

**NAME: DUMBE OLIVER WULI ELIKANA**

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**QN 1. Why is the cost of capital the minimum acceptable rate of return on an investment?**

The cost of capital is the cost of a company's funds (both [debt](https://en.wikipedia.org/wiki/Debt) and [equity](https://en.wikipedia.org/wiki/Equity_(finance))), or, from an investor's point of view the [required rate of return](https://en.wikipedia.org/wiki/Required_rate_of_return) on a portfolio company's existing securities It is used to evaluate new projects of a company. It is the minimum return that investors expect for providing capital to the company, thus setting a benchmark that a new project has to meet.

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. Minimum acceptable rates of return are also known as hurdle rates, cut-off rates or benchmarks.

Minimum Acceptable Rate of Returns is useful way of weighting up whether an investment is worth the risks associated with it. Through MARR, an investor can calculate different aspects of the investment opportunity including the opportunities for expanding operation and rate of return on investments.

Minimum Acceptable Rate of Return helps the investors to determine whether they can invest or put out of the investment. (By Shannon P. Partt and Roger J. Grabowski 2014 Cost of capital)

**QN 2. How is the cost of debt capital ascertained? Give example**

The cost of debt refers to how much money it costs a firm when using debt for financing. Whenever anyone takes out debt, they must repay interest on the debt. The interest rate associated with the debt then is the cost of debt because the interest rate on the debt is how much money the firm must pay to obtain the debt.

The cost debt of capital is the rate a company pays on its debt, such as bonds and loans. Cos of debt is one part of a company’s capital structure, with the others being cost of equity. To calculate the cost of debt invoices finding the average interest paid on all of a company’s debts.

**For example**, Firm A wants to start a construction project. In order to finance the construction project, Firm A must take out a $100,000 loan at a 10 percent interest rate. The cost of debt then is 10 percent in order to obtain the $100,000, the firm must pay the lender an additional 10 percent. Often, companies’ measure cost of debt as after-tax cost of debt because interest expenses on debt are tax deductible.

Determine the interest rate a company is paying on its debt and how long the company has to pay the debt. In our example, if the company has two years to pay back the debt,

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).

**For 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: 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.

**QN3 How will you calculate the cost of preference share capital?**

Cost of Preference Share Capital**:** An amount paid by company as dividend to preference shareholder.

Preference share is a small unit of a company’s capital which bears fixed rate of dividend and holder of it gets dividend when company earn profit. Dividend payable is not a tax deductible amount. So, there is no tax adjustments required for comparing with cost of debt.

In adjustment case cost of preference share capital will change and can be calculated in the following way:

Kp = D/NP

**Where**

D = Annual preference dividend

NP = Net proceed =per value of preference share capital – discount – cost flotation

Or NP = per value of preference share capital + premium

KP denotes cost of preference share capital, So KP is equal to dividend divide by market price of preference shares or net proceeds multiply by 100. If there are new shares, than the formula will be dividend divided by net proceeds or market price of preference shares mines Flotation cost.

Formula for Cost of Preference Share are divided into two and they are illustrated below

Irredeemable preference share

Kp = Dp/NP

**And**

Redeemable preference share

Kp = Dp + (RV – NP)/n)/ (RV + NP)/2

**Where,**

Kp = Cost of Preference Share

Dp = Dividend on preference share

NP = Net proceeds from issue of preference share (Issue price – Flotation cost)

RV = Redemption Value

N = Period of preference share.

**Example:**A company issues 20, 000ssp irredeemable preference share at 8% whose face value is Rssp.50 each at 4% discount. Find out the Cost of Preference Share Capital.

**Solution:**Dividend on Preference share (Dp) = 50\*8/100 = 4

Discount = 50\*4/100 = 2

Net Proceeds (NP) = 50-2 = 48

Kp = Dp/NP

=4/48

**= 8.33%**

**QN 4 Use the following details to calculate Weighted Average Cost of Capital.**

The weighted average cost of capital (WACC) is the rate that a company is expected to pay on average to all its security holders to finance its assets. The WACC is commonly referred to as the firm’s cost of capital. It is used by the companies to raise funds from different sources of finance and doing business with those funds. Companies make their investment decisions and evaluate projects with similar and dissimilar risks.

Equity (Expected dividend 12%) Rs.1000000

Tax Rate 50%

10% Preference Rs.500000

8% Loan Rs.1500000

**Solution**

WACC = (E/V)\*Ke+ (D/V)\*Kd\*(1-Tax %) Or WACC = E/V\* Re + D/V \* Rd \* (1-Tc)

Where Ke=Cost of Equity, (Rs 1000000),

E=market cost of Equity (Rs 500000),

V=market value of Equity + market value of debt (Rs 1500000+500000)

D=market value of debt (Rs 1500000),

Kd= Cost of debt (Rs 8%)

Tc = Corporate tax rate (Tax50%)

WACC= (500000/2000000) \*1000000 + (1500000/2000000)\*1500000 \*(1-50%)

WACC= (0.25 \* 1000000/100%) + (0.75\* 1500000/100%\* (100-50/100)

WACC= (0.25 \* 10.000) + (0.75 \*15.000\*0.5)

WACC= 2.5 + 5.625

WACC= 8.125

WACC=8.13%

**QN 5 What is Net present value and how does it change by variation in discount rate.**

According to Will Kenton 2019, Net Present value (NPV) is the difference between the value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyze the profitability of projected investment or project.

The outflows will have negative value while the inflows will have positive values. If the present value is greater than outflows, we get positives NPV and if the inflow is greater than the outflows, we get negative. Positive NPV means a net gain in value maximization and the project is acceptable and vice versa.

NPV is the absolute value of a net gain in future and can be treated as a net addition to the value of the firm. It’s also called unrealized capital gain. It present maximum price that a firm should pay for foregoing the right to undertake the project or tell the project to some other party. It also present the amount a firm could raise from market at given rate of interest, in addition to the initial cost of the project and ensure that this will be paid off from the receipts of the project.

NPV change by variation in discount rate as at zero rate of interest the NPV is maximum at certain level as the rate of interest increase, the NPV gradually falls. The rate of interest of the NPV is zero and beyond that, it is even negative. If the discount rate changes, NPV produces different results for the same project because it calculate present value of cash inflow less present value of cash outflow.

The discount rate may increase alternative investment expect in the future since the cost of an equipment is reduced thus more capital is gain, this can be seen when annual discount rate is turned periodic or monthly. In case the NPV is positive, the equipment should be purchased and if the present value of these cash flows had been negative because the discount rate was larger or the net cash flows were smaller the investment should have avoided.

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

Net Present value (NPV) is the difference between the value of cash inflows and the present value of cash outflows over a period of time. NPV is used in capital budgeting and investment planning to analyze the profitability of projected investment or project meanwhile Profitability Index it’s the ratio between present value of inflows and present value of outflows.

Net present value (NPV) is the present value of all future cash flows. Generally there is an initial investment which is treated as a negative cash flow in time period zero however profitability index is the ratio of the present value of future cash flows divided by the initial investment. For example, the profitability index was 1.10 then we could say the present value of the investment net cash flows is 10 percentages (10%) more than the initial investment. ( Rick Murphree, BA Finance , The University of Tennessee 1972).

Net present value is calculated as the present value of flows - present value of outflow with cash flows discounted at a rate (time value of money) while profitability index is the present value of all future cash flows / present value of outflow (initial investment). According to Kartink Suriyanarayana.

The NPV method user are reinvestment rate close its current cost of capital, the reinvestment assumption of NPV method are more realistic than those associated with others methods like PI and IRR. Inclusion NPV is good method for evaluating mutually exclusive projects than other method.

Profitability Index is the best method and appropriate technique for investors to use during decision making. This method is modification of NPV used for comparing relative profitability between different projects and it’s used for calculating profit of many projects. PI has no limitations unlike net present Value and IRR methods.

**QN 7 What is the limitation for using NPV and IRR method in practices? Give your assessment.**

Net Present value (NPV) is the difference between the value of cash inflows and the present value of cash outflows over a period of time.

Internal Rate of Return: It is the rate of discount that equalizes the present value of inflows with the present of outflows.

Therefore, the limitations of Net present value and Internal Rate of Return are as follows:

Net Present Value method uses guesswork about the firm’s cost of capital. Assuming a cost of capital that is too low will result in making suboptimal investments. Assuming a cost of capital that is too high will result in forgoing too many good investments. NPV method is not applicable when comparing projects that have differing investment amounts. A large project that requires more money should have a higher NPV but does not make it better investment compared to a smaller project.

NPV method is not useful for compering two projects of different size because its results are in dollars the size of NPV output is determine mostly by the size of the input.

It is not possible to know in advance the rate of interest at which discounting is to be done. NPV may not be appropriate if the rate of interest has changed.

It may lead to wrong decision making especially when limited funds are available and we have to choose between different options.

(By James Woodruff 200, Capital Budgeting Basics and Investopedia: Net Present value).

The limitation for using IRR method is that, it does not account for the project size when comparing projects. Cash flows are simply compared to the amount of capital outlay generating those cash flows. This can be troublesome when two projects require a significantly different amount of capital outlay, but the smaller project returns a higher IRR.

It ignores future costs because the method concerns of itself with the projected cash flows generated by a capital injection and ignores the potential future costs that may affect profit. For example, future fuel and maintenance costs might affect profit as fuel prices fluctuate and maintenance requirements change.

Internal rate return ignores reinvestment rates during calculation of the value of future cash flows. It makes an implicit assumption that those cash flow can be reinvested at the same rate as the IRR. That assumption is not practical as the IRR is sometimes a very high number and opportunities that yield such a return are generally not available or significantly limited.

The NPV method user are reinvestment rate close its current cost of capital, the reinvestment assumption of NPV method are more realistic than those associated with IRR. Inclusion NPV is good method for evaluating mutually exclusive projects than IRR method

(By Philippe Lanctot : Business trade published in 1990 and Investopedia internal rate of return and Accounting tools Internal rate of return).

**QN 8. What purpose do capital markets serve?**

Capital market is an organized market mecha­nism for effective and efficient transfer of money capital or financial resources from the investing class to the entrepreneur class in the private and public sectors of the economy. H. T. Parikh states that and I court ‘By capital market I mean the market for all finan­cial instruments, short-term and long-term as also commercial, industrial and government papers’. Capital market is a market for medium and long term funds. It includes all the organizations, institutions and instruments that provide long term and medium term fund. The common instruments used in capital market are shares, debentures, bonds, mutual funds, public deposits and so on.

The purpose for capital market is as follows:

Capital markets link saving and investment process and market transfers’ money from savers to entrepreneurial borrowers. In other words capital markets bring savers and borrowers together by sell­ing securities to savers and lending that money to the borrowers hence it serves as mediator.

Capital and money markets are the means for allocating the savings in the most desirable way so that we can achieve the desired national objectives and priorities. It facilitates the efficient pro­duction of goods and services hence it contributes to the society’s wellbeing and raises the standard of living of borrowers and others in the economy.

Capital markets or financial markets satisfy the needs of both savers and borrowers. In financial markets, there are different financial instruments which are bought and sold daily. These instruments differ in liquidity, marketability, maturity, risk, return and tax conci­sions. Investors differ in their attitudes towards risk, return and liquidity.

The financial markets enable financing of not only physical capital formation but also of consumption expenditure. Capital / Financial markets man­age the flow of funds not only between individual savers and investors but also between institutional savers and investors.

Capital markets raise funds through shares, debentures and bonds from individuals, institutions, central government, state government, local self-government, and private corporate sector which constitute the new issue.

The capital market plays a significant role in the financial system. Savings and investments are vital for economic development of an economy. General units which save and invest in different sectors, makes capital market provides a bridge by which sav­ings of surplus units are transmitted into long-term investments by deficit unit.

The Capital markets not only help in transfer of savings in new industry but also provide oppor­tunities for financial investment so as to earn in­come on surplus. In other words, these markets perform both financial and nonfinancial functions.

The capital market plays a vital role in mobilizing the savings and making them available to the en­terprising investors. The primary capital market helps Govt. and industrial concerns in raising funds by issuing various kinds of securities. The second­ary market provides liquidity to the outstanding securities.

An active capital market through its price mechanism allocates the scarce financial resources to the most productive uses at a low cost. The sys­tem of allocation of funds works through incen­tives and penalties hence it serves as mobilizer of scattered resources. (By Al-faki M. 2006.The Nigerian capital market and socio-economic development).

**QN 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–tern fund?**

Debt is an amount of money borrowed by one party from another. Many firms or companies use debt as a method for making large purchases that they could not afford under normal circumstance. A debt arrangement gives the borrowing party permission to borrow money under the condition that it is to be paid back at a later date. Debt can be represented by bonds loans, mortgage and commercial paper as some examples of debt.

Equity is used when referring to an ownership interest in a business which will include stockholders equity or owner’s equity. Occasionally, equity is also used to mean the combination of liabilities and owners’ equity.

Debt financing is when the company gets a loan, and promises to repay it over a set period of time, with a set amount of interest. The loan can come from a lender, like a bank, or from selling bonds to the public. Debt financing may at times be more economical, or easier, than taking a bank loan.

Equity financing refers to the issuing of shares to investors in order to support a company’s business operations. This mode of financing is especially important during a company’s start-up stage. In this method of financing, investors make gains when there is an increase in the share price, as well as through the distribution of dividends by the company in which the investor has purchased a stake.(According to Dr. Fong Chun Cheong).

In long term goals of the business, it’s important to think about what you actually hope to achieve in the long-run. What is the purpose of starting your business? Where do you hope for your business to be in ten years? Twenty years? By answering these questions, it will be easier for a company to decide how financially entrenched in the business the company will actually be.

For the sake of controlling firm business, you need to make sure outvoting of all other stakeholders is done and many business owners will maintain certain percentage of ownership and sell the remaining percentage.

The amount of capital required by the company will always determine the means of raising money. It doesn’t look good to borrow venture capital if the company business needs small financial injection.

Available interest rates, the opportunity cost of choosing equity over debt finance will be largely determined by how much the company will actually need to pay to the borrowed money. If the business has access to low-interest rates or specialty loans, the total cost of borrowing will be relatively lower. It will be a good idea to compare multiple options before making any final decisions.

Borrowing requirement, lenders want to see some hard numbers on paper such as your debt-to-equity ratios, fixed monthly expenses, overall business plan, and various others. These requirements can often be rather rigid, that is why companies business needs to plan its financing strategy in advance.

Another variable is current business structure. If the business is already formally structured as a partnership for example, this may complicate the process of selling equity. The company should agree with the investor certain ownership and the profit by doing so, it allow the big investor or venture capitalist to share the company.

Access to equity markets if the company hopes to finance its business via equity and it’s so important to have access to people who are actually interested in buying. The company needs to develop business plan that meets with a wide range of individuals, and also be willing to make compromises. For some business owners, the time it takes to do this is justified by the lack of debt that only equity financing can provide. For others, traditional lending is a more appealing option.

In conclusion, the about factors should be consider when the company is deciding to go for debt or equity financing borrowing with its importance.With equity financing, the company lose some control over your business, but it can continue operating without debt. With debt financing, the company will increase its future liabilities, but the future of the business will remain in it operation management. As you can see, both decisions have clear appeals and trade-offs. Many business owners also use a mixed financing model that is better tailored to their specific needs. Regardless, be sure to remember these seven factors before making any permanent decisions.

**QN 10. Discuss the roles of an underwriter in managing an IPO**?

According to Johnson 1988**,** an underwriter is any party that evaluates and assumes another party's risk for a fee. The fee is often a commission, premium, spread, or interest. Underwriters are critical to the financial world including the mortgage industry, insurance industry, equity markets, and common types of debt security trading. A lead underwriter is called a book runner.

IPO is initial Public Offering. An IPO is underwritten by one or more investment banks who also arrange for the shares to be listed on one or more stock exchanges. Wikpedia

Underwriters are critical to the mortgage industry, insurance industry, equity markets, and common types of debt security trading.

Therefore, the roles of underwriter in capital market are as follows:

It raises money for expansion and increase market value- due to the increased liquidity and available information.  
They attract and retain employees (general traded securities are good compensation for the employees).  
Enlarge and diversify personal holdings that make more return hence there is high chance for growth.  
It provides liquidity for the shareholders (the shares are subject to the general public).  
Enhance company’s reputation (public listed companies are more credible than private held ones) because they are respected and exposure.  
Facilitate future mergers and acquisitions by using securities instead of cash simply because there is potentially in return for shares of stock.  
Enable cheap access to capital and financial markets. Attract and retain better management and employees through liquid equity participation

Create multiple financing opportunities like equity, convertible debt and cheaper bank loan. (By Johnson J Miller R. Investment Banker Prestige and Financial Management books published in1988).

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

Stock exchange is a structured market where bonds, shares, government securities and debentures of trading units are been repeatedly transacted. Stock exchange is a place that provides buyers and sellers to transact the transactions.

Capital market is a market for medium and long term funds. It includes all the organizations, institutions and instruments that provide long term and medium term fund. The common instruments used in capital market are shares, debentures, bonds, mutual funds, public deposits and so on.

Stock exchange indicates the health of the economy this is to say, good or bad health of the economy. Increase and decrease in the prices of shares indicated the path of growth or downtrodden of the economy, like if the prices of share are rising it means that country is running on the path of growth and prosperity. Stock exchange is the focal point for primary and secondary market since it is an organized security market hence it provides marketability and price continuity for shares and also helps in fair evaluation of securities.

It is an important institution of the capital markets due the following reasons:

Since stock exchanges are prearranged souk where members of the organization meet/gather to trade company stocks or any form of securities, the members may act either as agents for their customers or as a principals for their own account.

It raises capital for the business for startup companies. This source helps many companies today to expand and create more opportunities for the investors to run business without any limitation.

They also facilitates for the issue and redemption of securities and other financial instruments which includes the payment of dividend and income for the growth of the company.

The stock exchange mobilizes savings and channel resources which remain scattered for further investment. Stock exchanges tap the new resources and encourage a broad based investment in the capital structure of industries thus it is an imperative organ in a present society that manages modern democratic economy.

The stock exchange is a sector which benefits the entire economy, entire community like producers, savers, investors and many in a variety of way.

Stock exchange also provides opportunities to the savers like small investors to store the value as provisional domicile of purchasing power or as a permanent abode of purchasing power in the form of financial assets.

It also helps the savers who put their savings in commercial firms and non-banking financial intermediaries because these institutions avail themselves from services of stock exchange to invest the money and share profits.

Stock exchange helps as barometer of the economy where share prices rise and fall depend largely on the forces of economy. Shares prices tend to rise or remain stable when companies and the economy is general show signs of stability and growth. A recession, depression or financial crisis could eventually lead to a stock market crash before stock indexes can be an indicator of general trend in the economy. (By Barua S K & Raghunathan V 1986 Inefficiency of the Indian Capital Market).

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