VI.6.1 Handling Money: Finance Management

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Assignment of Finance Management

Q- I) Pick any five topics from the following and explain it in detail.

1) **Cost of Capital**

Cost of capital is the required return necessary to make a capital budgeting project, such as building a new workplace, new warehouse, new manufacturing plant, etc worthwhile. When analysts and investors discuss the cost of capital, they typically mean the weighted average of a firm's cost of debt and cost of equity blended together.

The cost of the capital metric is used by companies internally to judge whether a capital project is worth the expenditure of resources, and by investors who use it to determine whether an investment is worth the risk compared to the return. The cost of capital depends on the mode of financing used. It refers to the cost of equity if the business is financed solely through equity, or to the cost of debt if it is financed solely through debt. It encompasses the cost of both equity and debt, weighted to the company's preferred or existing capital structure, known as the weighted average cost of capital.

Example- Let's assume Company CIC is considering whether to renovate its warehouse systems. The renovation will cost ₹50 Crores and is expected to save ₹10 Crores per year over the next 5 years. There is some risk that the renovation will not save Company CIC a full ₹10 Crores per year. Alternatively, Company CIC could use the ₹50 Crores to buy equally risky 5-year bonds in XYZ Co., which return 12% per year.

The renovation is expected to return 20% per year (₹10,00,00,000 / ₹50,00,00,000), the renovation is a good use of capital because the 20% return exceeds the 15% required return CIC could have gotten by taking the same risk elsewhere.

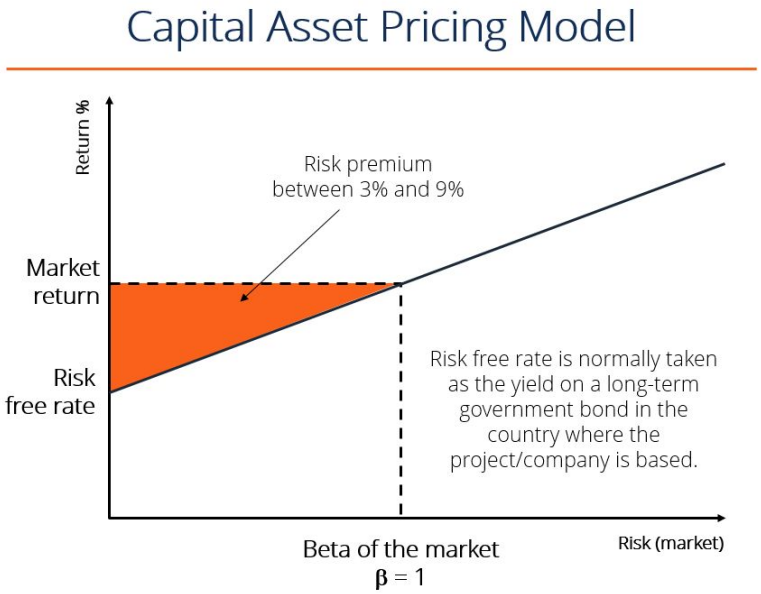
The return an investor receives on company security is the cost of that security to the company that issued it. A company's overall cost of capital is a mixture of returns needed to compensate all creditors and stockholders. This is often called the weighted average cost of capital and refers to the weighted average costs of the company's debt & equity.

Note- The cost of capital is an important component of business valuation work. Because an investor expects his or her investment to grow by at least the cost of capital, cost of

capital can be used as a discount rate to calculate the fair value of an investment's cash flows.

2) CAPM

The Capital Asset Pricing Model (CAPM) is a model that describes the relationship between the expected return and the risk of investing in security. It shows that the expected return on a security is equal to the risk-free return plus a risk premium, which is based on the beta of that security.



Source- Corporate Finance Institute

Formula-

Expected Return on Security = Risk-free Rate + (Beta Market Risk Premium)*

*i.e. 12.5% = 2.5% + (1.25*8.0%)*

also, Risk Premium = (Expected Return of the Market - Risk-free Rate)

Expected Return- It is a long-term assumption about how an investment will play out over its entire life.

Risk-free Rate- It corresponds to the country where the investment is being made, and the maturity of the bond should match the time horizon of the investment. The professional convention, however, is to typically use the 10-year rate no matter what, because it's the most heavily quoted and most liquid bond.

Beta- It is a measure of a stock's risk (volatility of returns) reflected by measuring the fluctuation of its price changes relative to the overall market.

Market risk Premium- It represents the additional return over and above the risk-free rate, which is required to compensate investors for investing in a riskier asset class. Put

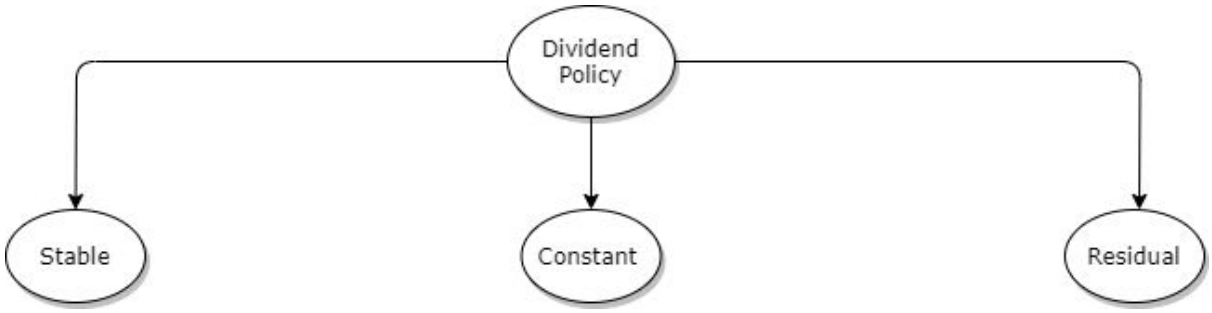
another way, the more volatile a market or an asset class is, the higher the market risk premium will be.

The CAPM formula is used for calculating the expected returns of an asset. It is based on the idea of systematic risk (otherwise known as non-diversifiable risk) that investors need to be compensated for in the form of a risk premium. A risk premium is a rate of return greater than the risk-free rate. When investing, investors desire a higher risk premium when taking on more risky investments.

3) Types of Dividend Policy

A dividend policy is a policy a company uses to structure its dividend payout to shareholders. Dividends are often part of a company's strategy. However, they are under no obligation to repay shareholders using dividends.

There are mainly three types of Dividend Policies and they are described below-



❑ Stable Dividend Policy-

- Easiest & most commonly used
- Steady and predictable dividend payout
- Earnings are up or down, investors receive a dividend
- The goal is the long-term growth of the company
- This approach gives the shareholder more certainty concerning the amount & timing of the dividend

❑ Constant Dividend Policy-

- The drawback of the stable policy is that investors may not see a dividend increase in the boom year
- In it, the company passes % of its earnings as dividends every year
- Investors experience the full volatility of company earnings
- If earnings are up, investors get a larger dividend; if earnings are down, investors may not receive a dividend
- It is difficult to plan financially when dividend income is highly volatile

❑ Residual Dividend Policy-

- It is also a highly volatile
- Some investors see it as the only acceptable dividend policy
- With it, the company pays out what dividends remain after the company has paid for capital expenditures (CAPEX) and working capital
- It makes the most sense in terms of business operations
- Investors do not want to invest in a company that justifies its increased debt with the need to pay dividends

4) Capital Budgeting Techniques

Capital budgeting is a set of techniques used to decide which investments to make in projects. There are a number of capital budgeting techniques available, which include the following:

- *Discounted Cash Flows*- Estimate the amount of all cash inflows and outflows associated with a project through its estimated useful life, and then apply a discount rate to these cash flows to determine their present value. If the present value is positive, accept the funding proposal.
- *Constraint analysis*- Examine the impact of a proposed project on the bottleneck operation of the business. If the proposal either increases the capacity of the bottleneck or routes works around the bottleneck, thereby increasing throughput, then accept the funding proposal.
- *Discounted payback*- Determine the amount of time it will take for the discounted cash flows from a proposal to earn back the initial investment. If the period is sufficiently short, then accept the proposal.
- *Internal rate of return*- Determine the discount rate at which the cash flows from a projected net to zero. The project with the highest internal rate of return is selected.
- *Breakeven analysis*- Determine the required sales level at which a proposal will result in positive cash flow. If the sales level is low enough to be reasonably attainable, then accept the funding proposal.
- *Real options*- Focus on the range of profits and losses that may be encountered over the course of the investment period. The analysis begins with a review of the risks to which a project will be subjected, and then models for each of these risks or combinations of risks. The result may be greater care in placing large bets on a single likelihood of probability.
- *Accounting rate of return*- This is the ratio of an investment's average annual profits to the amount invested in it. If the outcome exceeds a threshold value, then the investment is approved.

5) **Working Capital-**

Working capital, also known as net-working capital (NWC). It is the difference between a company's current assets, such as cash, accounts receivable customers unpaid bills, inventories of raw materials & finished goods, and its current liabilities, such as accounts payable.

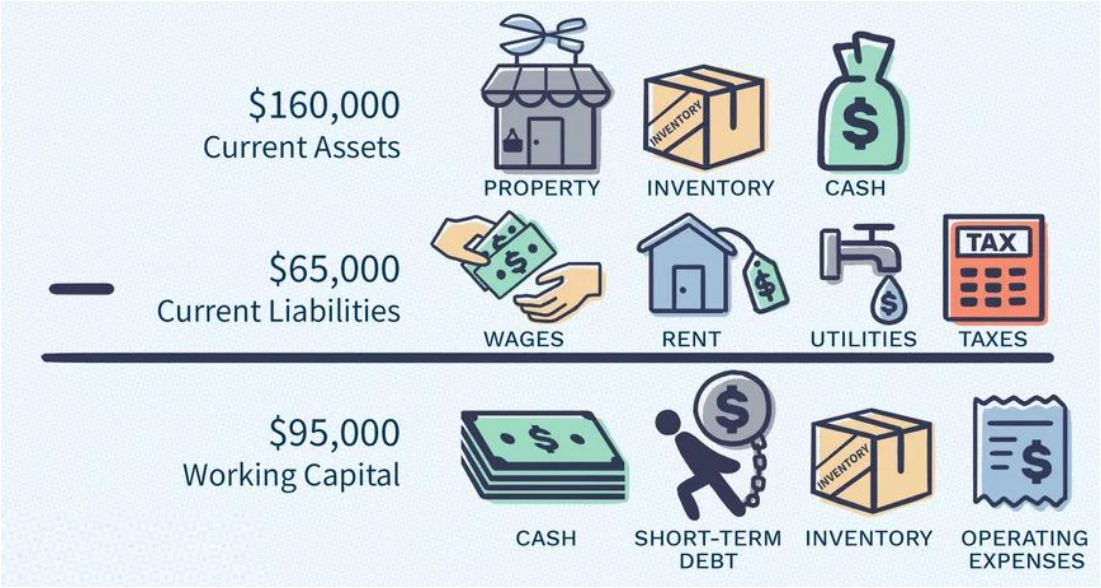
Net operating working capital is a measure of a company's liquidity and refers to the difference between operating current assets and operating current liabilities. In many cases, these calculations are the same and are derived from company cash plus accounts receivable plus inventories, fewer accounts payable, and less accrued expenses.

It is a measure of a company's liquidity, operational efficiency, and its short-term financial health. If a company has substantial positive working capital, then it should have the potential to invest and grow. If a company's current assets do not exceed its current liabilities, then it may have trouble growing or paying back creditors, or even go bankrupt.

Working capital is calculated by using the current ratio, which is current assets divided by current liabilities. A ratio above 1 means current assets exceed liabilities, and generally, the higher the ratio, the better.

$$Current\ Ratio = \frac{Current\ Assets}{Current\ Liabilities}$$

Example- A hair salon with assets of $160,000 and liabilities of $65,000



Source- Investopedia

Q- II) Pick any one numerical from the following.

Numerical on NPV, PI and Payback method

1) Calculate the net present value of a project which requires an initial investment of $243,000 and it is expected to generate a net cash flow of $50,000 each month for 12 months. Assume that the salvage value of the project is zero. The target rate of return is 12% per annum. Also, determine the Profitability Index and Payback Period.

Solution-

Given-

Initial Investment- $243,000

Net Cash flow per month- $50,000

No. of months- 12

Discount Rate- 12% per annum = $\frac{12\%}{12\ month} = 1\%$ per month

Net Present Value (NPV)- $\frac{R_1}{(1+i)^1} + \frac{R_2}{(1+i)^2} + \frac{R_3}{(1+i)^3} + \ldots\ldots$ - Initial Investment

where,

i = discount rate

R_1 = Net cash inflow during the first period

R_2 = Net cash inflow during the second period

so on…

Here,

$$\begin{aligned}
\text{NPV} &= \$50{,}000 \times (1 - (1 + 1\%)^{-12}) \div 1\% - \$243{,}000 \\
&= \$50{,}000 \times (1 - (1.01)^{-12}) \div 0.01 - \$243{,}000 \\
&\approx \$50{,}000 \times (1 - 0.887449) \div 0.01 - \$243{,}000 \\
&\approx \$50{,}000 \times 0.112551 \div 0.01 - \$243{,}000 \\
&\approx \$50{,}000 \times 11.2551 - \$243{,}000 \\
&\approx \$562{,}754 - \$243{,}000 \\
&\approx \$319{,}754
\end{aligned}$$

And, Profitability Index (PI)- $\frac{PV\ of\ Future\ Cash\ Flows}{Initial\ Investment}$

$$\begin{aligned}
\text{PI} &= \frac{\$562{,}754}{\$243{,}000} \\
&= 2.316
\end{aligned}$$

Also, Payback Period- $\frac{Initial\ Investment}{Net\ Cash\ flow}$

$$PP = \frac{\$243,000}{\$50,000}$$

$= 4.86$

≈ 5 months

Therefore,

$NPV \approx \$319,754$ $PI = 2.316$ $PP \approx 5$ *months*

Date- May 6th, 2020
Day- Wednesday