Top Investment Banking Interview questions and answers

1. What is financial modeling?

It is the goal of the analyst to accurately forecast the price or future earnings performance of a company. Numerous valuation and forecast theories exist, and financial analysts can test these theories by recreating business events in an interactive calculator referred to as a financial model. A financial model tries to capture all the variables in a particular event.

2. Explain valuation and techniques

Valuation is the process of determining the current worth of an asset or a company; there are many techniques used to determine value. An analyst placing a value on a company looks at the company's management, the composition of its capital structure, the prospect of future earnings, and the market value of assets.

Techniques

1. Discounted cash flow (DCF) analysis.
2. Comparable transactions method.
3. Market valuation.
4. Book value

3. Explain dividend models.

Dividend Growth Model

The Gordon growth model is used to determine the intrinsic value of a stock based on a future series of dividends that grow at a constant rate. Given a dividend per share that is payable in one year and the assumption the dividend grows at a constant rate in perpetuity, the model solves for the present value of the infinite series of future dividends.

Value of Stock = Dividend pay-out next year / Required rate of return + Expected growth rate

4. Dividend Discount Model?

The dividend discount model (DDM) is a procedure for valuing the price of a stock by using the predicted dividends and discounting them back to the present value. If the value obtained from the DDM is higher than what the shares are currently trading at, then the stock is undervalued.

Value of Stock = Dividend pay-out next year / (Discount rate – Expected growth rate)

5. Difference between Depreciation, Depletion, and Amortization

Depreciation is an accounting method of allocating the cost of a tangible asset over its useful life. Businesses depreciate long-term assets for both tax and accounting purposes.

Amortization is an accounting term that refers to the process of allocating the cost of an intangible asset over a period. It also refers to the repayment of loan principal over time.

Depletion refers to the allocation of the cost of natural resources over time. For example, an oil well has a finite life before all the oil is pumped out. Therefore, the oil well's setup costs are spread out over the predicted life of the oil well.

6. What is accumulated depreciation?

Accumulated depreciation is the total depreciation for a fixed asset that has been charged to expense since that asset was acquired and made available for use.

7. Profitability and valuation ratios

Profitability Ratio
1. Gross Profit Margin
2. Net profit Margin
3. Return on equity
4. Return on assets

Valuation Ratios
1. EV / Sales
2. EV / EBITDA
3. EV / EBIT
4. P / EPS
5. P / BVPS

8. Difference between solvency and liquidity?

Solvency is defined as the firm’s potential to carry on business activities in the foreseeable future, to expand and grow. It is the measure of the company’s capability to fulfill its long-term financial obligations when they fall due for payment.

9. Difference between an operating lease and a financial lease?

A finance lease is often used to buy equipment for a major part of its useful life. The goods are financed ex GST and have a balloon at the end of the term. Here, at the end of the lease term, the lessee will obtain ownership of the equipment upon a successful 'offer to buy' the equipment. Traditionally this 'offer' is the balloon amount.

An operating lease agreement to finance equipment for less than its useful life and the lessee can return equipment to the lessor at the end of the lease period without any further obligation.

10. What is asset acquisition?

An asset acquisition strategy is the purchase of a company by buying its assets instead of its stock. An asset acquisition strategy may be used for a takeover or buyout if the target is bankrupt. liquidity is the firm’s ability to fulfill its obligations in the short run, normally one year. It is the near-term solvency of the firm, i.e., to pay its current liabilities.

11. Explain the leverage ratio and solvency ratio

A leverage ratio is any one of several financial measurements that look at how much capital comes in the form of debt (loans) or assesses the ability of a company to meet financial obligations.

The solvency ratio indicates whether a company’s cash flow is sufficient to meet its short-term and long-term liabilities. The lower a company's solvency ratio, the greater the probability that it will default on its debt obligations

12. What is working capital and what is net working capital?

Working capital is the amount of a company's current assets minus the amount of its current liabilities. The adequacy of a company's working capital depends on the industry in which it competes its relationship with its customers and suppliers, and more.

13. Components of cash flows Statement

- Cash flow resulting from operating activities.
- Cash flow resulting from investing activities.
- Cash flow resulting from financing activities.

14. Distinguish between Budgeting and Forecasting.

Budgeting and financial forecasting are financial planning techniques that help a business enterprise achieve its desired levels of profits.

Budgeting uses estimation to quantify the desired levels of revenues, profits, and cash flows that a business wants to achieve for a future period, whereas financial forecasting is used to estimate the amount of revenues that will likely be achieved. Budgeting essentially is a plan for where a business wants to go, whereas financial forecasting indicates where the business is headed given the scenario.

Budgeting is essentially planning whereas forecasting is estimating based on the given indicators. Hence, forecasting would indicate whether budgets will be achieved or not.

14. What is contingent liability?

A contingent liability is a potential liability that may occur, depending on the outcome of an uncertain future event. A contingent liability is recorded in the accounting records if the contingency is probable, and the amount of the liability can be reasonably estimated.

15. What is the book value of a business?

Equity shares holdings + Reserves and surplus + Retained Earnings

16. What is the difference between private equity and venture capital?

Private equity firms mostly buy mature companies that are already established. The companies may be deteriorating or not making the profits they should be due to inefficiency. Private equity firms buy these companies and streamline operations to increase revenues. Venture capital firms, on the other hand, mostly invest in start-ups with high growth potential.

17. Which is cheaper debt or equity?

A company should always optimize its capital structure. If it has taxable income it can benefit from the tax shield of issuing debt. If the firm has immediately steady cash flows and is able to make their interest payments it may make sense to issue debt if it lowers the WACC.

18. What is accretion and dilution?

Accretion is asset growth through addition or expansion. Accretion can occur through a company's internal development or by way of mergers and acquisitions.
Dilution is a reduction in earnings per share of common stock that occurs through the issuance of additional shares or the conversion of convertible securities. Adding to the number of shares outstanding reduces the value of the holdings of existing shareholders.

19. What is the difference between commercial and investment banking?
Commercial bank: accepts deposits from customers and makes consumer and commercial loans using these deposits.

Investment bank: acts as an intermediary between companies and investors. Does not accept deposits, but rather sells investments, advises on M&A, etc... loans and debt/equity issues originated by the bank are not typically held by the bank, but rather sold to third parties on the buy side through their sales and trading arms.

Meaning and formula of WACC
WACC – Weighted Average cost of capital - (ME/E+D Re) + (MD/E+D*Rd) *(1-t)
ME – Market Value of Equity
E – Equity
D – Debt
Re – Cost of equity
Rd – Cost of Debt
T – Tax rate

A company is typically financed using a combination of debt (bonds) and equity (stocks). Because a company may receive more funding from one source than another, we calculate a weighted average to find out how expensive it is for a company to raise the funds needed to buy buildings, equipment, and inventory.

It's important for a company to know its weighted average cost of capital to gauge the expense of funding future projects. The lower a company's WACC, the cheaper it is for a company to fund new projects.

20. What is the cost of debt and the cost of equity?

Cost of Debt = Total interest payable / Total Debt * 100

The cost of Debt is the total Cost(interest) that a company is required to pay on the borrowed money. The cost of debt refers to the effective rate a company pays on its current debt.

Cost of Equity = CAPM AND DIVIDEND GROWTH MODEL

Cost of equity refers to a shareholder's required rate of return on an equity investment. It is the rate of return that could have been earned by putting the same money into a different investment with equal risk.

21. Explain CAPM.

CAPM = Rf + B (Rm-Rf)
Rf = Risk Free rate
B = Beta
Rm = Market risk

The capital asset pricing model (CAPM) is a model that describes the relationship between systematic risk and expected return for assets, particularly stocks. CAPM is widely used throughout finance for the pricing of risky securities, generating expected returns for assets given the risk of those assets, and calculating costs of capital. The CAPM model says that the expected return of a security or a portfolio equals the rate on a risk-free security plus a risk premium. If this expected return does not meet or beat the required return, then the investment should not be undertaken. The security market line plots the results of the CAPM for all different risks (betas).

22. Meaning of BETA and can it be negative?

Beta is a measure of the volatility, or systematic risk, of a security or a portfolio in comparison to the market. A security's beta is calculated by dividing the covariance between the security's returns and the benchmark's returns by the variance of the benchmark's returns over a specified period. A beta of 1 indicates that the security's price moves with the market. A beta of less than 1 means that the security is theoretically less volatile than the market. A beta of greater than 14 than 1 indicates that the security's price is theoretically more volatile than the market.

If a stock's beta is 1.2, it's theoretically 20% more volatile than the market. Conversely, if an ETF's beta is 0.65, it is theoretically 35% less volatile than the market.

beta less than 0, which would indicate an inverse relation to the market - is possible but highly unlikely. However, some investors believe that gold and gold stocks should have negative betas because they tend to do better when the stock market declines

23. What is the required rate of return?

The required rate of return (RRR) is the minimum annual percentage earned by an investment that will induce individuals or companies to put money into a particular security or project. The RRR is used in both equity valuation and corporate finance. Investors use the RRR to decide
where to put their money, and corporations use the RRR to decide if they should pursue a new project or business expansion.

24. What is the risk-free return?

Risk-free return is the theoretical rate of return attributed to an investment with zero risk. The risk-free rate represents the interest on an investor's money that he or she would expect from a risk-free investment over a specified period.

25. How will you calculate enterprise value?

Enterprise Value, or EV for short, is a measure of a company's total value, often used as a more comprehensive alternative to equity market capitalization. The market capitalization of a company is simply its share price multiplied by the number of shares a company has outstanding. Enterprise value is calculated as the market capitalization plus debt, minority interest, and preferred shares, minus total cash and cash equivalents.

EV = market value of common stock + market value of preferred equity + market value of debt + minority interest - cash and investments.

26. What is minority interest?

Minority Interest also referred to as non-controlling interest (NCI), is the share of ownership in a subsidiary's equity that is not owned or controlled by the parent corporation. The parent company has a controlling interest of 50 to less than 100 percent in the subsidiary and reports the financial results of the subsidiary consolidated with its own financial statements

For example, suppose that Company A acquires a controlling interest of 75 percent in Company B. In this case, the minority interest in Company B will be 25%. On its financial statements, Company A cannot claim the entire value of Company B without accounting for the 25 percent that belongs to the minority shareholders of Company B. Thus, Company A must incorporate the impact of company B's minority interest on its balance sheet and income statements.

27. IPO AND BOOK BUILDING PROCESS

An initial public offering (IPO) is the first time that the stock of a private company is offered to the public. (HDFC Standard Life Insurance) (Biggest IPO – COAL INDIA – 15200cr) Book building is the process by which an underwriter attempts to determine at what price to offer an initial public offering (IPO) based on demand from institutional investors. An underwriter builds a book by accepting orders from fund managers, indicating the number of shares they desire and the price they are willing to pay.

28. Explain NPV and IRR and how do you calculate the same.

Net Present Value (NPV) is the difference between the present value of cash inflows and the present value of cash outflows. NPV is used in capital budgeting to analyze the profitability of a projected investment or project. NPV = Cash inflows / (1+r) ^n – Cash outflows Internal rate of return (IRR) is a metric used in capital budgeting to measure the profitability of potential investments. The internal rate of return is a discount rate that makes the net present value (NPV) of all cash flows from a particular project equal to zero. the higher a project's internal rate of return, the more desirable it is to undertake the project. IRR is uniform for investments of varying types and, as such, IRR can be used to rank multiple prospective projects a firm is considering on a relatively even basis.

29. Can the IRR be negative?

Negative IRR indicates that the sum total of the post-investment cash flows is less than the Initial investment, i.e., the non-discounted cash flows add up to a value that is less than the investment. Yes, both in theory and practice negative IRR exists, and it means that an investment loses money at the rate of the negative IRR. 17 In such cases the net present value (NPV) will always be negative unless the cost of capital is also negative, which may not be practically possible.

However, a negative NPV doesn’t always mean a negative IRR. Negative NPV simply means that the cost of capital or discount rate is more than the project IRR.

IRR is often defined as the theoretical discount rate at which the NPV of a cash flow stream becomes zero.

30. What is typically higher – the cost of debt or the cost of equity?

The cost of equity is higher than the cost of debt because the cost associated with borrowing debt (interest expense) is tax deductible, creating a tax shield. Additionally, the cost of equity is typically higher because, unlike lenders, equity investors are not guaranteed fixed payments, and are last in line at liquidation.

31. What is loan syndication?

Loan syndication is the process of involving several different lenders in providing various portions of a loan. Loan syndication most often occurs in situations where a borrower requires a large sum of capital that may be too much for a single lender to provide or outside the scope of a lender's risk exposure levels. Thus, multiple lenders work together to provide the borrower with the capital needed.

Loan syndication is used in corporate borrowing. Companies seek corporate loans for a wide variety of reasons. Loan syndication is commonly needed when companies are borrowing for mergers, acquisitions, buyouts, and other capital projects. These types of capital projects often require large loans; thus, loan syndication is mainly used in extremely large loan situations.

32. What is securitization?

Securitization is the process of taking an illiquid asset, or group of assets, and through financial engineering, transforming it (or them) into a security. Securitization is the financial practice of pooling various types of contractual debt such as residential mortgages, commercial mortgages, auto loans, or credit card debt obligations (or other non-debt assets that generate receivables) and selling their related cash flows to third-party investors as securities, which may be described as bonds, pass-through securities, or collateralized debt obligations (CDOs).

33. Explain valuation.

Valuation is the process of determining the current worth of an asset or a company; there are many techniques used to determine value. An analyst placing a value on a company looks at the company's management, the composition of its capital structure, the prospect of future earnings, and the market value of assets.

34. Techniques of capital budgeting?

- Payback Period.
- Discounted Payback Period.
- Net Present Value
- Internal Rate of Return.

35. What is the payback period and discounted payback period?

The payback period is the length of time required to recover the cost of an investment. The payback period of a given investment or project is an important determinant of whether to undertake the position or project, as longer payback periods are typically not desirable for investment positions.

The discounted payback period is a capital budgeting procedure used to determine the profitability of a project. A discounted payback period gives the number of years it takes to break even from undertaking the initial expenditure, by discounting future cash flows and recognizing the time value of money. The net present value aspect of the discounted payback period does not exist in a payback period in which the gross inflow of future cash flows is not discounted.

36. For whom free cash flows are prepared

Free cash flows for equity (FCFE)
Free cash flows for Firm (FCFF)

37. How to calculate FCFE?

Net Income + D&A + Net Borrowings
- Net Capital Expenditure
- Net Change in working capital

38. How to calculate FCFF?

Net Income + D&A + Interest (1-T)
- Capital Expenditure
- Change in working capital

39. How to calculate Free cash flows?

EBIT (1-tax rate) + (depreciation) + (amortization) - (change in net working capital) - (capital
expenditure).

40. What is DCF and why do we calculate DCF?

A discounted cash flow (DCF) is a valuation method used to estimate the attractiveness of an investment opportunity. DCF analysis uses future free cash flow projections and discounts them to arrive at a present value estimate, which is used to evaluate the potential for investment. If
the value arrived at through DCF analysis is higher than the current cost of the investment, the opportunity may be a good one

41. What are free cash flows?

FCF is an assessment of the amount of cash a company generates after accounting for all capital expenditures, such as buildings or property, plant, and equipment. The excess cash is used to expand production, develop new products, make acquisitions, pay dividends, and reduce debt.