REA Technical Questions Review Guide:

Cap Rates

1. **What is a cap rate?**
   a. A cap rate is simply NOI / Value. Alternatively, cap rate is the difference between your discount rate and your NOI growth per the Gordon model. It is the same as your going in yield.

2. **What are the three major determinants of cap rates?**
   a. **Opportunity cost of capital:** Comes from the capital market / investor sentiment. Basically, the higher real interest rates or higher expected returns in other investments will require higher expected returns in real estate and therefore higher cap rates if everything else is equal. Also higher rates mean less capital to borrow.
   b. **Growth expectations in the property's future cash flows:** Comes from the property's potential to compete against other properties within the market. How much can investors expect that this property's net cash flow (rent – expenses) will be able to grow over the coming years? Higher growth expectations will allow a lower cap rate, as investors will be willing to pay more $ for a given amount of current income since the income will grow.
   c. **Specific risk of the property:** Could come from competition in the specific submarket or from greater macroeconomic factors like interest rates, consumer trends, demographic changes etc. Greater risk or greater sensitivity to risk will require higher cap rates.

3. **If a property has a low cap rate (say 3.0%), why could that be?**
   a. Two major reasons why the cap rate is very low: (1) The property is either a very safe, core, stabilized asset so a new investor buying the asset would require a lower return because it is "safer", or (2) the asset is not stabilized with very low NOI. In this case, an investor looking to buy the asset is going to evaluate the cap rate versus the stabilized yield and mark-to-market cap rate (the cap rate a property would have today if the property was stabilized at today's market rents).

4. **You have an office building, a hotel and apartment building which all produce the same amount of NOI. Which one is likely to have the lowest cap rate (and be worth the most)? Why? Under what circumstances might the order change?**
   a. Apartment will be worth the most:
      i. Because an apartment is multi-let, tenant credit is strong (people will pay their rent first), and there is typically replacement demand.
      ii. People will always need to live somewhere, whereas the existence of companies is contingent upon products and services that are highly susceptible to market shocks and volatility.
   b. **Office worth second most:**
      i. Because an office will have in-place contractual leases making the NOI less risky. Depending on the investor strategy, there tends to be a preference for longer term office leases with strong tenant credit quality.
   c. **Hotel worth third most:**
      i. Hotel business is the most risky given the nature of the asset (e.g. highly operationally intensive, shorter turnover, more volatile revenue per available room). Hotels tend to be impacted very quickly by macroeconomic issues (e.g. pandemic-induced travel restrictions, economic downturns, natural disasters), as well as by hotel management.

   All of this could change if, for example:
   d. The hotel is a trophy asset in a superior location in a gateway market (George V in Paris, or The Plaza in NYC).

e. The office has a tenant that is very credit worthy (Apple, Microsoft etc).
f. The office has a tenant that has a very long lease (contrast with smaller mom and pop businesses or restaurants).
g. The apartment building is in a neighborhood that is becoming obsolete or susceptible to changing trends (e.g. pandemic-induced remote work environments have led to a temporary urban exodus as remote workers move to more suburban or rural markets in search of better space and quality of life).

5. **What's more important when evaluating a real estate investment - the cap rate or the price per square foot? Why?**
    a. Both are very important. Cap rates are based off NOI and help you generalize across assets. However, because it is applied to an NOI, it could be skewed (maybe if selling off an unstabilized NOI). Also, it is important to define what kind of cap rate you are using (e.g. gross or net, because sometimes people cap NOI at 100% occupancy, like in Europe). Cap rates also don't tell you much about the asset. It could be a very big building producing a low NOI, and so the cap rate is high.
    b. Price per square foot helps you look at assets on a “pound for pound” basis. It ignores NOI and tells you about the building.

6. **I have two identical buildings next door to one another. One of them trades at a higher cap rate but also a higher price per square foot. How is this possible?**
    a. That building must have had a higher NOI (or NOI per sqft, but we assume that both buildings have the same sqft). Please see the example below.

Building / SF	NOI	Buyer Going In Cap	Price	Price / SF
A / 100,000	1,000,000	5%	20,000,000	200
B / 100,000	2,000,000	8%	25,000,000	250

7. **Explain the relationship between cap rates and interest rates.**
    a. **Capital flow:**
        i. As interbank exchange rates decrease, the cost of funds is reduced and funds flow into the system; conversely, when rates rise, the availability of funds decreases. The changes in interbank lending rates either add or reduce the amount of capital available for investments. The amount of capital and the cost of capital affect demand but also supply of capital available for real estate purchases and development.
        ii. For example, when capital availability is tight, capital providers tend to lend less as a percentage of intrinsic value, or not as far up the "capital stack." This means that loans are made at lower loan to value ratios, thus reducing leveraged cash flows and property values.
    b. **Discount rates:**
        i. Cap rates are discount rates less NOI growth. Discount rates are risk free rate + premium.
        ii. The risk-free rate is the rate on U.S. Treasuries, which are considered risk-free. Higher risk investments must achieve a higher return to compensate for the additional risk borne (i.e. risk premium).
        iii. Because discount rates are equal to the risk-free rate plus a risk premium, the capitalization rate is equal to the risk-free rate plus a risk premium, less the anticipated growth in income.

iv. Risk premiums vary as a result of supply and demand, but discount rates will vary due to changes in the interest rates that make them up.

v. When the required returns on competing or substitute investments rise, real estate prices fall; conversely, when interest rates fall, real estate prices increase.

c. Summary

i. Capital flow / availability of capital (if interest rates are high, that means less cash in circulation, less banks lending, that means less people can buy, that means higher cap rates)

ii. Higher interest rates affect returns negatively, and people pay less for low returns

8. Why would someone buy an office building in downtown NYC at a 3.5% cap rate if they can get a higher guaranteed return investing in US Treasuries?

a. It would have to be if they believed that the in-place rents were low and they thought that they could benefit from some reversion when it was time to re-lease (opportunity for rents to mark to market).

b. Real estate can provide diversification benefits and relative stability during periods of volatility in the broader economy, especially for core trophy assets with long-term leases.

9. Would you buy a 3.5% cap rate office building in New York? How would you make money? What would you need to do to earn a return?

a. Yes, but only if there was an opportunity to renegotiate the leases at a higher rent in the near future. The cap rate on the building is already compressed to a very low rate, therefore in order to earn a return, there would have to be a strong opportunity for rent appreciation. In this market, I would be extremely cautious about purchasing a building at such a low cap rate. Having a strong office brokerage team is necessary to ensure that the building is re-tenanted as efficiently as possible at a higher lease rate.

10. Do you think real estate investors are justified in buying at lower cap rates? Why or why not?

a. A cap rate is not indicative of anything in isolation, as it depends on each investor's objective and goal. .

b. If the investor's goal is to optimize NOI and IRR and there is room for rental reversion / growth, then a low cap rate is justified. The low cap rate could have been off a low NOI, which would imply that the price to purchase the asset is not high on a relative basis.

c. If the investor's aim is to buy an ultra-core trophy asset for diversification / stable cash flow / capital protection purposes, then a low cap rate could be justified.

11. If I buy something at a 5% cap, put 50% debt on the property at a 4% interest rate, what is my cash on cash yield?

a. To make this easier, assume that you purchased the building for $100. That means that you bought the property with $5 of current income (5% cap). That also means that you only spent $50 in equity and borrowed the other $50 from the bank (50% debt). If your debt cost 4%, you are paying $2 of interest (.04*$50). This means that your levered income is $3 (your $5 of current income, less your $2 of debt). Your equity investment is $50. That means your cash on cash yield is 6% ($3/$50).

b. Please note that your unlevered yield is 5%. If they ask if you hold it for a year and sell at a 5% cap, your unlevered IRR is 5% and your levered IRR is 6% (assuming interim cash flows are reinvested at the IRR rate).

c. Please know this question front and back, the interviewer can give you any 3 of the 4 variables and ask for the fourth.

d. Without getting into numbers, if they sell it for a 4 cap in 1 year, your levered IRR will be greater than 6% (because your exit cap > entry cap)

IRR

12. **What is an IRR?**
    a. The IRR is the discount that makes your NPV zero. It is a metric used to analyze investor returns and is often associated with IRR hurdle rates and promotes.

13. **Explain to me what is an equity multiple?**
    a. An equity multiple is another metric used to analyze investor returns. It is calculated as the sum of total cash distributed to the investor including appreciation from sale over the holding period divided by the initial investment.

14. **What's the relationship between IRR and NPV?**
    a. The IRR is the discount rate required to make your NPV equal to 0.
    b. It does this by discounting your future cash flows so that their present value is equal to your investment.

15. **I have 2 deals I am looking at, one is guaranteed to have 300% IRR and the other one has a guaranteed 7% IRR, which one should I invest in?**
    a. There is no right answer but only wrong answers. The main point of this question is to see if the candidate understands the IRR concept. Here is an example answer- It really depends. If the 300% IRR deal has a one-day investment period, and it is only for $1, I would be making very little money and it would not be worth my time. I am also interested in the cash flow multiple in relation to the IRR. I would prefer the 7% IRR deal if it was for a larger equity check, say $50MM, and over 10 years so I can benefit from ~2.0x cash flow multiple. It also depends on my investment mandate and how much money I want to invest.

16. **Please explain what is the impact of depreciation on the project IRR?**
    a. No impact. Project IRR is calculated on the basis of cash flow and depreciation is a non-cash flow item.

Valuation Methods

17. **Walk me through a DCF.**
    a. This is a short answer, but basically a DCF is a way to project out future cash flows and discount those CF's back to present value. You are saying that this property is something that is going generate income (while having operating expenses) over some period of time fluctuating with market conditions, and that this potential needs to be taken into consideration when valuing the building.

18. **How do you evaluate RE in general?**
    a. Real estate’s value is derived by how it serves its users, so to develop an opinion one must look at human elements or signs of trends. Also important are the attributes of the built environment (i.e. current supply). Lastly, financial factors help define the outlook: savings, capital flow from around the world, etc.

b. Sales Approach: Look at comparables of similar properties on a price per square foot basis (more applicable for residential, but can work for commercial buildings) – must make adjustments since no two buildings are exactly the same.
c. Cost Approach: First look at the cost of replacing the building, then subtract the cost of any improvements that are necessary (i.e. minus estimated depreciation), then add on the cost of the land. Typically only used for unique properties like churches or schools.
d. Income/Direct Capitalization Approach: Calculate the annual NOI of a property, and use the market cap rate for similar properties to back out the value: Value = NOI / cap rate.
e. DCF: For a longer period of time, you take a discounted cash flow of NOIs for 10 years plus the discounted residual value in year 10. You can calculate the residual value by taking the assumed Y11 cash flow, and dividing it by assumed cap rate in Y11. You could also use a growing perpetuity formula [i.e. NOI / (r – g) or NOI / going-out-Cap-rate] NOI is gross income produced minus the operating expenses (e.g. taxes, utilities, insurance, maintenance, property management).
f. IRR: The most widely used approach. Often firms have a hurdle they must meet before they choose to invest. Higher IRR is better given two assets with similar risk characteristics. IRR is the discount rate which makes the NPV of a property's future cash flows equal to zero. You should include the purchase price in the model.
    i. Unlevered IRR: Measures the return on an investment at the asset level ignoring capital structure
    ii. Levered IRR: Represents returns to equity investors

19. How would you value an office building? Retail? Multifamily? Industrial? Hotel?

a. Retail, Multifamily and Industrial
    i. Cap rate on stabilized NOI. Cap rate based on comps, with adjustments
    ii. Price per square foot
    iii. Replacement cost
a. Hotel
    i. Cap rate on stabilized NOI
    ii. DCF, using asset specific WACC
    iii. ADR rule

20. What is NOI?

a. NOI is an asset's net operating income. It is equal to total operating income – operating costs. See below for a more detailed breakdown.
    1. Rental income
    2. – vacancy = net rental income
    3. + ancillary and overage income
    4. + expense reimbursement
    5. + ancillary income
    6. – credit loss = operating income
    7. – reimbursable expenses
    8. – non reimbursable expenses
    9. = NOI
    10. – TI's, leasing commissions and capex

21. In trying to determine the value of an office building in downtown NYC: how would you value it and why? What questions do you need to ask?

a. First of all I would look at comps
    i. Price per square foot comps and cap rate comparables
b. IRR analysis
    i. I would determine a level of underwriting that I am comfortable with and determine what my expected return is, given the asset risk profile and envisaged business plan. Then I would see what price (benchmarked from the comps) would support those returns and not bid above that. I would need to take a view on exit as well
c. DCF
    i. Similar to the above. I would underwrite the asset cash flows, and discount them back to today's values. Would need to take a view on the exit as well as determine what the appropriate discount rate is.
d. Replacement cost
    i. What would it cost to replace the building? Am I building at or near replacement cost?

<u>Due Diligence and risk</u>

22. What would you consider to be the most relevant part of the due diligence process?

a. Every part of the process is relevant; however, three critical issues in due diligence are environmental, legal and pro-forma analysis. If relevant, due diligence will also be needed to evaluate your operating partner on their execution ability, management team, reporting functions etc.

23. Our firm wants to invest in an asset. If we give you the OM, what are the some of the things you'd do/look at?

a. Asset type: what kind of asset is this (resi, office, etc)? Then specifics (high rise, midrise, trophy, etc)?
b. Location: Country, city and then market
c. Parties involved: Who is the seller (more relevant if they are retaining a stake)?
d. Proposition / proposed capital structure: What kind of investment will this be (core building with 20 year lease, or value add residential refurbishment)? What is being sold and how much of it is being sold and to whom?
e. Building overview: size, floors, floorplates, refurbished recently?
f. Occupancy: leasing profile if office or retail, occupancy if multifamily
g. Cashflow: NOI (try and estimate going in cap), future capex requirements, etc

24. If you have $100 million of equity to invest where would you invest it and why? What type of returns could you expect?

a. You can give a wide variety of answers here. Goal is to show that you've been reading the news and have your own view on the market.
b. Know the types of returns you would expect from your investment idea. For example, you don't want to tell an interviewer that you think there is a good opportunity in multifamily development in Austin and you'd look for deals with a 11% yield on cost.

25. You have been asked to fly to Chicago (any city will do) for a due diligence trip and site visit for a potential investment. What would you do before you leave to prepare? What would you want to achieve while you are there?

a. **Before:** Understand how national macroeconomics are filtering down to the city, read broker research to understand real estate trends, look at a map of the city and of the neighborhood to get familiar with the geography, read up on recent transactions that have taken place and understand what kind of plays there are.

b. **There:** Walk the asset (very important to get a feel of what you are buying), walk around the neighborhood, speak to the asset management team, develop an opinion on the partner, ideally speak to a tenant if possible.

26. Interviewer opens a large document to a wide angle picture of a commercial real estate asset from the parking lot. What do you see? Would you want to own this? Why/why not? How would you value it? What concerns you?

a. **Building questions**
    i. Who is in it? Vacancy, tenants, lease terms, etc
    ii. Entitlements. What can be done with the asset?
    iii. Location. Is it accessible? What area is this catering to (suburban office or high rise)?
    iv. NOI
    v. Quality. Capex requirements, past refurbishments
b. **Market**
    i. Macro: GDP, unemployment, population, forecasts
    ii. Micro: asset submarket, neighborhood, trends
c. **Possible play**
    i. What could be my business plan?
    ii. I would pay a number that allows me to get an appropriate return.

<u>Leverage</u>

27. Why borrow?

a. You don't have the money
b. You want to diversify, and invest the money elsewhere.
c. Tax shield
    i. Pension funds are non-taxable, so they will only do it for option b and c. That's why some of them go unlevered.
    ii. Developers also won't care about this, because developments won't generate income tax.
d. Enhance returns
    i. Capital appreciation. The amount of debt stays the same. So if your building goes up in value, that additional value is profit over your relatively small equity requirement.
e. Positive leverage (i.e. cash yield)
    i. Levering at a lower rate than your unlevered IRR brings about positive cash on cash.

28. Debt terms

a. Negative covenants (things the borrower cant do, otherwise the loan will accelerate)
    i. Prepayment penalties / yield maintenance: make sure the borrower doesn't refinance early if rates drop.
    ii. Distribution: limiting distributions to equity, to provide cushion
    iii. Operating restrictions: things the borrower can't do without causing the loan to accelerate. For example, signing below market rate tenants. Lender would worry about a borrower doing this just to get fees, which may exceed the equity in the deal, but the borrower's collateral (the asset) may lose value.
    iv. Additional debt: need to take their permission
b. Positive covenants (things the borrower must do)
    i. DSRA: you may have to maintain a minimum deposit in their bank accounts
    ii. NOI minimum restrictions
    iii. Leases: provide copies of all leases prior to execution, to check vs business plan

c. Secured: secured by recourse to the assets of the property. If a borrower fails to repay, the lender is entitled to foreclose on the asset (building, improvements and land as well as leases).
d. Recourse: if loan is secured just by the assets, it's a non-recourse loan. This makes the loan a put option to the borrower (they can just sell it if it falls below a value). But sometimes the lender may secure against the personal assets of the borrower. This is recourse lending.
e. Guarantees: lender may make the borrower guarantee certain things such as a construction completion guarantee or leasing to a specific level of occupancy.
f. Receivables: lender has right to borrower other receivables
g. Draws: schedule must be worked out. Also specific use of proceeds
h. Amortization: Amortization rate is over a certain number of years. This period is longer than the term of the loan. Divide the loan amount by this to get the loan constant. Anything left over at the end of the loan term is paid as a balloon.
i. Insurance: You must insure at least the amount of the loan, as specified by the lender. The lender doesn't care if you insure beyond this amount. Lenders are ranked in accordance to their mortgages for claim over the insurance.
j. Sweep: Taking all cash until loan is satisfied.
k. Fees: To cover lender due diligence costs.
l. Refinancing: Reasons to refinance could include the following:
    i. Property has risen in value. Allows you to lever more and take cash out (get equity windfall out).
    ii. To get lower rates and better terms.
    iii. Refinancing gives you a greater tax shield, as you will be in the early years of your amortization schedule and less principal (assuming not interest-only loan). But you may have prepayment penalties on your current loan. This makes sense if:
        1. You manage to convince the lender to issue you a new loan and waive the prepayment fees. Do this only in a competitive market where the lender needs to get cash out.
        2. If you think today's rates are at all time lows.
        3. If you really want to take some cash out.
        4. If you are a new owner and can get debt at better rates due to your credit.

29. What is a DSCR and how do the allowances vary by property type?

a. Debt service coverage ratio. NOI / debt service. Debt service is equal to interest and principal payments.
b. How many times your NOI must cover your interest and amortization payments in a year. Below are least risky to most risky.
    i. Multifamily: 1.15 – 1.30
    ii. Industrial: 1.2 – 1.3
    iii. Office: 1.25 - 1.50
    iv. Hotels: 1.35 – 2.25

30. What kind of leverage can a well leased office building carry? Would it all come from one lender? How would that leverage be priced in today's markets (spreads)? Below is just an example (subject to change based on each deal).

a. LTV: <68%
b. DSCR: 1.52
c. Rate 4.5%
d. Amortization rate: 18.5 years

31. Discuss Mezzanine Debt.

b. Mezzanine capital, in finance, refers to a subordinated debt or preferred equity instrument that represents a claim on a company's assets, which is senior only to that of the common shares. Mezzanine financings can be structured either as debt (typically an unsecured and subordinated note) or preferred stock.
c. Mezzanine capital often is a more expensive financing source for a company than secured debt or senior debt. The higher cost of capital associated with mezzanine financings is the result of its location as an unsecured, subordinated (or junior) obligation in a company's capital structure (i.e., in the event of default, the mezzanine financing is less likely to be repaid in full after all senior obligations have been satisfied). Additionally, mezzanine financings, which are usually private placements, are also often used by smaller companies and may also involve greater overall leverage levels than issuers in the High Yield market and as such involve additional risk. In compensation for the increased risk, mezzanine debt holders will require a higher return for their investment than secured or other more senior lenders.
d. Mezzanine financings can be completed through a variety of different structures based on the specific objectives of the transaction and the existing capital structure in place at the company. The basic forms used in most mezzanine financings are: subordinated notes and preferred stock. Mezzanine lenders, typically specialist mezzanine investment funds, look for a certain rate of return which can come from four sources: (each individual security can be made up of any of the following or a combination thereof):
    i. Cash interest — A periodic payment of cash based on a percentage of the outstanding balance of the mezzanine financing. The interest rate can be either fixed throughout the term of the loan or can fluctuate (i.e., float) along with LIBOR or other base rates
    ii. PIK / capitalized / accrued interest — Payable in kind interest is a periodic form of payment in which the interest payment is not paid in cash but rather by increasing the principal amount of the security in the amount of the interest (e.g., a $100 million bond with an 8% PIK interest rate will have a balance of $108 million at the end of the period but will not pay any cash interest).
    iii. Ownership — Along with the typical interest payment associated with debt, mezzanine capital will often include an equity stake in the form of attached warrants or a conversion feature, similar to that of a convertible bond. The ownership component in mezzanine securities are almost always accompanied by either cash interest or PIK interest and in many cases by both. In the case of real estate mezzanine debt will have a pledge of shares which will allow it to control the asset and a second lien (subject to intercreditor agreements)
    iv. Fees – Mezzanine lenders will also often charge an arrangement fee, payable upfront at the closing of the transaction. Arrangement fees contribute the least return and are aimed primarily to cover administrative costs and as an incentive to complete the transaction.
e. In structuring a mezzanine security, the company and lender work together to avoid burdening the borrower with the full interest cost of such a loan. Because mezzanine lenders will seek a return of 14% to 20%, this return must be achieved through means other than simply cash interest payments. As a result, by using equity ownership and PIK interest, the mezzanine lender effectively defers its compensation until the due date of the security or a change of control of the company.
f. Mezzanine loans present certain complications to the origination process, including restrictions on the structure of the holding company and typically cumbersome paperwork. However there are advantages for both the lender and the borrower: for the lender, in case of default the foreclosure process is relatively streamlined; and the borrower is able to leverage the property to an extent otherwise impossible

g. Mezzanine Capital and Real Estate Finance
    i. In real estate finance, mezzanine loans are often used by developers to secure supplementary financing for development projects (typically in cases where the primary mortgage or construction loan equity requirements are larger than 10%)
    ii. These sorts of mezzanine loans are often collateralized by the stock of the development company rather than the developed property itself (as would be the case with a traditional mortgage)
    iii. This allows the lender to engage in a more rapid seizure of underlying collateral in the event of default and foreclosure. Standard mortgage foreclosure proceedings can take more than a year, whereas stock is a personal asset of the borrower and can be seized through a legal process taking as little as a few months.
    iv. So why are mezzanine loans so attractive? Well, in situations that banks and other lenders consider to be high risk, you may not be able to get sufficient funding via a term loan. The alternative is to seek capital from private equity investors, but that will involve surrendering equity.
        1. In the case of a mezzanine loan, equity is typically granted to the lender in the form of a warrant that will provide a return on exit. This compensates the lender for the perceived higher risk. The key characteristic of a warrant is that it does not result in any dilution of your shareholding in the company. If you own 100% or 70% of your business, you will continue to do so.
        2. Also important is the fact that the debt associated with a mezzanine finance arrangement is sometimes redeemed in a one-off payment rather than being paid monthly over a period of years. This means that on a month by month basis, the debt does not place a strain on cash flow. Indeed, the mezzanine element is often redeemed relatively painlessly on the back of a subsequent refinancing.
        3. However, a mezzanine loan is more expensive. Lenders look for a yield of 3% or 4% above the base rate, plus the additional return based on the performance of the business. This compares to a rate for term loans of 1% 1.5% above base.
    v. Mezzanine can also be
        1. Convertible debt (converts to equity at certain terms) or participating debt (get interest payment and also part of NOI above a hurdle)

<u>Joint Venture / Waterfalls</u>

32. What is a waterfall structure?

a. A waterfall is a structure that provides incentive to the GP or developer. The GP will get some percentage of cash flows up to a certain IRR hurdle rate, and then will get an increasing percentage of cash flows once the IRR hits additional hurdle rates.

33. What is a promote?

a. It is really just the disproportionate share of the fund's profit (achieved by above average returns) which the GP receives thus incentivizing them to perform better in their role.

34. Do you know how to structure a joint venture?

a. Basically what a JV does is provide a co-investment by multiple parties to fund a real estate deal. This could be a general partnership (GP), limited partnership (LP), or an LLC. Ultimately it is simply a way to link money (capital) providers and people who specialize in real estate services. What a JV tries to accomplish is utilize this link to provide all parties with above-average risk adjusted returns and also assess structuring details with regards to downside protection if the deal goes bad.

35. In a JV Partnership, what does each party bring to the table? Do you understand the basic equity and promote structure of a JV? If so, walk me through the rationale.

a. The LPs bring the majority of the equity (90%). The GP brings the execution expertise and some equity (10%). A typical JV structure will split the equity 90/10 between LP and GP.
b. Without the LPs the GP wouldn't have the scale and capital needed to fund projects. Without the GP the LPs wouldn't have opportunities to invest in.
c. The rationale behind the promote is that returns are pari passu until an agreed hurdle. After this hurdle is reached the GP has effectively delivered returns that earn them carried interest for their successful execution. This is to align interests between the LP and the GP so that the GP will be incentivized to execute the project successfully to deliver agreed upon returns before they get a disproportionate share of the profits.

36. Fund waterfalls (typical terms below)

a. Pari passu until preferred return, then the sponsor starts getting promoted. Also, it can be structured where the sponsor gets their promote interest on everything up to the preferred return, as long as they hit it.
b. Fund manager will also earn an annual management fee for asset management services.

<u>Miscellaneous</u>

37. Should I condo / should I go rental?

a. I am buying a vacant multifamily property that is fully completed. I can either condo out the property at no further cost at a $1,000 PSF sellout or lease it up at $50 PSF. Assume that a fully leased residential property across the street just sold at a 4 cap. Should I condo the property or should I lease it up as rental?
b. It depends on the numbers they give you but given the numbers above, you should move forward as a rental. You must compare the total value of condo vs. the total value of residential. The total value as a condo is $1,000 PSF. The total value as residential is $1,250 ($50 / .04).

38. Risk Across Asset Classes

a. In general, what is the riskiest asset class and why?
b. Hotels since the leases are only overnight and since the income can be very volatile from month to month, or year to year.

39. Assets Across the Street

a. You have two buildings that are located at the same intersection, across the street from each other, that are the same size, asset class (office), age, and occupancy rate. However, one is valued twice as much as the other. Why could that be?
b. Variety of answers, but some reasons include: one building has higher (at or above market) paying leases, better credit tenants, a better lease expiration plan (so all tenants don't roll at once), substantial deferred maintenance that needs to be completed, higher expenses (due to an ineffective operator). Basically look for quantitative things that would produce a different NOI or qualitative things that make the building more attractive to investors. See another example below.

40. Two office buildings are located on opposite corners of Park Ave. They both have the same number of floors and look identical from the outside. Why is one worth $150M and the other $500M?

a. The buildings differ in value due to the length of the office leases as well as the rents negotiated on the leases. The building that is worth $500M most likely has higher lease rates and therefore higher annual NOI. Other factors that could also increase the value of the building are listed below.
b. Diversification of the tenants – if every tenant is in the financial services industry, that can be more risky than having a diverse tenant base from several industries.
c. Weighted average lease term – longer leases are better.
d. For expiring leases – if the rent is below market, that would make the building more attractive.
e. Capital structure - one is offered debt free and the other is encumbered with high leverage / high prepayment penalty debt.

41. Ground Lease

a. What is one pro and one con about a building that has a ground lease (if you are going to buy the leasehold fee interest for the building only)?
b. A pro is that you don't need as much capital to purchase the asset since you aren't buying/paying for the land. Some cons are that it can be difficult to obtain a loan if the ground lease will expire in the near future, that the ground lease rent can roll to market at lease expiration and substantially increase the ground rent expense, that the use and alterations to the property can be restrictive based on the ground lease covenants, and that the value of the asset continuously diminishes as the expiration of the ground lease approaches.

42. Discuss ground leases.

a. Ground leases are like mortgages. The land belongs to someone other than the landlord of the building, and the landlord pays to lease it.
b. If the ground lease terms are broken, then the land owner may foreclose on the building and sell it.
c. Ground leases dictate that the landowner receive all structures on the land after the end of the lease too. Sometimes you will extend the lease at a higher payment to avoid this.
d. Ground lease rent is an operating expense and so your tax base is lower.

43. How do you value a building on a ground lease?

a. You can DCF the ground lease and subtract it from the building value calculated on a fee simple (freehold) basis.
b. Discount rate will be lower than the discount rate of the building cash flows post ground lease, because ground lease payments are more senior.
c. You can cap the ground lease payment and subtract this from the fee simple value.
d. You can cap / DCF the NOI net of the ground lease.
e. Ground leases increase the building's NOI risk and so a lender will take this into account and will NOI post ground lease or a value less ground lease amount for LTV purposes.

44. What is a triple net lease (NNN)?

a. A lease where the tenant pays their share of all building taxes, insurance and maintenance in addition to their rent payments
b. This is valuable because it grants more certainty to a lease's cash flows, although NNN leases tend to have lower base rents.

45. What is an expense stop? Why is it important to the landlord?

a. A fixed amount (typically per square foot) in a lease where the tenant is responsible for all building operating expenses and taxes in excess of said amount.
b. Expense stops benefit landlords by limiting exposure to operating expenses being greater than expected during the course of a lease. In other words, many landlords look to incorporate some type of Expense Stop into Full Service leases because it protects their operating income.
c. This makes your cash flows more predictable and secure, as you know the worst case scenario.

46. What is FAR? Why is it important?

a. FAR, otherwise known as the Floor Area Ratio, is calculated as the total/gross building area divided by the site's size or square footage. It is a measure of a project/building's density relative to the site upon which it is built.
b. So if you have a FAR restriction of 5x and a floorplate of 10 sqft, you can build one floor up thats 50 sqft or 5 floors up that are 10 sqft.
c. Important to know what it is so you can get the potential of the income.
d. Buy it with certain area, with hopes that you could increase it; go to the city so you can get a variance to go to this; can be a give and take.

47. Explain the bottom up analysis of a market? Top down?

a. Bottom up is starting with a specific asset and looking at its drivers, then the submarket, then the market, then further on up into how it fits into its macroeconomic environment
b. Top down is the reverse. Start with macroeconomic factors and work your way down to the asset level.

48. What is the impact on rents, stock and asset prices from a 10% increase in population?

a. It impacts everything positively, generally.
b. Tracking the trends in population growth can provide an accurate prediction of which neighborhoods are likely to succeed and which ones are doomed to at least short term failure.
c. An increase in population results in an increase in households and so the housing sector is positively impacted.
d. Similarly, employers and companies look to have operations in areas of high population density. Those employers will look for commercial space for their operations in these areas.
e. This drives up rents and higher rents (ie NOI) will ultimately drive up prices.
f. Stock will be affected as developers will try and match this demand by developing, although it won't track immediately.

49. What are the risks of entering a new market?

a. The main risk is that real estate is a highly localized business. The underlying driver of real estate investing is law, and without knowledge of the local laws and zoning requirements you are liable to make a mistake.
b. You need to know the local trends and who the big occupiers are and what are their preferences. Also, the local norms are important to know when negotiating leases.
c. Furthermore, RE is a business based on relationships and not having them in a new market will put you at a disadvantage relative to competitors.

50. Explain the subprime meltdown/credit crunch and how/why it has put a halt to real estate M&A activity.

a. A dramatic increase in mortgage securitization, which lead to more liquidity (i.e. investors wanted to buy these securities, so I-Bank demand increased, so commercial banks made it easier and easier to get loans, and eventually their standards dropped too low and they were giving loans to those who couldn't pay.)
b. With increased demand came increased prices. People were buying at ultra-low cap rates, in some cases with negative leverage, with the hope that they could raise rents and or flip the building in a short period for a profit.
c. Also, things were really highly levered (80-90% LTV). Defaults increased, banks stopped lending, and asset values dropped.

d. Then as risk premiums exploded during the credit crisis, cap rate spreads soared, depressing valuations. Asset values then dropped up to around 40% from peak levels and some had zero equity and become worth less than their respective debt.
e. Once Lehman fell, the capital markets locked-up. The CMBS market all but disappeared. Started long road to recovery.

51. I have an option to buy a piece of land with 500,000 buildable square feet for $50 per square foot. The option expires in 5 years. The carry cost of this option is an annual payment of $500,000 at the beginning of each year, which also means a payment of $500,000 at time 0. What are the inputs I need to understand how to value this option?

a. Timing: When did I expect to buy it and when did I expect to sell?
b. Identify asset that could be built on the land and estimate the development budget
    i. I would need to estimate the development costs for what I would build on the land.
    ii. I know the land will cost US$25m, and if I assume that the land cost is 20% of the budget (rule of thumb) I get a total development cost of 125m.
    iii. Then I need to assume some kind of profit, in place of real underwriting or proforma"
        1. A developer profit on cost of 20% is a good rule of thumb.
        2. That would mean an exit of US$150M.
    iv. Then I would run an IRR calculation and see what return I would get for buying the land, developing over time per an S curve, and selling at that profit on cost.
    v. I could also conduct an NPV analysis as well.

52. How would you decide how much to pay for land if you wanted to develop it?

a. First I assume a 20% profit on cost to the developer and see what land cost would support that.
b. I would need to decide what kind of asset I would be building and come up with some rough development budget. Generally hard costs are 40%, soft costs are 30% and financing is 10%.
c. Then I would estimate the NOI by estimating market rent, vacancy and ancillary rent. This gets me to rent per leasable sqft. I would then estimate recoveries based on local norms per sqft.
d. I can then divide rent psft by cost psft to get a rough estimate of yield.

53. Why / how to exit a RE investment?

a. Why?
    i. To free up capital.
    ii. Risk profile is different to what you do (you're a developer, and now your building is a core building).
    iii. Fund life (usually 7-12 years).
    iv. Human aspects (selling a building you inherited).
b. How?
    i. Sale.
    ii. 3-12 months.
    iii. Must gather docs and contracts, prepare financial statements, get them audited, create marketing materials, hire lawyers to negotiate and structure, hire a broker, and negotiate with the buyer.
    iv. All of this work cost fees and time. 2%-5% is a good estimate of sales costs (but this can be changed depending on value of asset – TW Center vs small building).
        1. If you sell to a buyer who is levering, their lender will not lend until they get their lien on the property. But you already have a mortgage and so you need to pay that first, but you can't do so until you sell the property. Get around this by simultaneously selling, paying your lender and transferring the first lien to the purchasers lender
        2. Taxes: In the US you pay capital gains tax on the gain as well as tax on the accumulated depreciation.

v. Refinancing
1. Cheaper on costs than selling.
2. Postpone capital gains tax.
3. Allows you to take money out tax free.
4. Only works if you don’t mind holding the asset again for a while.

vi. Recapitalization
1. Letting in a partner in at higher than your basis.

vii. 1031 exchange
1. You can roll your sales proceeds into another building and defer your tax liability.
2. This also allows you to restart your depreciation schedule, which is very helpful if your current building is near the end of its depreciable life.
3. You defer your tax until you no longer own it.
4. Makes sense for personal people who are old and want to avoid the income tax.
5. You can do two things to create value with this:
   a. Sell a stabilized asset for a value-add asset, and add value and get the return.
   b. Sell stabilized and buy a more stabilized property which would offer better refinancing opportunities (allowing you to take money out tax free).
   c. The problem with this is that others will be trying to do the same so that “like” properties may be hard to come by or will get bid up.
6. You could also 1031 for shares in a public RE company.
7. Summary: Good because it allows you to defer tax and restart the depreciation schedule.

viii. IPO
1. You will need a large asset base and your assets will need to have desirable aspects set by the market (low debt, predictable cash flow, independent governance, transparency).
2. IPOs also take 12-18 months and you will incur lots of fees.

54. Why would you invest in core single-tenant office assets if you could just buy the tenant's corporate bond?

a. I could take a view on cap rate compression due to it being a high barrier to entry market.
b. Furthermore, there could be a chance for some reversionary rent in the future.

55. Would you rather have $100 in inventory or $100 in accounts receivable?

a. It would depend on the receivable’s credit worthiness. Generally speaking $100 in accounts receivable is better, as I am one step closer to the cash, and liquidity is the main concern. Inventory still needs to be sold to be turned into cash, which is easier said than done.
b. However, if the tenant is not credit worthy, and there is a high chance of them defaulting, then it would be better to have the inventory for greater certainty.