will be expected to occur, is unclear.

In some cases issuance could lag well behind growth, in others, companies might issue and invest in anticipation of growth. Information is a key determinant of asset prices, and should play an important role in primary market development. Investors should be more willing to invest, as better information about investment, is made available. Conversely, companies may be opposed to information disclosure as it can have a variety of economic costs.

Capital markets allow agents to insure themselves against unfavorable events that are correlated with security prices. Together with financial futures markets and the insurance industry, they help to diversify risks across the community. Capital asset prices also reflect prospective economic developments, and thus help to collect information and share it across the community.

This information helps to inform investors, of investment and other key decisions taken by company directors, public officials and other agents.

The cost of capital is the minimum acceptable rate of return on new investments. The basic factors underlying the cost of capital for a firm are the degree of risk associated with the firm, the taxes it must pay, and the supply of and demand of various types of financing. The term cost of capital refers to the minimum rate of return a firm must earn on its investments so that the market value of the company's equity shares does not fall.

In estimating the cost of capital, it is assumed that, (1) the firms are acquiring assets which do not change their business risk, and (2) these acquisitions are financed in such a way as to leave the financial risk unchanged. In order to estimate the cost of capital, we must estimate rates of return required by investors in the firm's securities, including borrowings, and average 94

10. Discuss the role of an underwriter in managing an IPO.

New issues may include a 'green shoe' option that allows the underwriters to increase the offering, if demand is unexpectedly strong. IPOs tend to occur more frequently during a bullish stock market when potential investors are more interested in purchasing new stocks. They also occur more frequently when other investment opportunities are not as attractive. Like merchant bankers, underwriters too are required to seek registration and meet capital adequacy norms. Brokerage firms ask for allotments of IPO shares from securities firms underwriting the IPOs, so that they can offer IPO shares to individual investors. Brokerage firms may receive very small allotments and so they tend to make them available to their bigger clients. Stockbrokers may be sole proprietorships, partnerships or corporate bodies. They require, to be members of at least one stock exchange, meet capital adequacy standards, and registration by the regulatory authority.

11. Why is a stock exchange an important institution of the capital markets?

Secondary market activities take place at stock exchanges and over the counter (OTC) exchanges, through their members. The intermediaries to the activities are members/brokers at the exchanges, portfolio managers, investment advisers and transfer agents. World over, the outcry system of the trading ring is being replaced by the screen based trading system. The latter system provides increased transparency, improved liquidity and lower settlement risk and greater information.

The cost of capital plays an important role in primary market activity. As the cost of capital increases, issuers should be inclined to issue less capital. Intuitively, equity issuance activity should be closely related to the market price of equity, which is one measure of cost. Higher prices should promote more issuances; lower prices would hinder issuance.