



FINANCE COMPENDIUM

2024 -2025

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FINANCIAL TERMS

Market Capitalization

Market capitalization, or "market cap," refers to the total value of a publicly traded company's outstanding shares of stock. It is calculated by multiplying the current share price by the total number of outstanding shares. Here's a breakdown:

- **Formula:** Market Cap = Current Share Price × Total Outstanding Shares.
- **Indication:** Reflects the company's size and market value, offering a snapshot of its market position.
- **Categories:**

Large-Cap :

- Companies with a market cap above ₹20,000 crore.
- These are well-established, financially stable companies, often leaders in their industries (e.g., Reliance Industries, TCS).

Mid-Cap:

- Companies with a market cap between ₹5,000 crore and ₹20,000 crore.
- Generally, companies with significant growth potential, possibly transitioning from small-cap to large-cap. They offer a balance between risk and return.

Small-Cap :

- Companies with a market cap below ₹5,000 crore.
- Typically newer or less established companies with higher risk but potentially higher rewards.
- More volatile and can experience significant price swings.



Significance:

- Helps investors gauge risk and growth potential; larger companies tend to be safer but may grow more slowly, while smaller companies might offer higher growth with increased risk.

Price-to-Earnings (PE) Ratio

- The Price-to-Earnings (PE) Ratio is a key valuation metric used to evaluate a company's stock by comparing its current market price per share to its earnings per share (EPS).
- It is calculated by dividing the stock's current market price by its EPS over a specified period, typically the last four quarters or the trailing twelve months (TTM).
- The PE Ratio indicates how much investors are willing to pay for each unit of the company's earnings.

$$PE = \frac{\text{Stock Price}}{\text{Earnings Per Share}}$$

- A higher PE ratio suggests that investors expect significant future growth and are willing to pay a premium, whereas a lower PE ratio might imply lower growth expectations or a potential undervaluation of the stock. However, it's crucial to consider industry-specific factors and compare PE ratios within the same sector for a more accurate assessment.
- PE ratios are particularly useful in industries where earnings are stable and predictable, such as consumer goods, financial services, and healthcare. In contrast, industries like technology or biotech, which have volatile or speculative earnings, might require additional metrics for a more comprehensive evaluation.

Earnings per Share (EPS)



Earnings per Share (EPS) is a significant financial metric that quantifies a company's profitability by reflecting the portion of its profit allocated to each outstanding share of common stock.

- EPS is essential for investors and analysts as it provides insight into a company's earnings on a per-share basis. It aids in comparing the earnings performance of various companies and in evaluating their relative financial strength and growth potential. Typically, a higher EPS is preferred by investors, as it indicates stronger profitability and the potential for higher dividends per share.

ROIC (Return On Invested Capital)

- **Definition:** ROIC is a financial metric that evaluates a company's efficiency and profitability by assessing how well it uses its investments in both debt and equity.

$$\text{Return on Invested Capital Formula} = \frac{\text{NOPAT}}{\text{Invested Capital}}$$

- **Purpose:** It measures the company's ability to generate returns on the capital invested in its operations, including both equity from shareholders and debt from lenders.
- **Calculation:** ROIC is calculated by dividing the company's net operating profit after taxes (NOPAT) by its total invested capital (equity + long-term debt).

Significance:

- A higher ROIC indicates more efficient use of capital and effective capital allocation.
- It helps investors and analysts assess the company's ability to generate profits from its invested capital.

Industries:

- Valuable for companies with significant investments in fixed assets or long-term projects like manufacturing, utilities, and telecommunications, to evaluate their profitability.

Working Capital Ratio (Current Ratio)



- **Definition:** The Working Capital Ratio, also known as the Current Ratio, is a financial metric used to evaluate a company's short-term liquidity and ability to meet its current obligations.

- **Calculation:** It is calculated by dividing the company's current assets by its current liabilities.
- **Formula:** Working Capital Ratio = Current Assets / Current Liabilities

Purpose:

- Determines if a company has enough short-term assets (such as cash and accounts receivable) to cover its short-term liabilities (such as accounts payable and short-term debts).

Interpretation:

- A ratio above 1 indicates that the company has more current assets than current liabilities, which is generally considered healthy.
- A ratio below 1 suggests potential liquidity issues, as the company may not have sufficient assets to cover its short-term obligations.

Significance:

- A higher ratio reflects good short-term financial health and suggests the company is in a stable position to handle its immediate financial obligations.

Dividend Payout Ratio

Definition: The Dividend Payout Ratio is a financial metric that measures the percentage of a company's earnings that is distributed to shareholders in the form of dividends.

$$\text{Dividend payout Ratio} = \frac{\text{Dividends}}{\text{Net Income}}$$

Purpose:

- Indicates the proportion of earnings that the company returns to shareholders as dividends.
- A higher ratio means the company is distributing a larger share of its profits as dividends, while a lower ratio suggests the company is retaining more earnings for reinvestment or other uses.

Significance:

- Used by investors to evaluate a company's dividend policy and its ability to sustain dividend payments over time.

Net Present Value (NPV)

Definition: Net Present Value (NPV) is a financial metric used to assess the profitability and viability of an investment or project by comparing the present value of expected cash inflows to the initial investment cost.

Interpretation:

- A positive NPV means the investment is expected to yield returns greater than its initial cost, indicating it is financially attractive.
- A negative NPV suggests the investment may not be economically viable, as the projected returns do not cover the initial expenditure.

Purpose:

- NPV is a key tool in capital budgeting and investment decision-making.
- It helps determine the potential value added by an investment and enables comparison with alternative investment opportunities to guide decision-making.

Ratio Analysis



Liquidity

The ability to pay short-term liabilities



Solvency

The ability to meet long-term liabilities



Profitability

The ability to generate profits from the available asset base



Efficiency

The ability to effectively employ resources into business operations



Valuation

The intrinsic value of a company

Solvency Ratios

Debt to Equity Ratio

- **Meaning:** This ratio measures the proportion of debt financing compared to equity financing. It provides insight into the financial structure and leverage of a company.
- **Implication:** A high debt-to-equity ratio indicates that a company is aggressively financing its growth with debt, which could lead to higher risk, especially during downturns.
- **Actual use:** Investors and creditors use this ratio to assess the financial risk. A lower ratio is generally seen as favorable, indicating a more conservative approach to debt.



Debt to Equity Ratio Formula

$$= \frac{\text{Total Liabilities}}{\text{Total Equity}}$$


Interest Coverage Ratio

- **Meaning:** This ratio assesses a company's ability to meet its interest obligations on outstanding debt. It's a critical measure of financial health.
- **Implication:** A higher interest coverage ratio suggests that a company can comfortably pay interest expenses out of its earnings, reducing the risk of financial distress.
- **Actual use:** A ratio below 1 indicates that the company is struggling to cover interest expenses, which could be a red flag for investors and creditors.

Interest Coverage Ratio Formula

$$\text{Interest coverage ratio} = \frac{\text{Earnings before interest and tax}}{\text{Interest expense}}$$

Equity Ratio

- **Meaning:** The equity ratio indicates the proportion of a company's assets that are financed by shareholders' equity, reflecting its financial stability.
- **Implication:** A higher equity ratio suggests that the company is less reliant on debt financing, which generally implies lower financial risk.
- **Actual use:** Companies with a high equity ratio are generally seen as less risky because they have a cushion of equity to absorb potential losses.

$$\text{Equity Ratio} = \frac{\text{Shareholders' Equity}}{\text{Total Assets} - \text{Intangible Assets}}$$

Debt Ratio

- **Meaning:** This ratio indicates the proportion of a company's assets that are financed through debt. It's an indicator of financial leverage.
- **Implication:** A higher debt ratio means a larger portion of a company's assets are financed by debt, which could increase financial risk if earnings are not sufficient to cover debt obligations.
- **Actual use:** A debt ratio below 0.5 is generally considered healthy, indicating that a company has more assets than liabilities.



The graphic shows the Debt Ratio Formula with a calculator icon on the left and a bar chart with a dollar sign on the right. The formula is: Debt Ratio Formula = Total Liabilities / Total Assets. Below the formula is an icon of a hand holding a money bag.

$$\text{Debt Ratio Formula} = \frac{\text{Total Liabilities}}{\text{Total Assets}}$$

Efficiency Ratios

Asset Turnover Ratio

- **Meaning:** The asset turnover ratio measures how efficiently a company is using its assets to generate revenue. It reflects the productivity of a company's asset base.
- **Implication:** A higher asset turnover ratio indicates that the company is efficiently using its assets to produce sales, which is a sign of good management.
- **Actual use:** Industries with low margins often have high turnover ratios, while capital-intensive industries typically show lower ratios.

Fixed Asset Turnover

$$\text{Fixed Asset Turnover} = \frac{\text{Net Sales}}{\text{Average Net Fixed Assets}}$$

$$\text{Average Net Fixed Assets} = \frac{\text{Beginning} + \text{Ending Net Fixed Assets}}{2}$$

Operating Performance

Inventory Turnover Ratio

- **Meaning:** This ratio evaluates how often inventory is sold and replaced over a specific period. It helps in understanding the efficiency of inventory management.
- **Implication:** A higher inventory turnover ratio indicates efficient inventory management, meaning the company is effectively converting inventory into sales.
- **Actual use:** A low ratio may indicate overstocking, obsolescence, or inefficiencies, while a very high ratio may suggest inadequate inventory levels, which could lead to lost sales

Inventory Turnover Ratio Formula



$$\text{Inventory Turnover Ratio} = \frac{\text{Cost of Goods Sold}}{\text{Average Inventory}}$$



Market Ratios

Dividend Yield Ratio

- **Meaning:** The dividend yield ratio shows the return on investment from dividends relative to the stock price, indicating how much cash flow an investor is getting for each dollar invested in an equity position.
- **Implication:** A higher dividend yield is attractive to income-focused investors, but it's also important to consider the sustainability of the dividends.
- **Actual use:** While a high dividend yield might be appealing, it could also indicate a declining stock price or an unsustainable dividend payout, warranting further investigation

$$\text{Dividend Yield} = \frac{\text{Annual Dividends Per Share}}{\text{Price Per Share}}$$

Price-to-Book (P/B) Ratio

- **Meaning:** This ratio compares a company's market value to its book value, providing insight into how the market perceives the value of a company's equity.
- **Implication:** A P/B ratio above 1 indicates that the market values the company more highly than its book value, often due to strong future growth prospects or intangible assets.
- **Actual use:** A very low P/B ratio might indicate undervaluation, but it could also signal fundamental problems with the company.

$$\begin{array}{ccc} \text{Price / Book} & & \text{Price per Share} \\ \text{Value Ratio} & = & \frac{\quad}{\quad} \\ \text{P/B Ratio} & & \text{Book Value per Share} \end{array}$$

$$\frac{\text{Book Value per Share}}{\text{Valuation}} = \frac{\text{Total Shareholders' Equity}}{\text{Total Outstanding Shares}}$$

Valuation

Liquidity Ratio

Current Ratio

- **Meaning:** The Current Ratio is a liquidity ratio that measures a company's ability to pay off its short-term liabilities with its short-term assets.
- **Implication:** It measures the company's ability to meet its short-term obligations. A higher ratio indicates a stronger liquidity position.
- **Actual Use:** It's used by creditors and investors to assess the liquidity of a company. A ratio above 1 indicates that the company has more current assets than current liabilities, which is generally seen as a positive sign.

Current Ratio Formula

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

Quick Ratio

- **Meaning:** The Quick Ratio is a stricter measure of liquidity than the current ratio, as it excludes inventory from current assets.
- **Implication:** It measures a company's ability to meet its short-term obligations without relying on the sale of inventory.
- **Actual Use:** It's particularly useful in industries where inventory may not be easily or quickly converted to cash. A quick ratio above 1 is usually seen as a good sign of liquidity.

Quick Ratio Formula

$$\text{Quick Ratio} = \frac{\text{Current assets} - \text{Inventory}}{\text{Current liabilities}}$$

Profitability Ratios

Return on Equity (ROE)

- **Meaning:** ROE is a profitability ratio that measures the amount of net income returned as a percentage of shareholders' equity.
- **Implication:** It measures how effectively a company is using its equity to generate profit. A higher ROE indicates a more efficient use of equity.
- **Actual Use:** Investors use ROE to assess how well their capital is being reinvested in the company. It's a key indicator of financial performance.

$$\text{Return on Equity (ROE)} = \frac{\text{Net Income}}{\text{Average Total Equity}}$$

Net Profit Margin Ratio

- **Meaning:** This ratio measures how much of every dollar of sales a company actually keeps in earnings.
- **Implication:** It measures the percentage of revenue that remains as profit after all expenses are deducted. A higher margin indicates a more profitable company.
- **Actual Use:** It's used to evaluate a company's efficiency at controlling costs. Higher margins typically indicate better control over costs relative to revenue.

$$\text{Net Profit Margin (\%)} = \frac{\text{Net Income}}{\text{Revenue}}$$

FINANCIAL MARKETS AND TRADING

IPO (Initial Public Offering)

- An IPO is the first sale of a company's shares to the public, making it a publicly traded entity.
- It allows the company to raise capital by selling shares to institutional investors and the general public through a stock exchange.
- IPOs provide new investment opportunities and allow companies to access funds for expansion and growth.



IPO Process

- **Purpose of an IPO:** Raise capital for the company by selling a portion of its ownership(shares) to investors.
- **Preparation and Regulatory Compliance:** Before going public, a company must undergo extensive preparation, including financial audits, restructuring, and drafting detailed disclosures about its business operations and financial health. The company is required to file a registration statement with the Securities and Exchange Board of India (SEBI), which includes a prospectus providing comprehensive information about the company's business model, management, financial statements, and potential risks.
- **Underwriting Process:** Investment banks play a crucial role in the IPO process by acting as underwriters. They help the company determine the initial price of the shares, buy the shares from the company, and then sell them to institutional and retail investors. The underwriters also assist in marketing the IPO, which may include a "roadshow" where company executives present their business case to potential investors.
- **Pricing and Share Allocation:** The price is typically set based on the company's valuation, market conditions, and investor demand. The shares are then allocated, often with priority given to institutional investors.
- **Market Debut:** Once the shares are priced and allocated, the company debuts on a stock exchange, marking the first day its shares are available for public trading. On IPO day, the share price can fluctuate significantly based on investor sentiment and market conditions.
- **Post IPO Considerations:** After the IPO, the company must meet public reporting requirements like quarterly earnings and material event disclosures, while balancing new shareholders' interests with long-term goals, often under the scrutiny of analysts and investors.

Some other ways through which a company can raise funds

1. Rights Issue

- Existing shareholders are offered the right to purchase additional shares at a discounted price, proportionate to their current holdings.

2. Follow-on Public Offering (FPO)

- After the IPO, a company can issue additional shares to the public to raise more capital.

3. Convertible Debentures

- These are debt instruments that can be converted into equity shares at a later date, giving investors the option to become shareholders.

4. Public Bond Issuance

- The company can issue bonds to retail investors, raising funds through debt that must be repaid with interest over time.



BULL Market:

- A bull market is a financial market condition where prices of securities, such as stocks, are rising or are expected to rise, typically sustained over a period.
- Indicators of Bull Market:
- Rising Stock Prices: A consistent upward trend in stock prices across major indices.
- High Investor Confidence: Increased buying activity and optimism about future economic conditions.
- Economic Growth: Indicators like rising GDP, low unemployment, and strong corporate earnings



BEAR Market:

- A bear market is a financial market condition where prices of securities, such as stocks, are falling or are expected to fall, typically sustained over a period.
- Indicators of Bear Market:
- Declining Stock Prices: A continuous downward trend in stock prices across major indices.
- Low Investor Confidence: Increased selling activity and pessimism about future economic conditions.
- Economic Slowdown: Indicators like falling GDP, rising unemployment, and weak corporate earnings.



BONDS:

- A bond is a fixed-income security issued by corporates or governments to raise capital. When you buy a bond, you're essentially lending money to the issuer for a specified period. In return, the issuer makes fixed-interest payments to you.
- **Different types of Bonds :**
 1. **Treasury Bonds:** Issued by government and are considered low risk. The issuer makes fixed-interest payments and returns the principal at maturity.
 2. **Municipal Bonds:** Issued by state or local government and are considered low risk. Interest may be tax-free for investors, depending on local policies.
 3. **Corporate Bonds:** Issued by corporations and considered high risk compared to treasury and municipal bonds, at the same time, provide higher yield.
 4. **Savings Bond:** Issued by governments, aimed to individual investors and are considered low risk but provides lower yields.



MUTUAL FUNDS:

- Mutual Funds pool money from multiple investors to invest in a diversified portfolio of stocks, bonds, or other securities.
- Managed by professional fund managers, these funds make investment decisions on behalf of the investors.
- They offer a convenient way to access a diversified portfolio with relatively small investments, where risks and returns are shared proportionally among all investors.

Types of Mutual Fund:

1. **Equity Funds:** Invest primarily in stocks, aiming for high returns with higher risk.
2. **Debt Funds:** Invest in fixed-income securities like bonds, offering lower risk and steady returns.
3. **Balanced or Hybrid Funds:** Combine equity and debt investments to balance risk and return.
4. **Index Funds:** Track a specific market index, like the Nifty 50, aiming to replicate its performance.

Expense Ratio

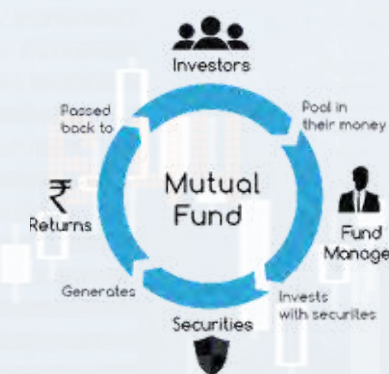
- The expense ratio is the annual fee charged by the mutual fund to cover its management, administrative, and other operating costs. A lower expense ratio can enhance net returns for investors.

Net Asset Value (NAV)

- NAV represents the per-share value of a mutual fund, calculated by dividing the total value of the fund's assets by the number of outstanding shares. It's updated daily based on the market value of the fund's holdings.

Performance Metrics

- Key metrics include alpha (excess returns), beta (volatility relative to the market), and Sharpe ratio (risk-adjusted return). Understanding these helps in evaluating fund performance.





Exchange Traded Funds(ETF):

- ETFs are investment funds that trade on stock exchanges, similar to individual stocks.
- They are designed to replicate the performance of a specific index, sector, commodity, or asset class.
- ETFs provide investors with a convenient and cost-effective way to gain exposure to a diversified portfolio of assets without needing to buy and manage individual securities. They offer liquidity, transparency, and flexibility in trading, making them popular among both individual and institutional investors.
- Examples of popular Indian ETFs include the “Nippon India ETF Nifty 50” and the “HDFC Gold ETF”.



Hedge Funds :

- Hedge funds are specialized investment vehicles that pool capital from accredited or institutional investors to implement a variety of advanced investment strategies.
- These funds employ a range of sophisticated techniques, such as long and short positions, derivatives, leverage, and arbitrage, aiming to generate returns in both rising and falling markets.
- Targeting high-net-worth individuals and institutional clients, hedge funds typically charge both management and performance fees based on the fund's success. While they offer the potential for higher returns, they also involve greater risk and operate with less regulatory oversight compared to traditional investment funds.



Short Selling :

- Short selling is a trading strategy where an investor borrows shares of a security and sells them in the market, anticipating that the price will decline. The investor then aims to repurchase the shares at a lower price and return them to the lender, profiting from the price difference.



- This strategy allows investors to profit from falling prices and can be used to hedge against long positions or speculate on market downturns. However, it carries higher risks, as potential losses are unlimited if the price increases instead of decreasing.
- Example: During the 2008 financial crisis, many investors short-sold shares of financial institutions like ICICI Bank and Housing Development Finance Corporation (HDFC), expecting their prices to drop due to market instability. Those who accurately predicted the downturn profited as the stock prices fell sharply.

Arbitrage

1. Arbitrage is a trading strategy where traders exploit price differences for the same asset in different markets or at different times by simultaneously buying and selling the asset to profit from the discrepancy.
2. The strategy aims to capitalize on market inefficiencies, requiring quick execution as these opportunities are typically short-lived.

Types of Arbitrage:

Spatial Arbitrage: Profiting from price differences in the same asset across different locations or markets.

Temporal Arbitrage: Exploiting price variations for the same asset at different times.

Statistical Arbitrage: Using mathematical models to identify and exploit short-term inefficiencies in the pricing of securities.

Capital Market Line (CML)

- The Capital Market Line (CML) graphically represents the relationship between the expected return and risk of a portfolio that combines both risky assets and a risk-free asset. It is depicted as a straight line starting from the risk-free rate of return, extending to the point where it tangentially touches the efficient frontier—representing the portfolio with the highest risk-adjusted return.
- The CML illustrates the optimal blend of risk and return for investors aiming to create a diversified portfolio. By showing the best possible return for a given level of risk, it guides investors in determining their ideal asset allocation. The slope of the CML is the Sharpe ratio, which measures the risk premium per unit of risk assumed by the investor.



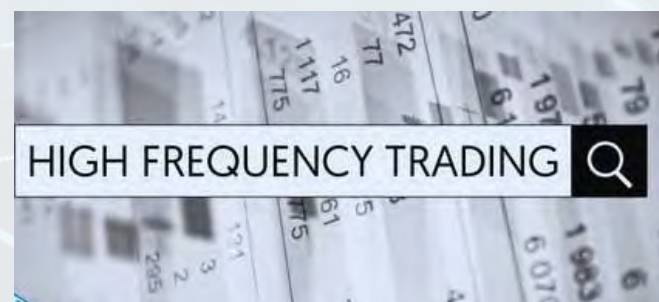
Capital Market Line (CML)

['kɑːpə-təl mɑːr-kət 'liːn]

A theoretical concept that represents all the portfolios that optimally combine the risk-free rate of return and the market portfolio of risky assets.

High-Frequency Trading (HFT):

- High-Frequency Trading (HFT) is a strategy that leverages advanced algorithms to execute a high volume of trades at extremely fast speeds.
- The primary objective is to profit from minor price differences and rapid market movements.
- HFT depends on cutting-edge technology and ultra-low-latency data connections, which has raised concerns about its impact on market stability and fairness.



Stock Split :

- A stock split is a corporate action where a company divides its existing shares into multiple new shares, increasing the total number of outstanding shares.
- This split does not alter the company's overall value or the proportional ownership of existing shareholders, as the total value of the shares remains the same.
- Companies typically implement stock splits to reduce the price per share, making the stock more accessible and appealing to a wider range of investors. It can also boost liquidity and trading activity. Common stock split ratios include 2-for-1, 3-for-1, and 5-for-1.
- Example: Tata Steel stock split was on July 28, 2022, when the face value of its shares was split from Rs 10 to Rs 1. This was a 1:10 split, meaning that one equity share was split into ten smaller shares.



Leveraged Buyout (LBO):

- An LBO is a financial arrangement in which a company is purchased using a substantial amount of borrowed capital (debt) alongside a smaller equity investment.
- Private equity firms or investor groups frequently employ LBOs to acquire companies, aiming to enhance their performance before selling them or taking them public.
- However, LBOs come with increased financial risk due to the significant debt burden incurred during the acquisition process.



Credit Default Swaps

- A credit default swap (CDS) is a financial swap agreement in which the seller compensates the buyer in the event of a debt default (by the debtor) or other credit event. That is, the seller of the CDS insures the buyer against some reference asset defaulting. The buyer of the CDS makes a series of payments (the CDS "fee" or "spread") to the seller and, in exchange, may expect to receive a payoff if the asset defaults.

Credit Default Swaps



How does a Credit Default Swap work?

Parties Involved:

- Buyer (Protection Buyer): This is usually an investor or a lender who owns a debt security and wants to protect themselves from the risk of default.
- Seller (Protection Seller): The seller, often a financial institution, agrees to compensate the buyer in case of a default.

Agreement terms:

- The buyer pays a periodic fee, known as the premium, to the seller.
- In return, the seller agrees to compensate the buyer if the borrower defaults.

Default event:

- If the borrower defaults, the protection seller is obligated to pay the buyer the face value of the debt or the difference between the face value and the market value of the debt.

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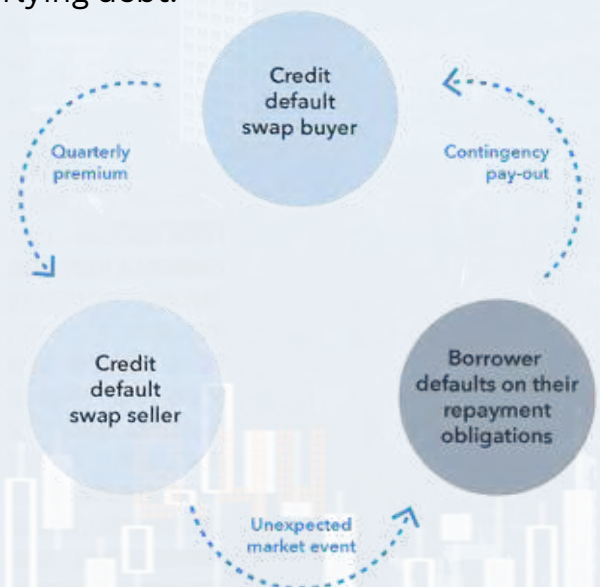
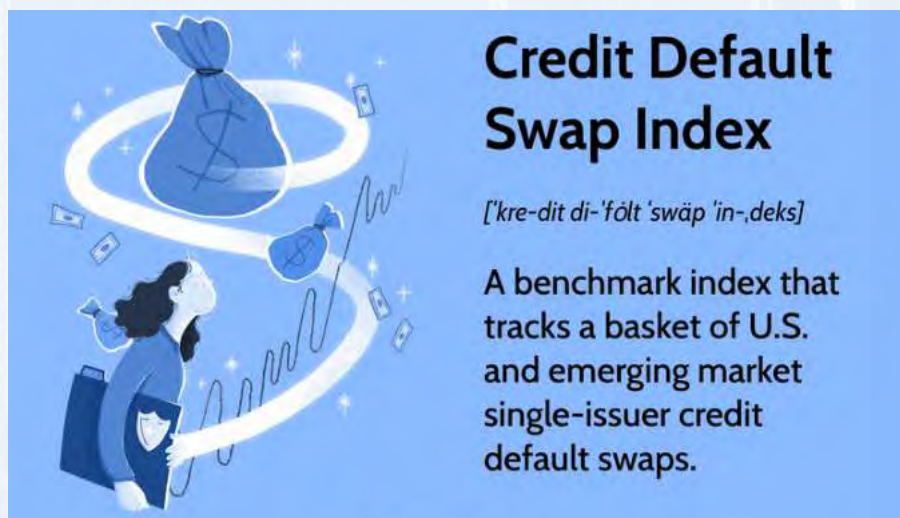
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Default event:

- If the borrower defaults, the protection seller is obligated to pay the buyer the face value of the debt or the difference between the face value and the market value of the debt.

Significance of Credit Default Swaps

- Risk mitigation: CDS provides a way for investors to mitigate the risk of holding debt by transferring it to another party.
- Liquidity in the Market: CDS trading enhances market liquidity, allowing investors to buy or sell protection against default without selling the actual bond.
- Speculation: Some market participants use CDS for speculative purposes, betting on the creditworthiness of a borrower without owning the underlying debt.



Sunk Cost:

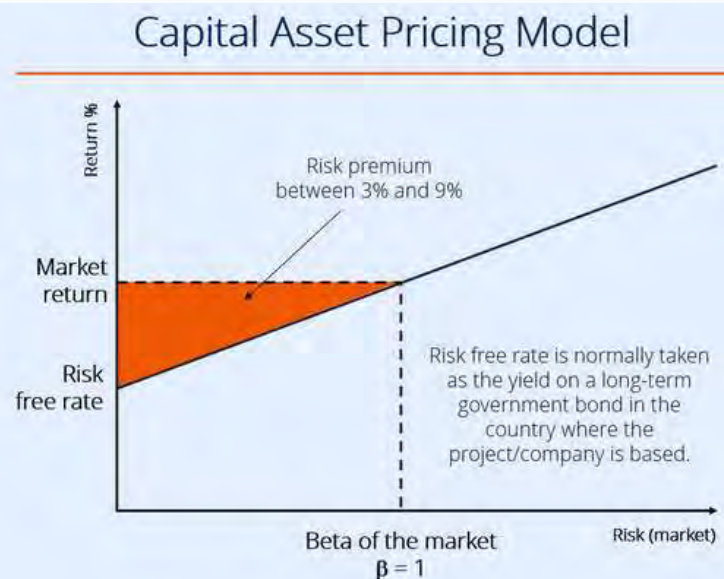
- A sunk cost is an expense or investment that cannot be recovered. When making business decisions, it's crucial to ignore sunk costs. Recognizing them helps prevent the "sunk cost fallacy," where individuals persist in unproductive ventures due to past investments. Instead, decision-makers should focus on maximizing future benefits.



Financial Models and Theories

Capital Asset Pricing Model (CAPM)

1. Capital Asset Pricing Model (CAPM): CAPM is a financial model used to estimate the expected return of an investment by considering the risk associated with the investment and the overall market return.
2. Risk-Return Trade-off: CAPM posits that investors are compensated for taking on additional risk. It assumes that higher returns are expected by investors for bearing greater systematic risk, which is the risk linked to the entire market rather than the risk specific to a particular investment.



$$\text{Cost of Equity } (k_e) = r_f + \beta (r_m - r_f)$$

- r_f → Risk-Free Rate
- β → Beta
- r_m → Market Return
- $(r_m - r_f)$ → Equity Risk Premium (ERP)

Efficient Market Hypothesis

- Efficient Market Hypothesis (EMH): EMH is a financial theory proposing that financial markets are efficient, meaning that asset prices fully incorporate all available information.
- Three Forms of EMH: (a) Weak Form: This asserts that current market prices already factor in all past trading data, such as historical prices and trading volumes. (b) Semi-Strong Form: This extends the weak form by including all publicly available information, like financial statements, news, and economic data. (c) Strong Form: This suggests that market prices reflect all information, both public and private.
- Implications: EMH has significant implications for investors and financial professionals. It implies that active stock selection and market timing strategies may not consistently yield higher returns in the long run, as prices already incorporate all available information.



Discounted Cash Flow :

- The Discounted Cash Flow (DCF) method is a valuation technique used to estimate the value of an investment based on its expected future cash flows. The idea is to project the future cash flows and then discount them back to their present value using a discount rate, typically the weighted average cost of capital (WACC).
- The sum of these discounted cash flows gives the present value, which can be compared to the current cost of the investment to assess its attractiveness.

Discounted Cash Flow Formula

$$DCF = \frac{CF_1}{(1+r)^1} + \frac{CF_2}{(1+r)^2} + \dots + \frac{CF_n}{(1+r)^n}$$

DCF = Discounted cash flow
CF = Cash flow period
r = Interest rate
n = Cash flows for the final year being considered in the DCF financial analysis

Net Present Value:

- Net Present Value (NPV) is a valuation method used to determine the profitability of an investment by calculating the difference between the present value of cash inflows and the present value of cash outflows over time. It helps in assessing whether a project or investment will add value to the firm.
- A positive NPV indicates that the projected earnings exceed the anticipated costs, making the investment potentially profitable.

$$NPV = \sum_{n=1}^N \frac{C_n}{(1+r)^n}$$

- N = Total number of time periods
- n = Time period
- C_n = Net cash flow at time period
- r = Internal rate of return

Dividend Discount Model:

- The Dividend Discount Model (DDM) is a method to estimate a stock's true value by considering its future expected dividends.
 - It works on the principle that a stock's value is the present worth of all its future dividends, discounted back to today's value using a chosen discount rate.
 - The DDM is popular among investors who focus on dividend-paying stocks, viewing dividends as a key indicator of a stock's value. It helps assess if a stock is undervalued or overvalued based on expected dividends and the required rate of return. However, DDM is best for companies with stable dividend payouts, and other models might be better for firms with inconsistent dividends.
1. **Gordon Growth Model:** Assumes constant dividend growth.
 2. **Multi-Stage DDM:** For companies with varying growth rates.

The Gordon Growth Model (GGM)

$$P_0 = \frac{D_1}{k - g}$$

P_0 = Theoretical value of the action
 D = Early dividend for the first period
 k = Market discount rate
 g = Dividend growth rate

Multi-period Dividend Discount Model

$$V_0 = \frac{D_1}{(1+r)^1} + \frac{D_2}{(1+r)^2} + \dots + \frac{D_n}{(1+r)^n} + \frac{P_n}{(1+r)^n}$$

V_0 = The fair value of a share
 D_1 = Payment of dividends in a period from now on
 P_1 = The share price in a period from now on
 r = The estimated cost of the share capital

Weighted Average Cost of Capital (WACC)

- Definition: WACC is the average rate of return a company is expected to pay its security holders to finance its assets. It represents the firm's cost of capital in which each category of capital is proportionately weighted. It is used extensively in financial modelling and valuations as it reflects the minimum return that a company needs to earn on an existing asset base to satisfy its creditors, owners, and other providers of capital.

Weighted average cost of capital formula

$$WACC = \left(\frac{E}{V} \times R_e \right) + \left(\frac{D}{V} \times R_d \times (1 - T_c) \right)$$

E = market value of the firm's equity
 D = market value of the firm's debt
 T_c = corporate tax rate
 R_e = cost of equity
 R_d = cost of debt
 V = $E + D$

Components:

- **Cost of Equity (Re):** This represents the return required by equity investors given the risk of the investment. It can be calculated using models such as the Capital Asset Pricing Model (CAPM), which is given by:
- **Cost of Debt (Rd):** This is the effective rate that a company pays on its borrowed funds. It is typically calculated by taking the average interest rate on all of the company's debt. Since interest expenses are tax-deductible, the cost of debt is adjusted by the tax rate.
- **Tax Shield (1 - Tc):** Interest on debt is tax-deductible, which effectively reduces the cost of debt to the company. This is why the cost of debt is multiplied by (1 - Tc) in the WACC formula.

$$r_E = r_f + \beta[E(r_m) - r_f]$$

Application:

- Valuation: WACC is used as the discount rate in Discounted Cash Flow (DCF) models to value a company. The rationale is that the future cash flows of the company should be discounted back to the present value using the firm's overall cost of capital.
- Investment Decisions: Companies use WACC to evaluate investment opportunities. If a project's return exceeds the WACC, it is likely to add value to the firm.
- Capital Structure Optimization: Firms aim to optimize their capital structure to achieve the lowest WACC, thereby maximizing the value of the firm.

Monte Carlo Model:

- The Monte Carlo model is a computational technique used to understand the impact of risk and uncertainty in financial forecasts and decision-making. It involves simulating a process many times (often thousands or millions) using random variables that follow specific probability distributions. By running these simulations, you can generate a range of possible outcomes, helping to assess the likelihood of various scenarios, such as investment returns or portfolio risks.

Key Points:

- Purpose: To model uncertainty and assess risk in finance.
- Process: Simulate random variables based on assumed distributions, run multiple iterations, and analyse the range of outcomes.
- Application: Used in portfolio management, option pricing, and risk management.
- Formula:

S_t = Asset price at time t

S_0 = Initial asset price

μ = Expected return

σ = Volatility

t = Time period

Z = Random variable from a standard normal distribution

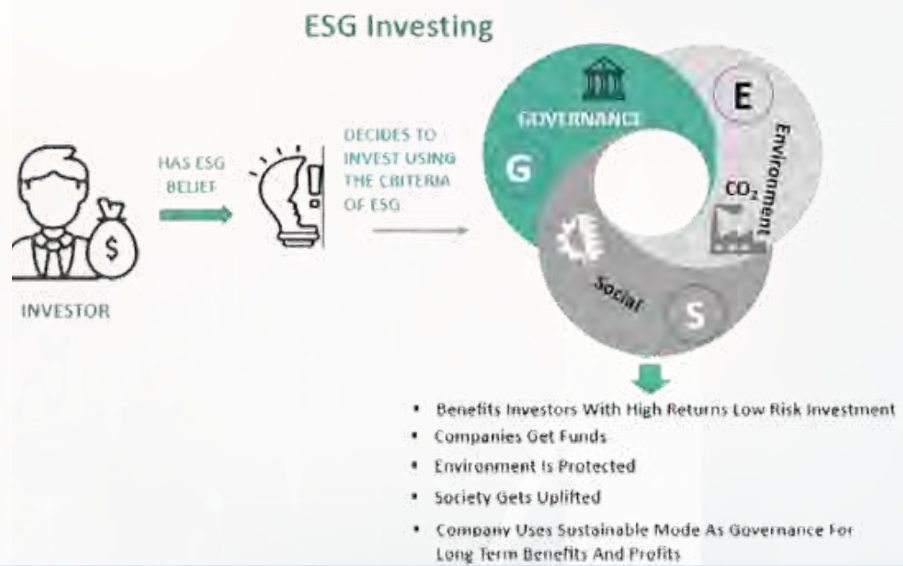
$$S_t = S_0 \times e^{(\mu - \frac{\sigma^2}{2})t + \sigma\sqrt{t}Z}$$

MODERN Finance

ESG Investing

- ESG stands for environmental, social, and governance. ESG investing refers to how companies score on these responsibility metrics and standards for potential investments. Environmental criteria gauge how a company safeguards the environment. Social criteria examine how it manages relationships with employees, suppliers, customers, etc. Governance measures a company's leadership, executive pay, shareholder rights, etc.
- To assess a company based on ESG criteria, investors look at a broad range of behaviours and policies. ESG investors seek to ensure the companies they fund are responsible stewards of the environment, good corporate citizens, and led by accountable managers based on criteria.
- The ultimate value of ESG investing depends on whether they encourage companies to drive real change for the common good, or merely check boxes and publish reports. That, depends on whether the investment flows follow ESG tenets that are realistic, measurable, and actionable.

- Tobacco and defence are two industries avoided by many ESG investors, but historically produced above-average market returns and can buck recessionary trends. To support ESG, U.S. investors may be sacrificing returns in exchange for values. Many ESG investors are willing to make that trade-off though.



Fin-Tech Ecosystem

- Fintech, short for financial technology, is the integration of technology into financial services. It's not just about creating new apps or tools; it's about fundamentally changing how we interact with money and financial systems.

What is Fintech?

- At its core, fintech is the application of modern technology to financial services and products. This could be as simple as using your phone to check your bank balance or as complex as using algorithms to decide where to invest your money. The goal of fintech is to make financial processes more efficient, more accessible, and often more transparent.

How Does It Work?

- Fintech companies use a combination of software, data analysis, and digital platforms to offer services traditionally provided by banks or financial institutions. For instance, instead of walking into a bank to apply for a loan, fintech might allow you to do this online, with the approval process driven by automated systems rather than human decision-makers.

Why Is It Important?

- Fintech is democratizing finance. It's making services that were once only available to wealthy individuals or large institutions accessible to everyone. Whether it's through mobile apps, websites, or even blockchain technology, fintech is giving more people control over their financial lives.
- **The Impact of Fintech:** Efficiency, Accessibility, Innovation
- **Where you see Fin-Tech:** Digital Payments, Online Banking, Cryptocurrency, Digital Currency, etc.
- In essence, fintech is reshaping the financial industry by using technology to create smarter, more user-friendly services.

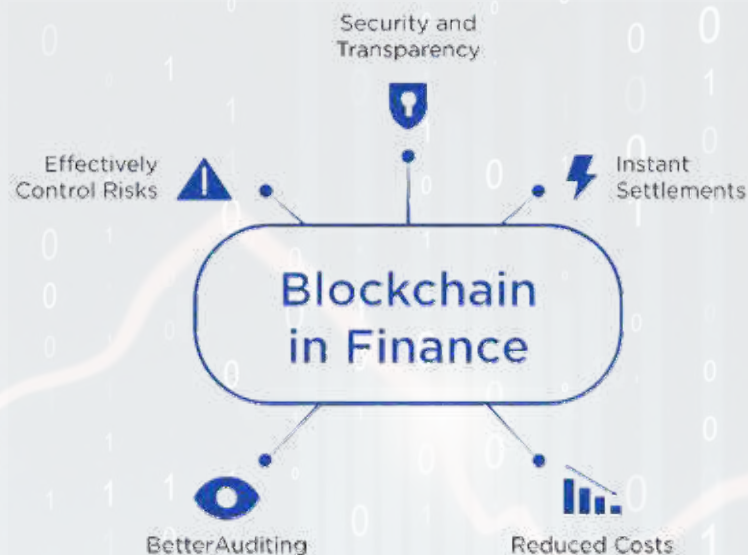


Blockchain in Finance

- Blockchain is a decentralized digital ledger technology that records transactions across multiple computers securely and transparently. In finance, it provides a tamper-proof, transparent record of transactions, reducing the need for intermediaries.

Applications:

- **Cryptocurrencies:** The most well-known application, where blockchain underpins digital currencies like Bitcoin and Ethereum, enabling secure, peer-to-peer transactions without central authorities.
- **Smart Contracts:** Automated, self-executing contracts with the terms directly written into code, which are used to streamline processes like trade settlements, loan agreements, and insurance claims.
- **Cross-Border Payments:** Blockchain facilitates faster and cheaper cross-border transactions by eliminating intermediaries and reducing transaction times from days to minutes.



Benefits:

- Increased Transparency
- Enhanced Security
- Cost Reduction
- Faster Transactions

Challenges:

- **Regulatory Uncertainty:** The regulatory environment for blockchain and cryptocurrencies is still evolving, which can create uncertainty for financial institutions.
- **Integration with Legacy Systems:** Integrating blockchain with existing financial systems can be complex and costly, requiring significant investment in new technologies and training.

Cryptocurrency

- Cryptocurrency is a form of digital or virtual currency that uses cryptography for security. Unlike traditional currencies issued by governments, cryptocurrencies operate on decentralized networks based on blockchain technology, making them immune to central control or interference.

Key Features:

- **Decentralization:** Cryptocurrencies are typically decentralized and operate on blockchain networks, which are distributed across a large number of computers (nodes), ensuring no single entity has control.
- **Security:** Cryptography ensures secure transactions, protecting against fraud and unauthorized access. Each transaction is verified and added to the blockchain through a process called mining.



- **Transparency:** All transactions are recorded on a public ledger, providing transparency and traceability while maintaining user privacy through pseudonymous addresses.
- **Limited Supply:** Most cryptocurrencies, like Bitcoin, have a capped supply, which can influence their value by creating scarcity.

Applications:

- Investment
- Payments
- Decentralized Finance (DeFi)
- Smart Contracts

Challenges:

- Volatility
- Regulation
- Security Risks
- Adoption

Innovation and Ecosystem Growth:

- **Decentralized Finance (DeFi):** DeFi platforms, built primarily on Ethereum, enable users to engage in financial activities such as lending, borrowing, and trading without the need for traditional intermediaries like banks. DeFi's rapid growth reflects a broader trend towards decentralization in the financial industry, creating new opportunities and challenges.
- **Non-Fungible Tokens (NFTs):** NFTs are unique digital assets that represent ownership of specific items or content, such as art, music, or virtual real estate, and are typically bought and sold using cryptocurrencies. NFTs have sparked a new wave of innovation in the digital economy, blending finance, art, and technology in unprecedented ways.
- **Stablecoins:** These are cryptocurrencies pegged to stable assets like the US dollar or gold. Stablecoins like Tether (USDT) or USD Coin (USDC) are designed to reduce the volatility commonly associated with cryptocurrencies, making them more suitable for transactions and savings.
- **Central Bank Digital Currencies (CBDCs):** While not true cryptocurrencies, CBDCs are digital versions of a country's official currency, inspired by the technology behind cryptocurrencies. Central banks are exploring CBDCs to maintain control over their monetary systems while offering the benefits of digital currencies.



Regulatory Developments:

- **Global Approaches:** Governments and regulatory bodies worldwide are taking various approaches to regulate cryptocurrencies, ranging from outright bans to embracing them as legal tender. For example, El Salvador's adoption of Bitcoin as legal tender marks a significant milestone in the mainstream acceptance of cryptocurrencies.
- **Compliance and KYC/AML:** As cryptocurrencies become more integrated into the financial system, regulatory frameworks focusing on Know Your Customer (KYC) and Anti-Money Laundering (AML) measures are being implemented to prevent illegal activities.
- **Taxation:** Governments are developing tax policies for cryptocurrency transactions, treating them as assets or commodities in many cases. This includes capital gains tax on profits from trading or selling cryptocurrencies, which varies significantly across jurisdictions.

Future Outlook:

- **Mass Adoption:** The future of cryptocurrency hinges on its mass adoption as both an investment and a medium of exchange. Factors such as ease of use, regulatory clarity, and technological advancements will play a crucial role in shaping this future.
- **Technological Evolution:** Innovations and development of scalable blockchain solutions will address current challenges like transaction speed and energy consumption, making cryptocurrencies more viable for widespread use.

CORPORATE FINANCE

Merger & Acquisition

- **Merger:** A merger is a strategic business combination where two or more companies decide to unite and operate as a single entity. The purpose of a merger is to create a stronger, more competitive, and more efficient organization by pooling resources, market share, and expertise.
- **Acquisition:** An acquisition, also known as a takeover, is when one company acquires control over another company by purchasing a significant portion of its ownership, often a majority stake.
- **Merger and Acquisition (M&A) Process:** M&A activities involve several stages, including strategic planning, target identification, due diligence, negotiation, and integration.

Difference Between Merger and Acquisition



Weighted Average Cost of Capital

- The Weighted Average Cost of Capital (WACC) is a financial metric that represents the average cost of financing a company's operations. It considers the cost of debt, the cost of equity, and the proportion of each type of financing in the company's capital structure.
- **Calculation:** WACC is calculated by taking the weighted sum of the cost of equity and the cost of debt. The formula for WACC is: $WACC = (E/V) \times Re + (D/V) \times Rd \times (1 - T)$, where E is the market value of equity, V is the total market value of equity and debt, Re is the cost of equity, D is the market value of debt, Rd is the cost of debt, and T is the corporate tax rate.
- **Significance:** WACC is a crucial metric used to evaluate investment projects or assess the overall financial health of a company. It represents the minimum rate of return the company needs to earn on its investments to satisfy the expectations of its investors and lenders.

Weighted average cost of capital formula

$$WACC = \left(\frac{E}{V} \times Re \right) + \left(\frac{D}{V} \times Rd \times (1 - T_c) \right)$$

E = market value of the firm's equity

D = market value of the firm's debt

T_c = corporate tax rate

Re = cost of equity

Rd = cost of debt

V = E + D

Capital gain tax

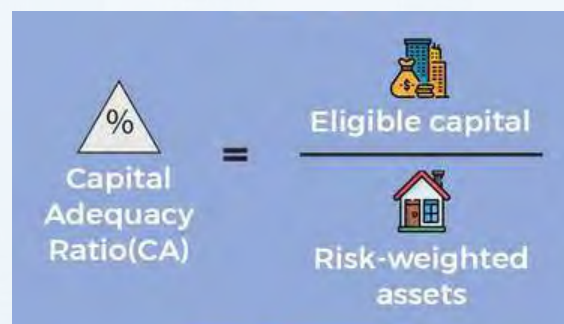
- **Capital gain tax** is a tax imposed on the profits earned from the sale or disposal of capital assets, such as stocks, real estate, precious metals, or other investments. It is the tax applied to the difference between the selling price (proceeds) of the asset and its original cost (basis).

Types of Capital Gains

- **Short-term Capital Gains:** If the asset is held for one year or less before being sold, any profit from the sale is considered a short-term capital gain. Short-term capital gains are typically taxed at the individual's ordinary income tax rates, which can be higher than long-term capital gains rates.
- **Long-term Capital Gains:** If the asset is held for more than one year before being sold, any profit from the sale is considered a long-term capital gain. Long-term capital gains are often taxed at lower rates than ordinary income tax rates, making them more tax-efficient.

Capital adequacy Ratio

- The Capital Adequacy Ratio (CAR) is a key financial metric used to assess a bank's financial health and its ability to absorb potential losses. It measures the proportion of a bank's capital to its risk-weighted assets, indicating the bank's ability to meet unexpected losses or risks arising from its operations.
- Calculation: CAR is calculated by dividing a bank's capital (both Tier 1 and Tier 2 capital) by its risk-weighted assets. The formula for CAR is $CAR = (Tier\ 1\ Capital + Tier\ 2\ Capital) / Risk\text{-}Weighted\ Assets$. Tier 1 capital includes the core capital of a bank, such as common equity and retained earnings, which are the most stable and permanent sources of funding. Tier 2 capital includes supplementary capital, which is less stable than Tier 1 capital and provides additional loss absorption capacity.



Regulatory Requirement:

- Regulators, such as central banks or financial authorities, set minimum CAR requirements to ensure the stability and safety of the banking system. Banks must maintain their CAR above the regulatory minimum to continue their operations.

Divestiture

- Divestiture, also known as divestment, is the process by which a company sells, spins off, or otherwise disposes of a part of its business or assets. It involves reducing or eliminating a specific business unit, subsidiary, or investment from a company's portfolio.

Banking and Risk Management

Stress testing

- Stress testing is a risk management technique used to simulate extreme economic scenarios, such as market crashes or recessions. It helps financial institutions assess their ability to withstand significant financial strain during adverse conditions.
- The primary purpose of stress testing is to evaluate a bank's resilience and identify potential vulnerabilities in its financial position. By subjecting the bank to hypothetical stress scenarios, it ensures that the institution can survive without significant losses.

Credit Default Swaps (CDS)

- A Credit Default Swap (CDS) is a financial derivative that acts as insurance against the default of debt obligations. In a CDS, the buyer pays a premium to the seller in exchange for compensation if the
- CDS contracts transfer the credit risk from one party to another, allowing investors to hedge against potential losses or speculate on credit risks. The seller of the CDS takes on the risk, while the buyer gains protection, making CDS a crucial tool in risk management.



Base III

- Basel III is an international regulatory framework established to enhance the stability and robustness of the global banking sector. It was developed in response to the deficiencies revealed by the 2008 financial crisis, focusing on improving risk management and supervision.
- Basel III sets stringent capital requirements, including a higher minimum Capital Adequacy Ratio (CAR), to ensure banks have enough capital to absorb losses. This regulation mandates that banks hold a greater proportion of high-quality capital, such as common equity, to increase financial stability.



VaR

- Value at Risk (VaR) is a statistical technique used to quantify the potential loss in value of a portfolio or investment over a defined period for a given confidence interval. It provides a measure of the maximum expected loss under normal market conditions, offering a snapshot of market risk exposure.
- VaR is widely used by financial institutions and investment managers to assess market risk, allocate capital, and set risk limits. Despite its usefulness, VaR has limitations, particularly in capturing tail risks or extreme events, which require supplementary risk management tools.



$$\text{Value at Risk} = v_m \frac{v_i}{v_{i-1}}$$

General Financial Concepts

Operating Cycle

- Measures the time it takes for a company to convert inventory into cash and pay off short-term liabilities.
- Components: Inventory Conversion Period and Receivables Collection Period
- Importance: Indicates efficiency in managing working capital and cash flow. A shorter cycle is favorable.

Inventory Conversion Period

- Time it takes to convert inventory into sales.
- Factors: Inventory levels, production time, and sales speed.

Receivables Collection Period

- Time it takes to collect cash from customers.
- Factors: Credit terms, collection efforts, and customer creditworthiness.

Overall, a **shorter operating cycle** suggests a company is:

- Efficient in managing inventory.
- Effective in collecting payments from customers.
- Able to generate cash quickly to meet short-term obligations.



$$\text{Operating Cycle} = \frac{365}{\text{Cost of Goods Sold} / \text{Average Inventory}} + \frac{365}{\text{Credit Sales} / \text{Average Accounts Receivables}}$$

Liquidity

- Liquidity is a measure of a company's ability to quickly turn assets into cash to pay off short-term debts. In simpler terms, it's how easily a company can meet its financial obligations.
- Why is **liquidity important**? It's like having enough cash on hand to cover unexpected expenses or to seize opportunities. A company with good liquidity is less likely to face financial difficulties.
- How is **liquidity measured**? Liquidity ratios, such as the current ratio and the quick ratio, are used to assess a company's liquidity position. These ratios compare the company's current assets (assets that can be easily converted to cash) to its current liabilities (short-term debts). A higher ratio generally indicates better liquidity.



Real interest rate

- It is the actual return on an investment or the cost of a loan after considering the impact of inflation. It's like the true interest rate you earn or pay when you factor in how much prices have gone up.
- **How is it calculated?** You subtract the inflation rate from the nominal interest rate (the stated rate).
- **Why is it important?** The real interest rate gives a more accurate picture of the investment's return or the loan's cost. For example, if the nominal interest rate is 5% but inflation is also 5%, the real interest rate is 0%. In this case, while you earn 5%, the purchasing power of your money hasn't increased due to inflation.



Risk tolerance

- Risk tolerance is how comfortable you are with the ups and downs of investing. It's about how much you're willing to risk to reach your financial goals.
- **What factors influence risk tolerance?** Your time horizon (how long you have to invest), your financial goals (what you hope to achieve), your financial situation (how much money you have and how stable your income is), and your knowledge and experience (how much you know about investing) all play a role.
- **Why is risk tolerance important?** Understanding your risk tolerance helps you build an investment portfolio that's right for you. If you're too aggressive, you might get scared and sell your investments at the wrong time. If you're too conservative, you might miss out on opportunities for growth.



Purchasing Power Parity (PPP)

- PPP is a theory that suggests the exchange rate between two countries should adjust to ensure that the same goods cost the same in both countries. This is based on the idea that identical items should have the same price when converted to a common currency.
- **Implications:** By comparing the prices of goods in different countries, PPP can help determine if a currency is undervalued or overvalued. If a currency is undervalued, it means it's relatively cheap compared to another currency and might increase in value in the future.



Blue Chip Stocks

Blue chip stocks are shares of large, well-known companies with a history of solid financial performance and a strong position in their industries. These companies are often considered less risky than smaller or newer businesses, making them attractive to investors looking for stable returns.

Characteristics: Blue chip companies are typically large, financially stable, and have a reputation for reliable earnings and dividend payments. They are often leaders in their respective industries.

Examples: Infosys Ltd, healthcare – Dr. Reddy's Laboratories, finance, and consumer goods – ITC



Junk Bonds

Junk bonds are debt securities issued by companies with lower credit ratings, making them considered riskier than investment-grade bonds. These bonds often offer higher interest rates to compensate for the increased risk of default.

Characteristics: Junk bond issuers typically have weaker financial health or face more significant business risks. They may have higher debt levels, limited cash flow, or face challenges in their industry.

Investment Implications: Investors who are willing to take on more risk for potentially higher returns may be attracted to junk bonds. They can be a suitable option for investors with a higher risk tolerance or those looking to diversify their fixed-income portfolio.



Forward Rate Agreement (FRA)

FRAs are financial contracts that allow parties to agree on a specific interest rate for a future period. This helps them manage the risk of interest rate changes.

How it works: In an FRA, two parties agree to exchange cash flows at a future date based on a predetermined interest rate. This rate, known as the "forward rate," is set when the contract is created and stays the same throughout the contract.

Purpose: FRAs are often used to protect against interest rate fluctuations. For example, a company that plans to borrow money can use an FRA to lock in a fixed interest rate, which can help them avoid paying higher interest costs if rates rise.

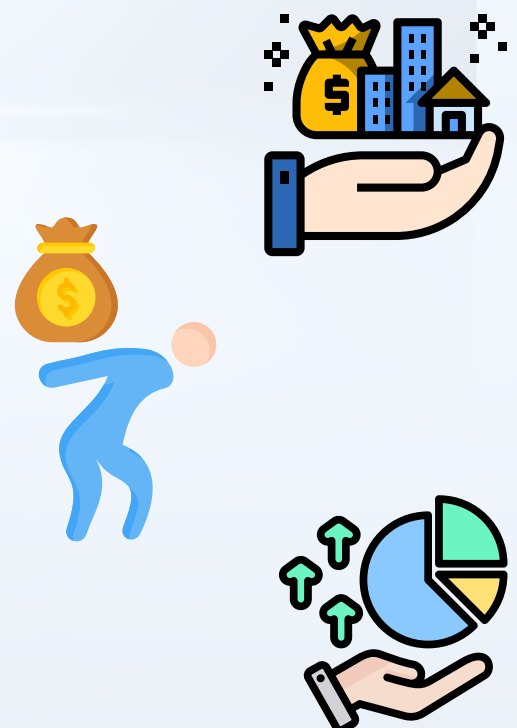
Assets are resources a business or individual owns or controls that can provide future benefits. They can be tangible (like cash or property) or intangible (like patents or goodwill). Assets are listed on a balance sheet to show a company's financial health.

Liabilities are debts owed by a business or individual. They are typically due for payment in the future. Examples include loans, accounts payable, and accrued expenses. Liabilities are listed on a balance sheet.

Equity represents the residual interest in the assets of a business or individual after deducting liabilities. It is essentially the owners' stake in the entity. Equity is calculated as Assets - Liabilities. For example, if a company has Rs100 in assets and Rs50 in liabilities, its equity would be Rs50.

Forward Rate Agreement

$$\text{Forward Rate} = R_2 + (R_2 - R_1) \times \left[\frac{T_1}{T_2 - T_1} \right]$$



Revenue is the income a business earns from selling its products or services. For example, a retail store's revenue comes from selling products, while a service company's revenue comes from providing services.



Expenses are costs incurred by a business to generate revenue. They can include things like salaries, rent, utilities, advertising, and supplies. Expenses are deducted from revenue to determine a company's profit or loss.



Profit is the difference between a company's total revenue and total expenses. If a company's revenue exceeds its expenses, it has a profit. If its expenses exceed its revenue, it has a loss.



Loss is the opposite of profit. It occurs when a company's total expenses exceed its total revenue. In other words, it's a negative profit.



A **balance sheet** shows a company's assets, liabilities, and equity. Assets are resources, liabilities are debts, and equity is the owners' stake.

The equation: Assets = Liabilities + Equity.

It helps assess financial stability, solvency, liquidity, capital structure, and performance.



Income Statement

An income statement shows a company's revenues, expenses, and net income (or loss). It helps assess financial performance. Key components include revenue, COGS, gross profit, operating expenses, operating income, other income/expense, and net income. By analyzing these, stakeholders can assess profitability, expense management, revenue growth, and profit margins.



Cash Flow Statement

A cash flow statement shows a company's cash inflows and outflows. It's divided into operating, investing, and financing activities. The overall net cash flow indicates whether the company generated or used cash. This is important for assessing liquidity, financial flexibility, and the ability to meet short-term obligations.



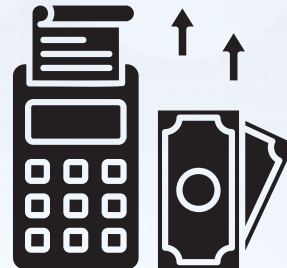
Accounts Receivable

Accounts receivable refers to the money a company is owed by its customers for goods or services sold on credit. It's listed as an asset on the balance sheet. A high accounts receivable balance can indicate potential liquidity issues if customers are slow to pay. However, it can also be a sign of strong sales growth.



Accounts Payable

Accounts payable is the money a company owes to its suppliers for goods or services received on credit. It's listed as a liability on the balance sheet. A high accounts payable balance can indicate that the company is taking advantage of credit terms from suppliers, which can improve cash flow in the short term. However, a persistently high balance can also indicate financial difficulties.



Depreciation is the allocation of the cost of tangible assets over their useful life. It reflects the wear and tear, obsolescence, and economic life of the assets. Depreciation is an expense that reduces the value of an asset on the balance sheet over time. It is not a cash outflow but rather an accounting adjustment.



Amortization is similar to depreciation but applies to intangible assets, such as patents, copyrights, and goodwill. It is the process of allocating the cost of these intangible assets over their useful life. Like depreciation, amortization is a non-cash expense that reduces the value of the intangible asset on the balance sheet.



Accruals are accounting entries that recognize revenues or expenses before cash flows. They ensure financial statements accurately reflect economic reality.

Example: A service provided in December, but payment received in January, would be accrued in December.



Trial Balance

A trial balance is a list of general ledger accounts and their balances. It's used to verify accounting accuracy and prepare financial statements.

Purpose:

- Verifies accounting accuracy.
- Identifies errors.
- Prepares financial statements.



Employee Stock Options (ESOPs)

ESOPs are a type of employee compensation that gives employees the right to buy shares of their company's stock at a predetermined price within a specific timeframe.

Purpose: ESOs are used to motivate employees and align their interests with the company's shareholders. By giving employees a stake in the company, employers can encourage them to work hard and stay with the company.

Free courses for certifications

1. Introducing the financial markets.

You'll discover how each market operates, what drives it, and most importantly how you might capitalize on movements.

[link](#)

2. How Does Trading Work?

In this course will give you some key insights into the mechanisms of the trading world. Starting with who's who: the people who make things happen and how you're connected with them. Then they take a look at market prices, showing you how they work, before finally explaining why even falling prices can create exciting trading opportunities.

[link](#)

3.Adaptive Markets: Financial Market Dynamics and Human Behavior.

A completely new way of thinking about financial markets, institutions, and innovation that reconciles human behavior with market efficiency using concepts from evolutionary biology, cognitive neuroscience, and artificial intelligence.

[link](#)

4. Basics of Technical Analysis

Technical analysis can help you make sense of the way investor behaviour drives market prices. In this course, we show you how to start using charts to forecast which way a market might move.

[link](#)

5. Trading Psychology

Psychology can have a surprisingly powerful influence on your success as a trader. In this course you'll learn how to recognise when your feelings are getting in your way, damaging your judgement for driving you to trade in a way you shouldn't.

[link](#)

6. Fundamental Analysis

Fundamental analysis can help you in your search. In this course, we'll explain how you can apply its methods to drill down through layers of information and uncover the markets with a potential value that others may not have spotted.

[link](#)

7. Introduction to International Trade

Learn about international trade and how it helps develop the world's different economies in this free commerce course. This certificate course in international trade will give you a broad view of what international trade entails as well as the important factors that affect it.

[link](#)



8. Blockchain and FinTech

Basics, Applications, and Limitations

Understand the design rationale of blockchain technology, its emerging platforms and applications and uncover the limitations and the opportunities enabled by blockchain applications, particularly as it relates to finance.

[link](#)

9. Day Trading Strategies

Learn the skills and techniques for trading on the stock market and day trading strategies in this free online course.

[link](#)

10. Essential Career Skills for Investment Banking and Finance

This course will improve your financial literacy. You will learn about the different sectors and sub-sectors across the financial industry. In addition to industry jargon, you will also learn how hiring decisions are made and the strategies to control the narrative and tell your story in the most compelling way possible.

[link](#)

11. Corporate Finance and Valuation Methods

Develop an understanding of how the key principles of project analysis, budgeting, and valuation decide a firm's optimal capital structure. This professional certificate is comprised of the following courses:

Fundamental of Financial Mathematics and Capital Budgeting

Cost of Capital

Discounted Cash Flow (DCF) and Other Valuation Methodologies

[link](#)

12. Finshiksha Boot Camp

Introduction to Financial Statements

- Introduction to Financial Markets

- Knowledge Series Sessions

These are introductory courses in Finance, that aim to give you a good solid understanding of some key concepts of Finance.

This Finance course for beginners is an introduction to the world of finance. It is designed for individuals who have little to no knowledge of the financial markets and wish to learn the basics of financial management and planning.

[link](#)



13. J.P. Morgan Investment Banking: This Virtual Experience Program helps you to explore life as an investment banker at J.P. Morgan and obtain valuable analytical skills required to drive your career in the direction you want it to go.

[link](#)

14. Finance by City Bank: Finance serves as a critical business partner to groups across the firm and enables Citi's leaders to make well-informed decisions in support of our business objectives.

[link](#)

15. Corporate Tax by PwC: PwC Virtual Case Experience in Corporate Tax shows you what we do, we cover all aspects of corporate tax strategy and execution including tax advice, tax risk, mergers & acquisitions, international compliance or digital processes.

[link](#)

16. Quantitative Research by J.P Morgan Chase & Co.: During this program, you will get the opportunity to step into the shoes of a JPMorgan Chase team member and complete tasks that replicate the work that our QR team does every day. You'll learn key skills in data analysis, programming, and financial mathematics.

[link](#)

17. Equity Trading Fundamentals (CFI X Amplify ME): In this course, with the help of Amplify Trading, we will explore how securities are traded and how orders are executed. We will also see who the market participants are, what spreads are, learn trading tools such as Refinitiv etc.

[link](#)

18. Audit a Financial Model with Macabacus Overview: This course will show you how to use Macabacus to efficiently audit a financial model.

[link](#)

19. Corporate Finance Fundamentals: This introduction to corporate finance course will give an overview of all the key concepts you need for a high-powered career in investment banking, equity research, private equity, corporate development, financial planning & analysis (FP&A), treasury, and much more.

[link](#)

20. Math Fundamentals for Capital Markets Overview: This course builds a solid mathematics foundation for a capital markets career. You will learn different topics on applied math to help you understand many finance concepts.

[link](#)





Roles and Opportunities

1) Corporate Finance Analyst

- Focuses on managing a company's financial activities, including budgeting, forecasting, and capital structure management. Corporate finance analysts analyze financial statements and develop strategies to maximize financial performance.

2) Investment Banker

- Works with companies to raise capital, advise on mergers and acquisitions, and provide financial consulting services. Investment bankers create financial models, conduct valuations, and manage complex financial transactions.

3) Portfolio Manager

- Manages investment portfolios for individuals or institutions, making decisions about asset allocation, stock selection, and risk management to achieve investment goals. They oversee day-to-day portfolio operations and client relations.

4) Financial Advisor

- Offers financial planning and investment advice to clients, helping them manage their finances, plan for retirement, and achieve financial goals. Financial advisors may also sell financial products like insurance or mutual funds.

5) Compliance Officer

- Ensures that a company adheres to laws, regulations, and internal policies. Compliance officers develop compliance programs, conduct audits, and provide training to prevent legal and regulatory breaches.

6) Chief Financial Officer (CFO)

- The CFO is the top financial executive in a company, overseeing all financial operations, including budgeting, forecasting, and financial reporting. The CFO plays a critical role in strategic decision-making and corporate governance.

7) Credit Risk Analyst

- Assesses the creditworthiness of individuals or companies, analyzing financial statements, credit history, and market conditions to determine the likelihood of default. Credit risk analysts help set credit limits and pricing.

8) Equity Research Analyst

- Provides detailed analysis of publicly traded companies, including financial modeling and market research, to make buy, sell, or hold recommendations for investors. Equity research analysts often specialize in specific sectors.

9) Private Equity Analyst

- Analyzes investment opportunities in private companies, conducting due diligence, financial modeling, and valuation. Private equity analysts support the investment team in acquiring, managing, and exiting investments

10) Internal Auditor

- Evaluates a company's internal controls, financial processes, and compliance with laws and regulations. Internal auditors help improve efficiency and effectiveness while mitigating risks.

11) Tax Advisor

- Advises individuals and businesses on tax-related matters, helping them plan and comply with tax laws while minimizing tax liabilities. Tax advisors also prepare tax returns and provide strategic tax planning.

12) Hedge Fund Manager

- Manages a hedge fund by developing and executing investment strategies to achieve high returns. Hedge fund managers often use complex financial instruments and leverage to enhance performance.

13) Venture Capitalist

- Invests in startups and early-stage companies with high growth potential. Venture capitalists provide capital, strategic guidance, and industry connections to help companies grow and succeed.

14) Quantitative Analyst (Quant)

- Uses mathematical models, statistical techniques, and algorithms to analyze financial data, develop trading strategies, and optimize investment portfolios. Quants work in areas like risk management, trading, and research

15) External Auditor

- Conducts independent audits of financial statements to ensure accuracy and compliance with accounting standards and regulations. External auditors provide assurance to stakeholders about a company's financial health.

16) Product Manager (Fintech)

- Oversees the development and management of financial technology products, such as digital payment systems, mobile banking apps, or blockchain solutions. Product managers ensure products meet customer needs and market demands.

17) Wealth Manager

- Provides personalized financial planning and investment management services to high-net-worth individuals. Wealth managers offer advice on asset allocation, estate planning, tax strategies, and retirement planning.

18) Data Analyst (Fintech)

- Analyzes large sets of financial data to derive insights, support decision-making, and improve financial products. Data analysts in fintech often work with machine learning and artificial intelligence

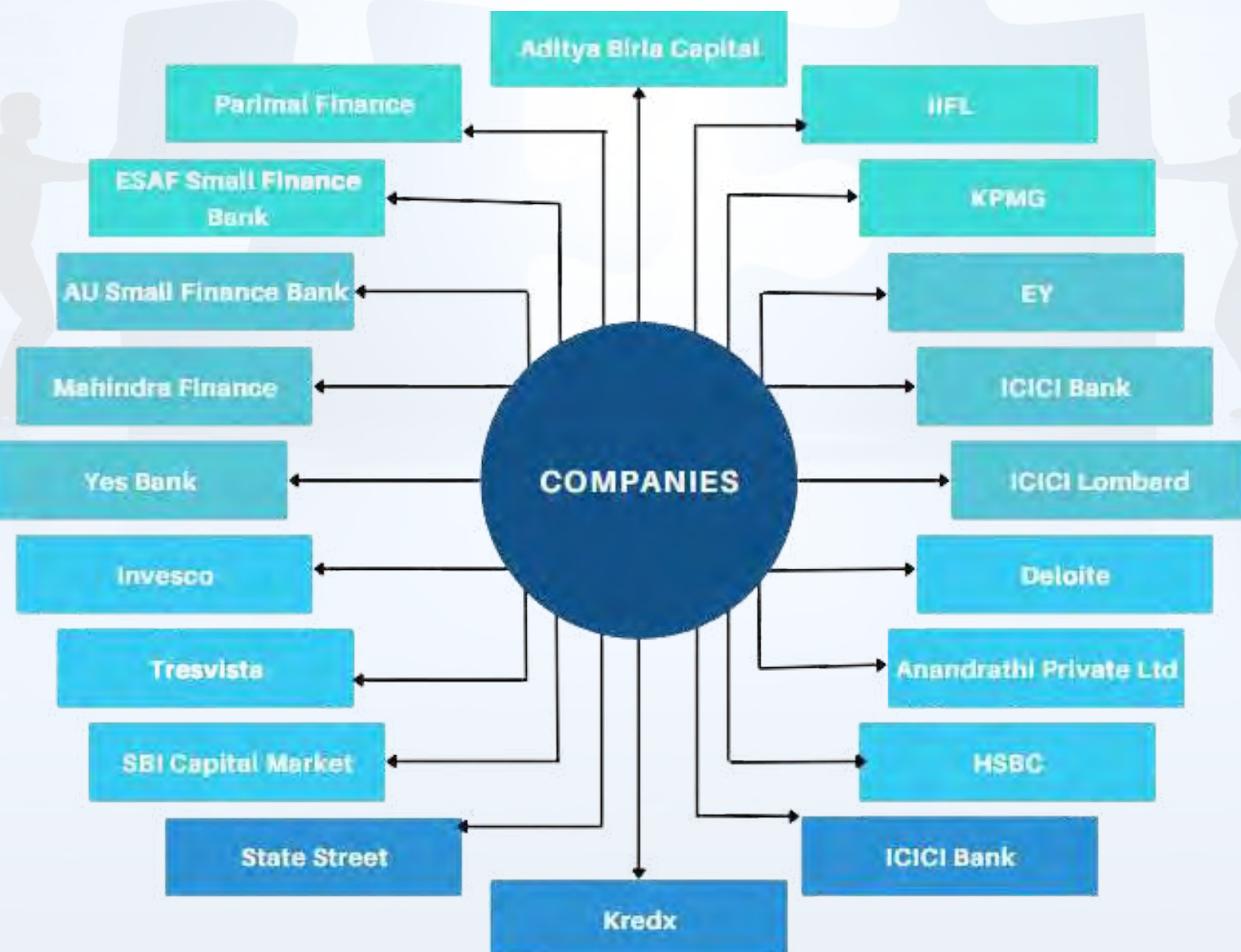
19) Relationship Manager (Commercial Banking)

- Manages relationships with clients, including businesses and individuals, providing banking products and services. Relationship managers aim to grow the bank's business by meeting clients' financial needs.

20) Blockchain Developer (Fintech)

- Develops and implements blockchain technology for financial applications, creating secure, decentralized systems for transactions, contracts, and data storage.

Finance Companies at IIM V



Skills for finance

1. **Data Analytics:** Finance professionals must analyze data to forecast outcomes and collaborate with data scientists to derive actionable insights.
2. **Digital Proficiency:** Mastery of advanced digital tools is essential as finance departments undergo significant digital transformation.
3. **Communication and Stakeholder Engagement:** Finance roles now require clear communication of complex concepts to stakeholders and active participation in brand building.
4. **Advanced Excel:** Proficiency in Excel for financial modeling, data analysis, and automation of complex calculations.
5. **Robotic Process Automation (RPA):** Skill in using RPA tools like UiPath to automate repetitive financial tasks.
6. **Blockchain Technology:** Awareness of blockchain and its applications in finance, particularly in areas like transactions and security.
7. **RegTech Tools:** Experience with regulatory technology tools for managing compliance and risk more efficiently.
8. **Machine Learning & AI:** Knowledge of applying machine learning and AI to predictive analytics and financial decision-making.
9. **Business Acumen:** Understanding business challenges and developing solutions is key for finance professionals to act as strategic advisors.
10. **Budgeting and Forecasting:** Finance experts must be skilled in preparing reliable budgets and forecasts using modern techniques.
11. **Accounting and Cash Flow Management:** Effective cash flow management is critical for maintaining financial health and supporting growth.
12. **Leadership and Organizational Skills:** Strong leadership and organizational skills are vital for finance professionals aspiring to senior roles.
13. **Discipline and Self-Dedication:** Success in investment banking requires discipline, diligence, and the ability to work efficiently under pressure.
14. **Resilience:** Resilience is necessary to handle the high-pressure environment of investment banking and maintain efficiency.
15. **Interpersonal Skills:** Strong interpersonal skills are key for managing relationships with clients and stakeholders in investment banking.

