Kahr's Challenge Cases

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About the Author

Joshua Kahr is the principal of Kahr Real Estate (www.kahrrealestate.com), a training and consulting company that he founded in 2002 and that serves the commercial real estate industry. In 2009, he founded Metropolitan America (www.metropolitanamerica.com), a real estate investment company that owns and manages apartment buildings in New Jersey. In 2020, he started Essex Suites (essexsuites.com), a coworking company, that is opening its first location in Verona, New Jersey in 2020.

Prior to this, he held positions in investment sales at a regional brokerage firm and in acquisitions at a fund that focused on environmentally contaminated real estate. He also served for five years on the board of directors for Monmouth Real Estate (NYSE: MNR) and is an advisory board member of Assess+RE, a real estate analysis software startup (www.assessre.com).

Mr. Kahr has taught real estate finance and real estate capital markets for Columbia University's MS in Real Estate Development program since 2005. He has also taught graduate level finance courses at Northwestern, New York University, and Georgetown University. For corporations, he has taught over 300 two-day seminars on Excel modeling and Argus.

Publications include two books on real estate market analysis, Real Estate Market Valuation and Analysis (John Wiley and Sons: 2005) and Beyond the Bubble (Amacom Books: 2007).

He has a Master of Science in Real Estate from New York University and a Bachelor of Arts in Economics from Reed College.

Shameless Plug

If you are interested in taking a class on Excel modeling for real estate analysis, I teach open enrollment classes on the topic every five weeks in New York City. It's a two day long class and I've been teaching it for over 10 years. You may take this in person, or if you prefer you can attend it as a webinar. To learn more or sign up for this class, or the other classes that I teach, please go to:

www.kahrrealestate.com

Also, as an added incentive, if you use the code "TQCKJCX8" when you sign up, you will get $100 off the regular price of $895 per person. This code is good until 12/31/2020.

Introduction

This case book is the result of being asked the same question again and again over a period of 15 years.

Let me explain.

I started teaching real estate finance at Columbia University in its MS in Real Estate Development program back in 2005. For approximately 15 years, I have been asked by at least 10 students per year, the following question:

“I am applying a job at <insert name of prestigious real estate private equity shop> as an Associate. I am going to have to take an Excel modeling exam when I get there. What should I expect?”

After being asked that question hundreds of times and having to dig around on my laptop to find one every time, I finally decided to pull this document together.

Over the years, I have collected them from former students. The cases run the gamut across product types and strategies. I have taken those “real world” examples, cleaned them up for clarity, adjusted when needed, and have consolidated them into one text. Also, I have organized them into three categories:

> Baseline - To work as an investment analyst, you should be able to at least complete this sort of assignment.
>
> Challenge – This is a reasonable expectation for someone who is post-B school to be able to complete. It will take a couple of hours.
>
> Abusive – These exist for no other reason other than to humiliate the applicant; they cannot be solved in 60 minutes or less. They are overly complex and often cryptic in their design. The questions are usually open-ended.

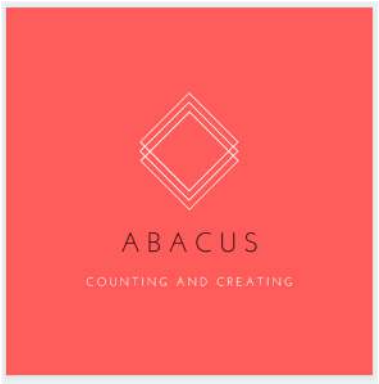
This version (1.0) does not have any answers to the cases. So, before you reach out to me to ask if I have answers, I do not. That said, I have a plan to do so. Please send me your answer solutions if you would like feedback. I will then use those answer solutions to help building the next version of the book which will have all the solutions. It is an “open source” approach to building a better case book.

With this brief introduction (and plea for feedback) out of the way, I suggest you grab a cup of coffee, snuggle up in a comfy chair, fire up Excel, and get to work. It’s going to be a long night.

Contents

Baseline

As the old line goes, every journey starts with the first step. Start here. These are the sort of cases that a first year analyst should be able to power through with minimal difficulty.



Abacus

Property Size
Building Net Rentable Square Feet 100,000 sf

Purchase Assumptions
Asking Price $14,000,000
Acquisition Closing Costs ..... 3.0% of purchase price

Sale Assumptions
Terminal (Exit) Cap Rate 9.5%
Sale Closing Costs ..... 2.25% of sale price

Revenue and Expense Assumptions
In-place Gross Rents $20.00/sf
Annual Rent Escalations 3.0%
Vacancy Loss Factor (annual) 5.0%
Operating Expenses $5.50/sf
Insurance $0.25/sf
Property Taxes $2.25/sf
Annual Expense Escalations 3.0%

Financing
Loan Amount ..... 75% of purchase price
Interest Rate 6.0%
Term ..... 10 years
Amortization ..... 25 years

Outputs
Year 1 Cap Rate (NOI/Purchase Price)
Year 1 Cash-on-Cash Yield (After Debt Cash Flow / Equity)
10-year Leveraged IRR (include debt)
10-year Unleveraged IRR (exclude debt)
Year 1 Debt Service Coverage Ratio

ASSIGNMENT: Using the above assumptions, create an Excel spreadsheet that includes a 10-year cash flow proforma, a sources and uses table, and calculates the Outputs listed above.

Balsa Construction

You have been presented with an office building for sale for $135 PSF. The building is 240,000 SF. There is one tenant in place who leases 50% of the building at a full-service rental rate of $25.00 PSF for 10 years, with 5% rent bumps every 2 years. Operating expenses for the building are $13.00 PSF.

Your research has proven than market lease terms for this building are $27.00 PSF full service for a 5-year lease. Tenant Improvements and leasing commissions on deals are $15.00 and 6%. Buildings of this quality should trade on a 10% cap rate based on the forward twelve months NOI.

Assume that you will lease the balance of the space to two equal sized tenants at market rates. The first new lease will occur 8 months after you purchase the building, and the second new lease will happen 15 months after purchase.

The initial capex is $200,000 with additional deferred capex of $50,000/year for 3 years. The building has a parking ratio of 3.0 spaces/ 1,000 SF and the market-parking rate is $100/month (net).

If you sell the building at the end of year 5 what is your unlevered IRR? Please use XIRR formula to calculate.

Now assume that you closed with a loan of 65% of your purchase price. Here are the terms of the loan, it is a 5-year loan with a 7% interest rate and has a one-point origination fee and a one point exit fee on the remaining outstanding loan balance. The loan amortizes on a 25-year schedule. What is your leveraged IRR? Please use the XIRR formula to calculate.

Based on your analysis and your general knowledge of real estate, what are other issues to consider when evaluating whether you should buy this building?

CORDELIA CAPITAL
DOTS IN A VOID

Cordelia Capital

Overview

You are evaluating an investment opportunity that is being placed on the market by a national brokerage firm. You are asked to underwrite an 80,000 SF retail center in a small Southern city for a potential acquisition, and your Director has asked you to arrive at an investment value for the property based on a Discounted Cash Flow model. Further, your Director has asked you to create a dynamic model for the acquisition, so any changes in the deal fundamentals can be analyzed for their effective value. Lastly, your Director has asked you for a brief write up that will be used to outline the investment opportunity, the merits and considerations of the deal, and the underwritten assumptions.

Asset Description:

- Name: Riverview Shopping Center
- Product: Retail Power Center
- Size: 80,000 SF
- Acquisition Date: 3/1/2015
- In place Leases:

    Gator Mania – occupies 25,000 SF @ $20/SF gross. The lease expires 3/31/2025
    Cane Central – occupies 20,000 SF @ $15/SF gross. The lease expires in 6/30/2017

Assume one additional lease executed in 10/1/2015 by:

Nole Nation – 35,000 SF @ gross market rents. Assume you will have to give tenant concessions of $10/SF in tenant improvements and you will have to pay 6% of the gross lease proceeds for the entire term. The term of the lease will be 10 years.

Assume a market vacancy factor once market occupancy is surpassed.
Assume $6/SF in operating expenses.

Objectives:

1. Determine the stabilized, annual net operating income of the project
2. Justify an appropriate exit cap rate of the investment and an optimal hold period
3. Create sensitivity tables to show the change in acquisition value based on different discount rates and hold period
4. Produce an executive summary that summarizes the opportunity and supports your investment conclusion

Purple Partners

Overview

Francois Tower is a 150,000 sf Class C office building in a gentrifying neighborhood of a major city. The property is currently vacant and is zoned for residential and commercial use. Purple Partners believes that the property can be demolished and redeveloped into a new, ground up, 250-unit apartment building with 15,000 square feet of ground-floor retail. Each apartment is an average of 1,000 square feet.

Costs to redevelop the property will be roughly $200/SF for Hard Costs and $30/SF for Soft Costs (inclusive of tenant improvements and leasing commissions). Planning and construction are expected to take 24 months.

It is believed that the property's performance will mirror the submarket's, and the residential submarket is currently 95% occupied. Apartment rents are currently $2.40/SF per month. Operating expenses run approximately $8.75/SF/Year at similar projects (does not begin until the building is complete). Retail rents in the submarket are currently $35/SF NNN. Assume rents and operating expenses increase by 3% per year. Assume a 12-month lease-up period for both the residential and retail.

It is believed that construction financing would be sized at 70% LTC and LIBOR + 3%. Assume LIBOR is currently 0.25% at the time of transaction and increases to 1.75% in 3 years.

Similar redevelopments have traded for cap rates ranging between 5.5% and 6.0%. Purple Partners needs to achieve a 20% IRR on its investment. Assume that the investment period is 3 years.

Instructions

Prepare a one page summary of your recommendation which details the existing situation, proforma, risks and an analysis of the projected economics including proposed purchase price. Please state any assumptions you are making.

Lorelei Investors

RSF is 10,000. GSF is 8,000.

Going in income is $100 / RSF growing 5% every other year starting with year 3.

Going in expenses are $35 / GSF growing 1.5% per year.

Acquisition is made at a 5.5% cap rate. Disposition cap rate at the end of the 5-year hold period is 5.25%.

The investment is financed by a 60% LTV, 3.5% rate, 30 year amortization loan.

Questions:
What is the unlevered IRR?
What is the levered IRR?
What is year 3 return on cost?
What is the year 3 cash on cash?

Please highlight these answers in yellow on your spreadsheet showing your work.

Challenge

Now it is starting to get fun. These cases almost always have a complex partnership structure, and/or ask the respondent to make some assumptions that show that they have a sense of what is reasonable and what's not.

approximata

... ISN'T A WORD

Approximata

As an acquisitions analyst for Approximata, you are currently evaluating Circle Place, a midtown office property as a possible investment for your Approximata "Free and Clear" Core Fund. This is an open end "core property" fund for which properties are acquired on an "all cash basis", that is "free and clear basis". Many of Approximata's conservative and long-standing pension fund client investors have participated in this fund for many years. Marketing has just raised an additional $100 million from these clients and you are a member of the acquisition team responsible for identifying and making investments for the fund.

The Circle Place property consists of a four-story building with gross building area of 70,000 square feet and rentable area of 60,000 square feet. The building is 7 years old and located on 3 acres of land with surface parking. It is an "A" property and would easily qualify as "investment grade" for your pension fund clients.

Revenues: The financial contents of leases are as follows:

Tenant	Rentable SF	$/SF	Lease Terms	Remaining Years on Lease
1	17,500	24	Base/$1.50 Step/$9.00 stop	8
2	14,900	25	Base/CPI/$8.00 stop	7
3	12,048	30	Gross Lease	6
4	11,186	22	Base/CPI/$7.00 stop	5
5	4,366	---------Vacant---------		
	Total: 60,000			

Expenses:

All leases are net of electric utilities, that is, there is a direct pass through for electric utilities and each tenant is separately metered. Depending on lease terms, tenants may pay all, none, or only part of operating expenses. For example, in the case of "net leases" all expenses are usually pro-rated and tenants are billed based on the rentable square footage that they occupy. Some leases contain expense "stops". In these leases, the property owner agrees to pay a portion of recoverable expenses up to an amount identified as an "expense stop" and tenants pay their prorated share of recoverable expenses in excess of the stop. In the case of "gross leases", the tenant pays only rent and the property owner pays all recoverable expenses attributed to the tenant's space. In your cash flow estimates, you should show total operating expenses payable by Approximata less those amounts recoverable from tenants.

Many other expenses and outlays are not recoverable from tenants and must be paid in total by the property owner. These could include various improvements and repairs and certain administrative costs, etc. These expenses and outlays also must be included in your cash flow projections.
Approximata does not believe that any major capital outlays will be needed during the next 5 years. It also believes that vacancies will remain at current levels for the next 5 years.

As to the four tenants occupying the property, more specific lease details are as follows:

1. Lease 1. Step up with stop. Rent during year one will be $24 psf and will "step up" or increase by $1.50 psf at the beginning of each subsequent year until the end of the lease. Recoverable operating expenses in excess of a $9.00 psf stop will be paid by the tenant (lessee).
2. Lease 2. Inflation Indexed with stop. Rent during year one will be $25 psf. After the first year, the rent will be increased based on the CPI. Recoverable operating expenses in excess of a $8.00 psf stop are to be paid by the tenant (lessee).
3. Lease 3. Gross Lease – flat. Rent begins at $30 psf and the property owner (lessor) is responsible for payment of all operating expenses. The tenant will pay a flat rent equal to $30 per rentable square foot for the entire term of the lease. No operating expenses will be paid by the tenant.
4. Lease 4. Inflation Indexed with stop. Rent during year one will be $22 and will increase by the full amount of any change in the CPI after the first year. Recoverable operating expenses in excess of a $7.00 per square foot stop are to be paid by the tenant.

Assumption:

It is assumed that the CPI and recoverable operating expenses will increase indefinitely at a rate of 3 percent per year. Recoverable operating expenses (before recoveries from tenants) that are payable by the owner for the entire property are expected to be about $540,000, or $9.00 per rentable square foot during year one. Non- recoverable expenses for Circle Place are estimated to be $120,000 during year one. These non-recoverable expenses are estimated to increase by 2 percent per year indefinitely.

Approximata has just completed a market survey of recent sales of comparable office properties in the area. The survey indicates that rents are about $32 psf (gross) and are expected to increase at 3% per year. Three office properties located in a one mile radius around Circle Place have sold during the past year. "Going in" cap rates indicated from those sales are in a range of 7.5%.

The current owner has retained a local affiliate of a national brokerage firm to market the property. The broker has indicated in the offering memorandum/materials that the asking price is $10,000,000. You have signed the broker's confidentially agreement and have begun phase one due-diligence.

The Approximata Investment Committee has made a preliminary review of Circle Place and has given you approval to further investigate and to send a Letter of Intent (LOI) to the broker if your analysis indicates that the investment IRR is achievable for the Approximata Fund. The broker has indicated that it expects to receive at least ten LOIs from interested investors (Approximata competitors) in the first round of bidding. The broker will select the three best offers and then it will conduct a second round of bidding. Approximata management has indicated to you that it would like to be included in the second round. You also remember that at the end of the year, Approximata will likely include this transaction in your performance and bonus review.

Required:

1. Prepare a five year projection of annual cash flows (before any Approximata fees) based on the lease information provided. A cash flow projection in the year of sale also must be made. A "rule of thumb" used by Approximata is that the "terminal or exit" cap rate to be used to estimate the selling price in the year of sale (EOY 5) should be 50 BP higher than the "going in" market cap rate. Assume the property will be purchased "free and clear", that is, with no mortgage loans.
2. Assume that a target return (discount rate) for the Approximata fund is 12 percent "free and clear" for the five year period at the end of which you plan to sell the asset.

Questions:

Prepare a memo supported by no more than two pages of support answering the following questions:

1. Based on the facts in this case, if the property is acquired for $10,000,000, would the investment meet a 12% investment target for the fund? If the investment target return is not met, what would be an appropriate counteroffer?
2. Of what use are the "going in" cap rates determined from Approximata's market study in your analysis? What market conditions and other aspects of the leases, expenses and cash flow analysis should Approximata be considering in its acquisition analysis? List at least 5 items with a short explanation for each item.

Argento Advisers

You are in the final stages of acquiring a 250,000 square foot office building for $50,000,000. Please assume that this purchase price is fixed and no longer subject to negotiation. The building is currently 100% vacant but there are two tenants who have each proposed lease terms to occupy the entire building. Please assume the lease begins on the first day of your ownership. The proposed terms for the leases are as follows:

Lease I:

- 15 year term
- 250,000 square feet
- $35 per square foot starting base rent
- 3% annual base rent escalations

Lease II:

- 15 year term
- 250,000 square feet
- $30 per square foot starting base rent
- 4.5% annual base rent escalations

You have received a commitment from a bank to finance the acquisition based on the terms outlined below. Please assume the loan is freely pre-payable without penalty when you exit the investment.

- Proceeds: 55% of total cost
- Interest Rate: 5.0% fixed
- Interest-Only Period: 2 years followed by a 30-year amortization schedule

The year 1 operating expenses for the building are as follows (please assume each expense grows annually at 3.0%, with the exception of the management fee):

- Repairs & Maintenance: $1.50 per square foot
- Administrative: $1.50 per square foot
- Utilities: $2.00 per square foot
- Property Management Fee: 3.0% of gross revenues
- Real Estate Taxes: $4.00 per square foot

Please develop an underwriting model (based on an IRR) for this property and provide a recommendation as to which of the two leases to accept. Please underwrite a 5-year and a 10-year hold period and provide a sensitivity table based on the exit cap rate. Please save one copy of the final model and print a hard copy for submission to the investment committee.

CHALLENGING LOGICAL
DECISIONS EVERY DAY

Aurora Capital

We have been approached directly by a financial institution looking to complete an off-market sale-leaseback transaction on approximately 25% of their operating real estate. The portfolio comprises 200 individual locations, predominately bank branches, aggregating 2.5 million square feet. The potential tenant has a BB credit rating and recently issued unsecured notes at 7.25% yield.

A list of the proposed lease terms are as follows:

- Rental Rate: $17.50 PSF
- Rent Escalations: 2.5% per annum
- Expense Reimbursement: Base Stop (over the year 1 operating expense of $10.00 PSF, assume 3% annual inflation)
- Capital Expenses: Tenant responsibility
- Term: 20 years

We have received preliminary indications that financing would be available upon the following terms:

- Interest Rate: 5.5% fixed
- LTV: 70%
- Origination Fee: 1.0%
- Amortization: Interest Only
- Release Pricing: 125% of allocated loan value (thought the lender has indicated that credit committee may require a full cash sweep on all asset sales)

We will be approaching the transaction with an operating partner and have agreed to the following partnership structure:

- Equity Ownership: 90% Aurora Capital, 10% Operator
- Promote: 20% promote over a 12% IRR to Aurora Capital and a 30% promote over an 18% IRR to Aurora Capital.

We believe that there is an arbitrage in buying the portfolio in bulk and disposing of it in more manageable chunks to high net worth investors. We are still gauging the depth of this market, but

believe that we could liquidate the whole portfolio within 6 years, starting in year 2 and likely in 4 total transactions (assume mid-year), at between 100 – 150 bps of cap rate compression.

Please build an annual model reflecting the post-promote levered IRR and equity multiple to Aurora Capital and include a sensitivity table based upon going in cap and exit cap rate.

Black and Green LLC

Black and Green's PE fund is proposing to acquire an existing apartment complex called The Applegate and needs to run an analysis of its investment. Black and Green is proposing to acquire The Applegate for a consideration of $110 MM, complete lease up of the project, refinance it after the project has stabilized and then sell it after a 10 year hold. Black and Green is proposing to purchase the property with all equity.

The Applegate is a high-end market rate apartment complex featuring 200 apartment units. The complex is 250,000 SF gross and has 200,000 SF of net leasable area. Due to poor management, the property currently operates at 60% occupancy. The property's operating expenses currently run $2.0 MM a year and is expected to increase 3% a year going forward. Upon completing the purchase, Black and Green will lease up the project. Black and Green currently projects that the net absorption of units will be 5 units a month. The in-place rents for the occupied units is $4.00 per SF per month and is projected to increase 3% a year going forward. You may assume the same market rents for the lease up of the vacant units. Please assume a 5% vacancy in your analysis.

At the end of year 2, Black and Green will refinance the property and place debt on the property. The anticipated terms of a senior loan at that time are as follows:

- Interest rate of 6% annual but with monthly payments
- 30 year amortization
- 10 year term
- Maximum loan to value of 80%. Assume a valuation using a cap rate of 5%
- Debt Service Coverage of 1.20
- Maximum debt yield of 6%
- Closing Costs are $200,000 and closing fees are 1.0%

At the end of year 10, Black and Green will sell the property. Currently, high-end core multifamily product is trading at a cap rate of 4%. You may assume the same cap rate in year 10. For simplicity, you may assume that there are no closing costs or fees from the disposition.

Please put together a financial analysis of the equity free cash flows for the investment. Please calculate the annual rate of return and equity multiple for Black and Green's equity.

Black and Green's equity is split between General Partner (90%) and a Limited Partner (10%). The GP and LP will split all cash flow contributions and distributions pari-passu until the GP achieves a 9% preferred return. The cash flows are then split 40% to the GP and 60% to the LP thereafter. Please model

the cash flow waterfalls for the GP and LP for this investment. Please calculate the rate of return and equity multiple for the GP and LP.

Fire Fund

Develop in excel, a basic, high level model for the following potential acquisition opportunity. We have provided some facts about the investment and would like you to determine what the value of the property is based on certain desired return criteria provided below. For any missing assumptions, feel free to make some assumptions and outline what those assumptions are briefly.

Acquisition Description:

- Class A warehouse – 400,000 SF building in a prime submarket in a Mid-Atlantic city
- Single Tenant Building leased to a shipping company with 2 years lese term remaining – rent at closing is $2.50 NNN with 3% annual bumps. The lease is a NNN lease
- Property Expenses include a $0.30 PSF of CAM, $0.50 PSF of taxes, $0.10 PSF of insurance and a management fee equal to 3% of rent.
- After the two year lease expires we expect there to be a 50-50% renewal probability with UPS (50% chance they stay – 50% chance they leave).
    - If they leave we would expect there to be 12 months down to re-tenant the property, need to spend $2.00 PSF of TI and would incur a 6% leasing commission
    - If they stay they would renew on an as-is basis (ie no TI needed) and gain a 6% leasing commission, no downtime
    - Lease term for new deal with the shipping company (or new tenant) would be 5 years (goes beyond our 5 year hold period)
    - Market Rent at Roll – we expect rent when the lease rolls to be $3.00 NNN with 3% annual bumps within the lease
- Capital Reserve – we anticipate needing a budget of $100,000 upfront for immediate capital, and then an annual budget of $0.10 PSF / year for capital reserve in cash flow. Capital is not reimbursed by the tenant.
- Debt Assumptions – assume we can borrow at closing 10 years money, 60% of purchase price, 30 year amortization, 5% interest rate
- Residual Assumptions – make your own assumptions on exit cap rates, briefly explain

Desired Output:

- Provide a basic, high level model of this investment opportunity on a 5 year hold
- For discussion purposes, if our leveraged IRR expectation if 15% - give us your opinion about what we should buy this property for – ie – what price in total $
- Show a 5 year leveraged IRR for the investment, and a multiple of equity
- Show the NPV for the project and make whatever assumptions you feel appropriate on the discount rate, briefly explain
- Show the leveraged yields for the investment (Cash-on-cash) both annually and on a 5 year hold
- We would like to understand the impact if cap rates are different in 5 years from your original target cap rate – 100 basis points up and down is fine

- Please provide a sensitivity on purchase price as well - $100,000 higher and lower than your recommended purchase price in case we need to change our pricing

Icarus Financial

Build a dynamic monthly real estate acquisition, operation, disposition, and financing model, formatted to print (printed model can be an annual roll-up) that assumes the following (all inputs listed below need to be adjustable):

Multifamily Project

- 100 units
- 1,200 SF average unit size
- Purchase Price: $20,000,000
- Average Rent: $1.25 PSF per month
- Rent Growth: 4% annually
- Current Occupancy: 75%
- Stabilized Occupancy 90%
- Time to Stabilization: 12 months
- No ancillary revenue sources
- Variable Expenses (as % of revenue): 18%
- Starting Fixed Expenses: $150,000 annual
- Fixed Expense Growth: 2% annually
- Cap-Ex Reserve: $250 per unit annually
- Hold Period: 5 years
- Exit Cap Rate: 5.5%

Senior First Mortgage Acquisition Loan

- 0-50% Loan to Cost (Purchase Price)
- 4% fixed interest rate, current pay
- 5 year term
- 0.5% origination fee (paid in cash to lender at closing)
- 30 year amortization schedule

Mezzanine Acquisition Loan

- 50-80% Loan to Cost (Purchase Price)
- 9% fixed interest rate, paid current to the extent available from net cash flow (the shortfall accrues into principal balance)
- 5 year term
- 2.0% origination fee (paid in cash to lender at closing)
- No amortization

Need the following:

Model Formatted to Print that includes…
(i) IRR, WDP & multiple for first mortgage, mezzanine loan and equity position

AND

(ii) Sensitivity table for each of the 3 IRR's- please choose what you believe to be most relevant variables (obviously no right answer)

Stillwater Hotels

Put together a summary LBO model using the following assumptions:

1. 5-year investment hold
2. 500 room hotel
3. Acquisition price of $250,000 per room
4. Assume 2% of acquisition price as transaction fees
5. Debt financing in an amount equal to 70% loan-to-cost (LTC), at a fixed cost of 4.50%, with two years of interest only payments, followed by amortization based on 30-year amortization period
6. Occupancy of 65% in Year 1, 70% in Year 2, 75% in Year 3, and 80% thereafter
7. Average Daily Rate (ADR) of $200 in Year 1, +7% in Year 2, +5% in Year 3, and +3% thereafter
8. Assume that Room Revenues comprise 70% of total revenues and other revenues comprise the remainder to get to Total Revenues
9. Assume the following EBITDA margins:
    a. 25.0% in Year 1
    b. 27.5% in Year 2
    c. 30.0% in Year 3
    d. 35.0% in thereafter
10. Assume lender requires borrower to escrow an additional 4% of total revenues for maintenance capex
11. For terminal value, assume a 12x LTM EBITDA with 2% transaction costs

Please create the following output and answer the following questions:

1. Financial projections showing components of unlevered and levered cash flow for the venture
2. What is the unlevered and levered IRR, Peak Equity and WDP (whole dollar profit, i.e., undiscounted profit after recovery of basis) for the Venture?
3. Sensitivity tables showing Venture's levered IRR and levered WDP across a range of the following variables:
    a. Exit multiple vs. hold period
    b. Acquisition price vs. exit multiple
    c. Loan-to-cost vs. cost of debt

Unreasonable

These cases have multiple layers, lots of steps, and you must step back and think about how you want to build the model. There are right and wrong ways to attack these.

Sometimes, to be evil, companies will give the test taker way less time than is reasonable to see how far they can get in the time provided. If you can handle these, you are going to be fine.

Black Capital

Black Capital has just received an opportunity to acquire a 136,000 sf office building in New City, New York with
a joint venture partner – NYC Properties. The acquisition date will be September 30, 2014 for $800 psf.

Please see below the relevant information to complete your task:

Tenants and Building Management Assumptions

Tenant 1:

- Lease commencement: 9/30/2012
- Rentable square footage: 53,000 sf
- Lease term: 10 years with $10 psf step up in gross rent at the start of yr.4 of the tenant's lease
- Gross rent of $75 psf

Tenant 2:

- Lease commencement: 9/30/2014
- Rentable square footage: 83,000 sf
- Lease term: 10 years with $10 psf step up in gross rent at the start of yr.5 of the tenant's lease
- Gross rent of $85 psf
- Tenant improvement allowance of $35 psf (all paid in year 1)
- Rental abatement of 6 months from lease commencement date
- Assume no leasing commissions

Assume the operating expense ratio at the asset is 40% of gross base rental revenues and remains steady through ownership.

Assume that the new operator receives reimbursement revenue (for operating expenses such as security, cleaning, utilities, insurance, real estate taxes) that equates to 10% of gross base rental revenues in year one of the hold period. This percentage grows to 12% in year three and 14% in year five and remains flat thereafter.

Assume the asset needs capital reserves of $0.30 psf annually to keep it up to Class A standards.

Acquisition costs and financing

Black Capital and NYC Properties plan to finance this transaction.

- *Leverage*: 65% loan-to-value, interest only loan
- *Annual Rate*: 4.77%

- 2.8% mortgage recording tax paid at closing
- 1% of the purchase price are the other closing costs paid at closing

Black Capital and NYC Properties may decide to refinance the asset at the end of year three so please build in
flexibility to the model to refinance the property at 75% LTV at that time. Other refinancing assumptions to consider:

- At the time of refinancing, the appropriate cap rate to apply to ascertain the value of the
- property is a 6% cap rate on forward year NOI.
- Annual Rate: 4.23%

Investment Exit

- Assumes exit of the investment in year 6
- Assume an exit cap rate of 6% on forward year NOI.
- Sales costs of 1% on gross sales price

Investment Structure

- NYC Properties and Black Capital have agreed on the following investment economics:
- NYC Properties will put up 10% of the equity and Black Capital will foot 90% of the equity
- *Preferred Return*: 12% to all parties
- *Promote:* 20% to NYC Properties over the 12% preferred return

Deliverables:

An Excel model (formatted to print) with the following:

- An acquisition sources and uses (be sure to consider the fact that an interest reserve might be needed to the extent that property level cash flow cannot cover debt service)
- An underwriting annual cash flow model taking into consideration the fact pattern above
- A summary section that includes the following information without a refinancing:
    - The going-in cap rate on the deal
    - The unleveraged deal IRR
    - The leveraged deal IRR
    - Black Capital's leveraged IRR, profit and cash flow multiple
- A summary section that includes the following information with a refinancing:
    - The unleveraged deal IRR
    - The leveraged deal IRR
    - Black Capital's leveraged IRR, profit and cash flow multiple
- A two variable sensitivity table of Black Capital's leveraged IRR showing the following without a refinancing:
    - Leverage from 65% to 80%
    - Exit cap rates of 5.5% to 7.0%
- A two variable sensitivity table of Black Capital's leveraged IRR showing the following without a refinancing:
    - Exit cap rates of 5.5% to 7.0%
    - Exit in years 4 through year 7
- A short, one page summary (in either Excel or Word) that briefly discusses the following:
    - In order to determine whether this is an attractive deal, what other key information/research would you collect and why? (Note that you do not need to actually collect such data, but rather, please describe the rationale for why you think it would be useful)

- Please discuss what factors you would consider in evaluating NYC Properties as a partner