University of Southern California

Price School of Public Policy

PPD 499: Real Estate Valuation and Transactions

Fall 2014

**General Information**

Instructor: Jay Glaubach

Class Meetings: Tuesdays 6:30 – 8:20 PM

Location: VPD 106

Office Hours: Tuesdays 8:30 - 9:30 PM

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**Course Overview**

The purpose of this class is to provide an introduction to the field of real estate transactions. We will specifically focus on how real estate assets are qualitatively and quantitatively evaluated, and how these assets are financed and transacted.

The first half of the class will focus on how real estate is valued. Through a discussion of various asset types— including office, retail and hotel assets— we will explore the factors that make some buildings more valuable than others, and the tools that real estate professionals use to price these buildings. We will also discuss the difference between buying existing buildings and developing new ones, and the particular risks and rewards of each strategy.

Once we understand how real estate transactions are valued, the second half of the class will focus on how such transactions are structured, financed and executed. We will begin with how real estate purchases are financed. This will involve a discussion of debt and equity, and how an aggressive lending market can affect the valuation metrics we discussed in the first half of the semester. We will then turn to how real estate projects are transacted through the brokerage, marketing, due diligence and closing processes. Along the way, we also will discuss note purchases and loan purchases as alternative processes for acquiring real estate interests.

By the end of this course, students will have a fundamental understanding of the property types that comprise the real estate sector, how to value them, and how such transactions are structured and executed.

**Course Structure and Requirements**

This class will be highly interactive. Class attendance is mandatory. There will be an emphasis on classroom discussion. Participation in discussions is required.

The reading and homework assignments will be manageable by design. Rather than assigning a large volume, my objective is to assign readings and case studies that provoke thought and discussion. Time saved on reading should be allocated towards reflection and preparation for the next class.

Final grades will be awarded 15% on each student’s classroom participation, 15% on case study assignments, 25% on a mid-term examination and 45% on the final exam. For the participation component of grading, the quality of your comments is far more important than quantity.

No prior real estate coursework or experience is required. Prior coursework on the basics of financial valuation (e.g. a working knowledge of IRR, NPV and DCF analyses) is recommended but not required.

**Class Materials**

*Required:* Real Estate Principles: A Value Approach (Third Edition), David C. Ling and Wayne R. Archer, McGraw-Hill (2010)

Required: HP12c financial calculator. HP12c App for iPhone/Android is also acceptable. Please have your calculator in class at all times. Microsoft Excel will also be helpful for certain in-class and take-home exercises.

**Course Syllabus**

**Part I: Real Estate Valuation**

**Class 1: Introduction to Real Estate**

*Assignment: Ling and Archer, Chapter 1*

1. Course introduction and ground rules
2. What is real estate? Discussion of various real estate “products” and types
3. What factors contribute to real estate values?

This class will begin with a discussion of the semester ahead, including assignments, participation expectations and classroom mechanics. We’ll then have an introductory discussion about real estate. What comprises the real estate market? How do we characterize these assets? What product types are included in real estate? And finally, how do we begin to value real estate? Our first case study, “The Twin Towers,” will provide an introduction to answering these questions.

**Class 2: Valuing Real Estate**

*Assignment: Twin Towers Case Study; Ling and Archer, Chapter 7 & Chapter 8 (pp. 193-195 only)*

1. Twin Towers discussion: the various “inputs” in determining value
2. Translating “inputs” to numerical valuations
3. Capitalization rates
4. Risk vs. reward: cap rates as an expression of return expectations

We’ll begin by discussing the Twin Towers case study and the relative importance of various factors in determining real estate values. We’ll then review how such factors are translated into asset prices, including the primary tool for valuing real estate: the capitalization rate. Our discussion of cap rates will conclude with how cap rates are informed and dependent upon return expectations and corresponding perceptions of risk, including the factors that we discussed at the beginning of class.

**Class 3: Cap Rates in Context**

*Assignment: Ling and Archer, Chapter 8 (re-read pp. 193-195 and then read pp. 202-212 only)*

1. Cap rates as annuities
2. Cap rates versus discount rates and internal rates of return
3. Cap rates: fiction versus reality

In this class, we will put the cap rate in context. As we already learned, a capitalization rate represents an asset’s return on cost in the context of a single year of income. Cap rates therefore treat real estate assets as annuities. Reality is more complicated. Other asset classes with variable income streams are commonly valued by net present value (NPV) calculations. In this context, the cap rate can be viewed as the simplified equivalent of the discount rate in an NPV calculation. We’ll review discount rates and internal rates of return in the context of NPV analyses, explore how they relate to cap rate analyses, and learn how real estate professionals use both to determine asset prices.

**Class 4: Asset Pro Formas**

*Assignment: Ling and Archer, Chapter 8 (focus on pp. 195-202)*

1. The importance of cash flow in NPV and Cap Rate Analyses
2. The challenges of underwriting and projections
3. Components of Net Operating Income
4. Introduction to asset-specific cash flow dynamics
5. Presentation of “Five Products” Case Study

In this class, we will focus on asset-level pro forma statements. How do real estate professionals quantify and predict asset performance? What are the revenue and expense dynamics of real estate? How do the resulting profit margins differ from one product type to another? And, given the importance of cash flow assumptions in DCF analyses, how do those differences in cash flow inform the values of various asset classes? Our next case study, “Five Products,” will provide a deeper exploration of these themes.

**Class 5: Cash Flow Dynamics**

*Assignment: Ling and Archer, Chapter 22; turn in Six Products Case Study*

1. Asset-specific cash flow dynamics
2. Discussion of the “Five Products” case study
3. Risks and rewards of specific product types
4. Connection of perceived risk to expected returns, cap rates and real estate values

Building on last week’s class, we will explore how different asset types are valued based on product-specific risk factors. Specifically, we will focus on how the revenue and expense dynamics (including lease terms and expirations, tenant quality, gross vs. net rent dynamics, fixed versus variable expenses and vacancy and turnover) affect cash flows and values. Asset types covered will include apartment buildings, office projects, retail assets, industrial buildings and hotels. We will then link this discussion to our understanding of cap rates and asset values, and how they relate to market-wide and asset-specific risks.

**Class 6: Development vs. Acquisition**

*Assignment: Ling and Archer, Chapter 23 (pp. 611-621, 625-636 only)*

1. Why build instead of buy?
2. The development process
3. Specific risk factors of development
4. Guest speaker

Our discussions so far have assumed the purchase of existing real estate. This week we will explore what changes when principals build new buildings instead of purchasing old ones. Why build instead of buy? What are the specific risks of new development, including governmental, legal and budgetary risks? How are sites chosen and deals structured? Class will conclude with a guest lecturer who is active in the field of ground-up development.

**Class 7: Real Estate Valuation Wrap-Up and Midterm Review**

**Class 8: Midterm Exam**

**Part II: Real Estate Transactions**

**Class 9: The Capital Stack and an Introduction to Debt**

*Assignment: Ling and Archer, Chapter 16*

1. Review of Midterm Exam
2. Introduction to the Capital Stack: upside vs. downside and risk vs. return
3. Defining debt
4. Debt terms, vocabulary and calculations

Now that we understand how real estate is valued, it’s time to understand how those values are realized through financings, purchase and sale. The next module of our class will focus on the mechanics of how real estate is transacted.

Any discussion of how real estate is acquired or built must first focus on how those transactions are financed. Today will provide an introduction to the capital stack: where the money comes from, and the differences in forms, incentives, remedies, risks and returns of debt financing versus equity financing. We will then discuss the debt component of the capital stack. Our review will focus on the first mortgage loan, but we will also touch on alternative debt structures in the context of buying existing buildings and developing new ones.

**Class 10: Introduction to Equity and Equity’s Use of Leverage**

*Assignment: Ling and Archer, Chapter 17 (except pp. 467-472)*

1. Definition of equity
2. Risk/return profile of equity vs. debt and different categories of equity investors
3. The concept of “leverage”: asset appreciation and cash-on-cash returns

This class will provide an introduction to equity and its relationship to debt. After defining equity, we will explore the relationship between equity and debt financing through the concept of “leverage.” We will specifically focus on the simplest forms of leverage: the “leveraged” appreciation of equity investments, and the inherent leverage of cash-on-cash returns.

**Class 11: Debt and Equity: How Leverage Affects Value**

*Assignment: Review notes on DCF and IRRs; Ling and Archer, Chapter 19*

1. Review of discount rates, NPV and IRR
2. The effect of leverage on IRR
3. How leverage effects real estate valuations

Today’s class will continue our discussion of the relationship between debt and equity. We’ve already seen how leverage effects simple metrics like equity value appreciation and cash-on-cash returns. Now we will explore leverage in the context of IRR and NPV. Layering leverage assumptions into our unlevered DCF analyses will lead to a more complete understanding of how debt effects returns. As leveraged returns increase, real estate valuations change. Class will therefore conclude with a discussion of how the level of activity in the debt capital markets can skew the types of valuations and analyses that we discussed in the first part of the semester.

**Class 12: Acquiring Debt**

*Assignment: 2008 Financial Crisis Articles*

1. Review of how debt effects value
2. Overheated capital markets: the debt crisis of 2008
3. Crisis and opportunity: the purchase of debt as a real estate transaction

This class will pick up from last week’s discussion on how robust financing markets can drive up real estate values. This phenomenon was recently on display during the 2008 financial crisis. After a discussion of the environment that led to the crisis, we will explore how the availability of inexpensive debt led to an asset pricing bubble. As always, crisis led to enormous opportunity: in this case, note purchase opportunities. We will conclude class with a discussion of this unique methodology for investing in real estate, which became an increasingly common way that real estate was transacted in the wake of the crisis.

**Class 13: Real Estate Transactions Part I: Brokerage**

*Assignment: Ling and Archer, Chapter 12*

1. Creating a market
2. Broker specializations: geographies and asset types
3. Broker listing agreements
4. Guest speaker

Now that we understand how real estate is valued and financed, we will conclude the semester with a discussion with how it is actually purchased and owned. In this class, we will migrate from “extraordinary” real estate transactions (like note purchases) to the more common mechanics of purchases in fee. This class will focus on brokered transactions, and how owners create a competitive market for their assets through brokerage relationships and listing agreements.

**Class 14: Real Estate Transactions Part II: Purchase and Sale**

*Assignment: Ling and Archer, Chapter 13*

1. Overview of the transaction process: underwriting, due diligence, negotiation and closing
2. Conveying real estate: the purchase and sale agreement
3. Asset management and exit

Now that we understand how real estate is financed, brokered and marketed, we will conclude the semester with a discussion of how it is finally transacted. Class will begin with an overview of the transaction process, including a discussion of the necessary steps in evaluating, underwriting and transferring real estate. This will lead to a detailed conversation about purchase and sale agreements, which are the legal documents that convey interests in real property. Our class will conclude with a brief discussion of next steps: managing real estate once it is owned, and evaluating and transacting its eventual sale.

**Class 15: Class Wrap-Up and Final Exam Review**