REFM
Model for Success

2018-2019 Corporate & University Real Estate Financial Modeling

TRAINING

"A HIGH-IMPACT TRAINING
SESSION FOR OUR ANALYSTS,
WORTH EVERY DOLLAR."

- MATTHEW CASPER
MANAGING DIRECTOR, PARK HILL

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WHY CHOOSE REFM

- ◦ Our time-tested training content is second to none in terms of refinement, depth and breadth
- ◦ Our efficient teaching and learning format makes the most of contact hours
- ◦ Our signature interactive, high-engagement training style
- ◦ Our comprehension and Certification testing programs
- ◦ We do not invest in real estate, so we pose no conflicts to client businesses

REFM CERTIFICATION PROGRAM: EXCEL FOR REAL ESTATE

Since 2011, REFM's Certification Program In Excel For Real Estate has measured proficiency in operating skillfully and efficiently in Microsoft Excel for the specific purpose of real estate transaction and partnership modeling analysis. Thousands of Certifications have been granted.

The rigorous Certification Program teaches and then tests one's ability to complete the following tasks using Excel:

- ◦ Forecasting property income and expense cash flows
- ◦ Building a mortgage payment schedule with an Interest-Only component
- ◦ Calculating IRR and NPV specific to actual calendar dates
- ◦ Quickly allocating construction costs according to bell-shaped curves
- ◦ Valuing a ground-up development site on a residual basis
- ◦ Forecasting an asset's future stabilized Net Operating Income
- ◦ Accurately calculating loan interest for multiple layers of financing
- ◦ Determining exactly how much equity partners should be compensated
- ◦ Performing sensitivity analyses around the driving factors in a transaction.

MEET THE TRAINERS

Bruce Kirsch

Bruce Kirsch is the founder of Real Estate Financial Modeling. Mr. Kirsch began his real estate career at CB Richard Ellis, where he marketed high-rise New York City office buildings for re-development in the top-producing Midtown Manhattan Investment Properties Institutional Group. After CBRE, Mr. Kirsch worked for a developer of urban infill design-forward residential lofts. Mr. Kirsch then engaged in his own urban and suburban condominium and single family detached housing ventures. Mr.Kirsch was then selected as one of the two executives to run New York City-based developer The Clarett Group's Washington, DC business.

Mr. Kirsch holds an MBA in Real Estate from The Wharton School. Mr. Kirsch is also the co-author of the Fifth Edition of the leading real estate finance textbook, *Real Estate Finance and Investments: Risks and Opportunities* along with The Wharton School's Professor Emeritus Dr. Peter Linneman. Mr. Kirsch graduated with a BA in Communication from Stanford University.


Bulkeley Banks

Bulkeley Banks joined REFM in 2010 upon receiving his Masters in Professional Studies in Real Estate from Georgetown University, where he served as the Finance Co-Chair on the Student Advisory Board in Real Estate.

At REFM, Mr. Banks develops and improves financial models, spearheads consulting client engagements, and serves as a training instructor. While with REFM, Mr. Banks has led the technical development of REFM's Excel Model Templates, and has served as lead on major financial modeling assignments for both Skanska and Washington, DC's Southwest Waterfront Project ("The Wharf"). In addition to his work with clients, Mr. Banks is adjunct faculty at the NYU Schack Institute of Real Estate, and he has lectured on topics in real estate finance at Cornell, Wharton, Columbia and Georgetown, among other universities. Prior to joining the company, Mr. Banks worked at the University of Chicago's Evolution and Ecology Lab analyzing genetic variation in botany. Mr. Banks holds a BA in Philosophy from the University of Chicago, where he was awarded the Herman S. Dunlap Scholarship and was a four year varsity swimmer and letterman.

CONTENT AUTHORSHIP

Training content is created by REFM founder Bruce Kirsch. Mr Kirsch is the co-author of the Fifth Edition of the top graduate-level real estate finance textbook, *Real Estate Finance and Investments: Risks and Opportunities* along with Dr. Peter Linneman, founding chairman of the The Wharton School's Real Estate department.

REAL ESTATE FINANCE AND INVESTMENTS
RISKS AND OPPORTUNITIES
Peter Linneman, PhD
Bruce Kirsch
Fifth Edition
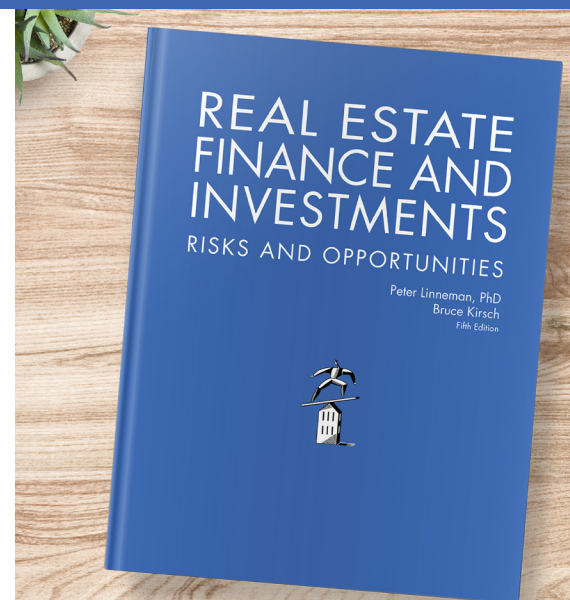
Training Formats

Training is available on-site and via online web meetings. In all sessions, participants are encouraged to ask questions as they arise.

Slide Show

Instructor lecture with interactive real-time Q&A.

Hands-On

Instructor lecture, with training participants following along in their own Excel in real time.

Participants perform a series of exercises to ensure they are grasping the lesson and mastering the concepts and technical skills being taught.

All exercise solutions are included and discussed.

OVERVIEW

REFM TRAINING

Real Estate Financial Modeling (REFM) training enables you to master basic and advanced concepts and techniques of commercial real estate, Microsoft Excel, finance, and real estate transaction and partnership financial modeling. All hands-on training other than for the HP 12c calculator is exclusively Microsoft Excel-based and is delivered assuming that each participant will be following along on their own computer. All Excel-based training includes reusable, fully-unlocked Excel files.

Benefits of training with REFM include:

- ◦ improved analysis capabilities, quicker work turnaround and fewer mistakes
- ◦ increased confidence in one's Excel skills
- ◦ improved financial modeling knowledge, understanding and customization capabilities
- ◦ sharpened presentation of a transaction's financials
- ◦ heightened credibility internally and with potential partners, lenders and investors

Additional benefits for university students:

- ◦ stronger performance in internship and job interviews
- ◦ sharpened presentation of case study financials
- ◦ stronger performance on academic assignments and exams.

POPULAR 2-DAY AGENDAS
Beginner / Advanced

	Page	Hours	Slides	Hands-On	Level*	Applicable Property
DAY ONE: Beginner						
Identifying Risks and Opportunities in Commercial Real Estate	15	1	☑		Easy	All income-producing and unit-sales based
Demystifying the Excel Pro-Forma: What It Is and How To Master It	18	1	☑		Easy	All income-producing and unit-sales based
Real Estate Development Modeling Basics	19	1	☑		Easy	All income-producing and unit-sales based
Mixed-Use Apartment/Multi-Family Building Development Modeling	31	4		☑	Medium/ Hard	Multi-family, retail
DAY TWO: Advanced						
Single Transaction Equity Joint Venture Partnership and Waterfall Modeling (Level 3) Bootcamp	41	4	☑		Medium/ Hard	All income-producing and unit-sales based
Mixed-Use For-Sale Condominium Building/Housing Subdivision Development Modeling	32	4		☑	Medium/ Hard	Condominium, retail, housing

* Level of difficulty is a relative rating of the subject course within the full spectrum of the entire REFM catalog. Every training participant will have their own perception of the level of difficulty given their specific educational background and experience.

POPULAR 2-DAY AGENDAS
"The New York Course"

	Page	Hours	Slides	Hands-On	Level*	Applicable Property
DAY ONE						
Real Estate Analysis Excel Toolkit	25	5		☑	Medium	All income-producing and unit-sales based
Mixed-Use Apartment/Multi-Family Building Development Modeling	31	4		☑	Medium/ Hard	Multi-family, retail
DAY TWO						
Single Transaction Equity Joint Venture Partnership and Waterfall Modeling (Level 3) Bootcamp	41	4		☑	Medium/ Hard	All income-producing and unit-sales based
Core- and Core-Plus Real Estate Private Equity Fund Modeling	42	4		☑	Medium/ Hard	All income-producing

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TRAININGS AT A GLANCE:

Real Estate Principles & Key Concepts

	Page	Hours	Slides	Hands-On	Level*	Applicable Property
Introduction to the Real Estate Business	14	1	☑		Easy	All income-producing and unit-sales based
Identifying Risks & Opportunities in Commercial Real Estate	15	1	☑		Easy	All income-producing and unit-sales based
Real Estate Finance 101	16	1	☑		Easy/ Medium	All income-producing and unit-sales based
How Developers Price the Dirt: Residual Land Valuation and Comparable Sales	17	1	☑		Easy	All income-producing and unit-sales based
Demystifying the Excel Pro-Forma: What It Is and How To Master It	18	1	☑		Easy	All income-producing and unit-sales based
Real Estate Development Modeling Basics	19	1	☑		Easy	All income-producing and unit-sales based
Truly Understanding Capitalization (Cap) Rates	20	1	☑		Easy/ Medium	All income-producing
Truly Understanding IRR (Internal Rate of Return)	21	1	☑	☑	Medium	All income-producing and unit-sales based
Commercial Real Estate Business Fundamentals for Law Associates	22	4	☑		Easy	All income-producing and unit-sales based
Principles of Commercial Real Estate Finance	23	16	☑	☑	Medium/ Hard	All income-producing and unit-sales based

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TRAININGS AT A GLANCE:

Financial Modeling Skills Foundations

	Page	Hours	Slides	Hands-On	Level*	Applicable Property
HP12c Financial Calculator Skills For Real Estate Analysis	24	1	☑	☑	Easy/ Medium	All income-producing and unit-sales based
Real Estate Analysis Excel Toolkit	25	5		☑	Medium	All income-producing and unit-sales based
Excel For Real Estate (Level 1) Bootcamp	26	3		☑	Medium	All income-producing and unit-sales based
Real Estate Finance (Level 2) Bootcamp	27	3		☑	Medium	All income-producing and unit-sales based
Job Interview Technical Modeling Test Training	28	5		☑	Medium	Apartments and retail

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TRAININGS AT A GLANCE:
Property-specific Transaction Modeling

	Page	Hours	Slides	Hands-On	Level*	Applicable Property
Multi-Family Property Operating Projection and Acquisition Screening Analysis	29	4		☑	Medium/Hard	Multi-Family
Multi-Family Building Acquisition & Individual Unit Renovation Modeling	30	4		☑	Medium/Hard	Multi-Family
Mixed-Use Apartment / Multi-Family Building Development Modeling	31	4 or 6		☑	Medium/Hard	Multi-Family
Mixed-Use For-Sale Condominium Building / Housing Subdivision Development Modeling	32	4 or 6		☑	Medium/Hard	Residential condominium, housing
Multi-Tenant Commercial Property Acquisition Modeling with ARGUS Cash Flow Projection Customization	33	3		☑	Medium/Hard	Office, industrial, retail
Office Property Operating Projection and Acquisition Screening Analysis	34	4		☑	Medium/Hard	Office
Mixed-Use Office / Industrial Building Development Modeling	35	4 or 6		☑	Medium/Hard	Office, industrial
Commercial Space Comparative Lease Analysis From Both Landlord & Tenant Perspectives	36	2		☑	Medium/Hard	Office, industrial, retail
Hotel Property Acquisition and Renovation Modeling	37	4		☑	Medium/Hard	Hotel
Hotel Property Development Modeling	38	4 or 6		☑	Medium/Hard	Hotel
Retail Property Operating Projection and Acquisition Screening Analysis	39	4		☑	Medium/Hard	Retail
Retail Property Development Modeling	40	4 or 6		☑	Medium/Hard	Retail

TRAININGS AT A GLANCE:

Equity JVs and Private Funds

	Page	Hours	Slides	Hands-On	Level*	Applicable Property
Single Transaction Equity Joint Venture Partnership and Waterfall Modeling (Level 3) Bootcamp	41	4	☑	☑	Medium/ Hard	All income-producing and unit-sales based
Core- and Core-Plus Private Equity Fund Modeling	42	4	☑	☑	Medium/ Hard	All income-producing

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TRAININGS AT A GLANCE:

Debt Financing and Note Modeling

	Page	Hours	Slides	Hands-On	Level*	Applicable Property
Single Property Transaction Debt Financing Modeling	43	4		☑	Medium/Hard	All income-producing and unit-sales based
Distressed Commercial Mortgage Note Acquisition Modeling	44	1.5	☑	☑	Medium/Hard	All income-producing

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INTRODUCTION TO THE REAL ESTATE BUSINESS

Easy

45 min

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this 45-minute session, you will learn about the constituent elements of the global real estate business through an easy-to-understand framework.

Topics covered include:

- the different types of real estate properties
- the different types of real estate investors and capital providers
- the types and sources of investment capital
- transaction capital structure
- the uses of capital
- real estate investment objectives
- the three main methods of valuing real estate properties.

Notes:

IDENTIFYING RISKS AND OPPORTUNITIES IN COMMERCIAL REAL ESTATE

Easy

1 hour

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this 1-hour session, you will learn about the real estate cycle and how it creates risks and opportunities related to acquiring, operating and developing commercial real estate in the U.S. and internationally.

Topics covered include:

- ◦ the goal of real estate investment and development
- ◦ where the primary risks lie in the US and abroad
- ◦ the biggest risks of all
- ◦ the primary ways to realize property value
- ◦ real estate cycles
- ◦ mitigating and accepting risk.

Notes:

REAL ESTATE FINANCE 101

Easy/Medium

1 hour

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this 1-hour session, you will learn the foundations of real estate finance as well as advanced techniques and topics.

Topics covered include:

- sources of capital
- types of equity and debt capital
- transaction capital structure
- debt financing, positive and negative leverage
- investment objectives
- investment methods
- valuation of properties
    - discounted cash flow (DCF) model
    - capitalization (cap) rate and comparable sales
    - replacement cost
    - residual land valuation
- operating property cash flow line item setups
- investment returns measurements
    - cap rate (yield on cost)
    - levered cash flow and net levered cash flow
    - cash-on-cash return
    - net present value (NPV)
    - multiple on equity
    - internal rate of return (IRR).

HOW DEVELOPERS PRICE THE DIRT:

Residual Land Valuation and Comparable Sales

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Easy

45 min

Hands-On

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this 45-minute session, you will learn how developers solve for what they should pay for a development site. You will learn the basics of real estate development residual land valuation for both income-producing assets and unit sales assets, as well as the principles of valuation through comparable sales (comps).

Topics covered include:

- ◦ developer control of project costs
- ◦ how land is different from other development costs
- ◦ preliminary residual land valuation by back of the envelope analysis
- ◦ secondary valuation by discounted cash flow (DCF) analysis comparable sales

Notes:

DEMYSTIFYING THE EXCEL PRO-FORMA:

What It Is and How To Master It

Easy

1 hour

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this 1-hour session, you will learn how to break down the real estate pro-forma (financial projection model) into its essential components, analyze the pieces individually in easy-to-understand language, and then re-assemble them into the original whole. The relationships between the constituent parts are explained so that you will intimately understand the entire spreadsheet and its various functions.

Topics covered include:

- what financial modeling is
- the purpose of the pro-forma
- the importance of timing
- the time value of money and discounted cash flow (DCF) model
- pro-forma model worksheet types
- the "cardinal rules" of financial modeling
- best practices for when you inherit a spreadsheet model.

Notes:

REAL ESTATE DEVELOPMENT MODELING BASICS

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📊 Easy

🕐 1 hour

📺 Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based
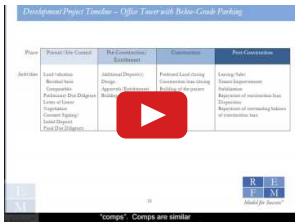
In this 1-hour session, you will learn the fundamentals of financial modeling specifically for real estate development transactions.

Topics covered include:

- ◦ what is financial modeling is
- ◦ modeling fundamentals
- ◦ what makes ground-up development different from acquisitions
- ◦ the development project timeline phases:
  - ◦ pursuit and site control
  - ◦ pre-construction and entitlement
  - ◦ construction
  - ◦ post-construction and stabilization
- ◦ uses of funds and relative size and timing of costs
- ◦ sources of funds
- ◦ pro-forma (projection model) components.

Notes:

TRULY UNDERSTANDING CAPITALIZATION (CAP) RATES

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▁▂▃ Easy/Medium

🕐 45 min

⌨ Hands-On

🖥 Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this 45-minute session, you will learn all about commercial real estate property capitalizaton (cap) rates.

Topics covered include:

- definition and calculation of a cap rate
- going-in cap rate and subsequent year cap rates
- why NOI is used as the income measurement
- what cap rates reveal about properties
- cap rate composition
- why cap rates change
- how to back-solve to a cap rate, and back-solve using a cap rate
- cap rate and valuation multiple relationship
- how to select an exit cap rate when performing a property valuation
- what to think when people quote discrepant cap rates for a deal
- where you can find cap rates for a certain geography.

Notes:

TRULY UNDERSTANDING IRR (INTERNAL RATE OF RETURN)

Medium

45 min

Hands-On

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this 45-minute session, you will learn about the the nature of the IRR calculation, and why it reacts the way it does in the various acquisition and development cases that are presented in spreadsheet form.

Topics covered include:

- time value of money basics
- definition of internal rate of return
- how IRR changes over a transaction timeline from negative to positive
- cumulative nature of the IRR
- what the IRR does and does not tell us.

Notes:

COMMERCIAL REAL ESTATE BUSINESS FUNDAMENTALS FOR LAW ASSOCIATES

Easy

4 hour

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

In this four-hour session geared towards law associates new to real estate practice groups, you will learn about the major elements of the commercial real estate business. All business and technical terms will be defined and made open for Q&A in real time.

Topics covered include:

- types of commercial real estate:
    - properties
    - investors
    - sources of capital
        - equity
        - senior debt
        - junior debt
- uses of capital
    - acquisition
    - ground-up development
    - entitlement
    - repositioning
- investment objectives and methods:
    - income (maximizing cash flow and yield)
    - recouping of investment and profit taking
- valuation of real estate:
    - discounted cash flow and time value of money model
    - net operating income (NOI), cap rates and comparable sales model
    - replacement cost
    - residual land valuation
- operating cash flow line items for income-producing properties
- profit measurement/return on investment performance indicators
- basics of joint venture partner profit sharing through waterfall structures.

PRINCIPLES OF COMMERCIAL REAL ESTATE FINANCE (11 MODULES)

Medium/Hard

16 Hour

Hands-On

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based

This multi-session, semester length-equivalent course provides you with a critical solid foundation in commercial real estate finance and investments. Among many other things, you will learn about discounting property cash flows, commercial real estate leases, pro-forma (projection) modeling, and how to think critically about real estate and real estate transactions. The required text is the Fifth Edition of *Real Estate Finance & Investments: Risks and Opportunities*.

Participants will perform two individual case study assignments. The course segments are:

- **Module 1:** Risks and opportunities; what is real estate?; global real estate
- **Module 2:** Time value of money and discounted cash flow; real estate cycles
- **Module 3:** Fundamentals of commercial leases
- **Module 4:** Property level pro forma analysis; financial modeling; internal rate of return; amortization
- **Module 5:** Due diligence; capitalization rates
- **Module 6:** Development pro forma and feasibility analysis
- **Module 7:** Debt financing
- **Module 8:** Bankruptcy; commercial mortgage backed securities (CMBS)
- **Module 9:** Ground leases; real estate exit strategies
- **Module 10:** Real estate companies; real estate private equity; real estate investor perspectives
- **Module 11:** REITs and liquid real estate; corporate real estate.

HP 12C FINANCIAL CALCULATOR SKILLS FOR REAL ESTATE ANALYSIS
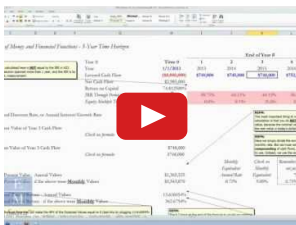
Easy/Medium

1 hour

Hands-On

Slide Show

Applicable Real Estate Property Types: All income-producing and unit-sales based
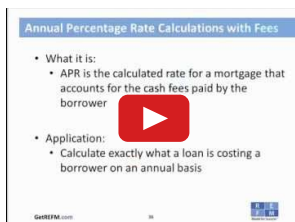
In this 1-hour session, you will learn how to leverage the most popular financial calculator for real estate analysis through hands-on exercises.

Topics covered include:

- financial registers
- simple and compound interest
- periodic and annual interest rates
- nominal and effective interest rate conversions
- how to calculate a weighted average
- present value (PV) and future value (FV)
- discounting future projected cash flows
- calculating net present value (NPV)
- calculating internal rate of return (IRR)
- calculating the loan annual percentage rate (APR)
- pricing a mortgage acquisition and calculating debt yield.

Notes:

REAL ESTATE ANALYSIS EXCEL TOOLKIT

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📊 Medium

🕐 5 hour

⌨ Hands-On

Applicable Real Estate Property Types: All income-producing and unit-sales based
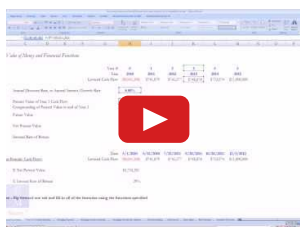
In this 5-hour session, you will learn the top 25+ Excel functions, tools and techniques that are most used in real estate analysis. Each topic and accompanying technique is isolated and taught with its own example, after which you will perform a topic-specific exercise. Use of keyboard shortcuts is emphasized.

Topics covered include:

- ◦ basic formula writing
- ◦ relative vs. absolute references
- ◦ dates
- ◦ advanced use of conditional statements
- ◦ financial functions
- ◦ mortgage amortization schedule
- ◦ projection formula writing
- ◦ formula auditing with trace dependents/precedents
- ◦ array lookup functions
- ◦ data tables for sensitivity analysis
- ◦ backsolving for maximum loan amount
- ◦ quality control checks
- ◦ debugging errors
- ◦ pivot tables
- ◦ goal seek
- ◦ basic macros
- ◦ circular references
- ◦ best practices

Excel techniques and functions taught include:

- ◦ formula writing
- ◦ cell anchoring using dollar signs/F4 key
- ◦ EOMONTH, EDATE
- ◦ IF, AND, OR, and combinations thereof
- ◦ COUNTIF, COUNTIFS
- ◦ SUMIF, SUMIFS
- ◦ VLOOKUP
- ◦ HLOOKUP
- ◦ ROW, ROWS
- ◦ COLUMN, COLUMNS
- ◦ INDEX, MATCH
- ◦ IFERROR, ISERROR
- ◦ RATE
- ◦ PV, FV
- ◦ NPV, XNPV
- ◦ IRR, XIRR
- ◦ PMT, PPMT, IPMT
- ◦ CUMPRINC, CUMIPMT.

EXCEL FOR REAL ESTATE (LEVEL 1) BOOTCAMP

Medium

3 hour

Hands-On

Applicable Real Estate Property Types: All income-producing and unit-sales based

This is the training content for Level 1 REFM Certification in Excel for Real Estate. The test is free and may be taken online at anytime here.
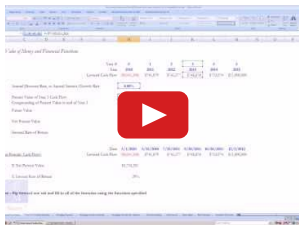
In this 3-hour session, you will learn the basics of operating in Excel, as well as advanced techniques, specifically as they relate to commercial real estate analysis. Each topic and accompanying technique is isolated and taught with its own example, after which participants will perform a topic-specific exercise. The use of keyboard shortcuts is emphasized.

Topics covered include:

- spreadsheet and formula basics
- arithmetic (SUM) and rounding (ROUND, ROUNDUP, ROUNDDOWN)
- basic statistics (MAX, MIN, AVERAGE, MEDIAN)
- relative vs. absolute cell references (F4 key)
- inserting and deleting rows and columns
- creating summary tables (SUMIF, SUMIFS, COUNTIF, COUNTIFS)
- formatting values
- conditional cell formatting
- array lookup functions (VLOOKUP, HLOOKUP)
- custom formatting
- format painting
- paste special
- transpose
- dates and timelines (EOMONTH, EDATE)
- conditional statements and how to nest them (IF, AND, OR and combinations thereof)
- financial functions for compounding and discounting (RATE, PV, FV, NPV, XNPV)
- internal rate of return (IRR, XIRR)
- mortgage payment calculation (PMT, PPMT, IPMT)
- formula auditing
- data tables for sensitivity analysis
- circular references
- best practices.

REAL ESTATE FINANCE (LEVEL 2) BOOTCAMP

Medium

3 hour

**Hands-On**

Applicable Real Estate Property Types: All income-producing and unit-sales based

This is the training content for Level 2 REFM Certification in Excel for Real Estate. The test is free and may be taken online at anytime here.
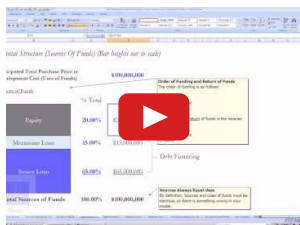
In this 3-hour session, you will learn the foundations of real estate finance as well as advanced techniques and topics as applied in Excel.

Topics covered include:

- the time value of money model
- the discounted cash flow model
- internal rate of return (IRR)
- mortgage payment calculation
- refinancing/interest-only scenario payment calculation
- refinancing case study
- maximum loan amount calculation
- residual land valuation
- future net operating income calculation
- transaction capital structures
- financing development transactions
- multiple equity investors discussion
- profit sharing discussion
- preferred return, internal rate of return waterfall and promote theory basics.

Excel techniques and functions taught include:

- compounding and discounting
- net present value (NPV) and XNPV
- internal rate of return (IRR) and XIRR
- conditional statements
- mortgage payment (PMT)
- principal payment (PPMT) and interest payment (IPMT)
- minimum (MIN) and maximum (MAX).

Notes:

JOB INTERVIEW TECHNICAL MODELING TEST TRAINING

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Medium

5 hour

Hands-On

Applicable Real Estate Property Types: Multi-family and Retail

In this 5-hour session, you will undergo a simulation of a timed job interview technical modeling Excel test similar to those given by top employers. You are provided with a set of assumptions from which you are tasked with building out an 8-year annual projection model for the ground-up development of a mixed-use apartment and retail building asset.

When you are done with the project, you will create two-way data tables to run investment performance sensitivity analyses on key inputs.

There are also 7 questions that you must answer from the completed projection that you construct.

1. What is the going-in cap rate for this transaction at stabilization?

2. What is the Elapsed Year 5 cash-on-cash return?

3. What is the Debt Service Coverage ratio of the Permanent Loan in Elapsed Year 5?

4. Assuming a valuation cap rate of 6.00% on forward Adjusted NOI, what is the Loan-to-Value of the Permanent Loan when it is funded?

5. Assuming a project annual discount rate of 15%, does the project create value according to the NPV calculation on an unlevered basis? On a levered basis?

6. What is the total profit to the Sponsor?

7. Based solely off the financial returns, would you do this deal if you were the Investor? Why/why not?

Topics covered include:

- ◦ Complex debt structure with both cash interest and accrued interest components
- ◦ Two-player equity joint venture structure with preferred return and catch-up to the sponsor
- ◦ Refinancing at stabilization
- ◦ Disposition and analysis of returns.

APARTMENT/MULTI-FAMILY PROPERTY OPERATING PROJECTION AND ACQUISITION SCREENING ANALYSIS

Medium/Hard

4 hour

Hands-On

Applicable Real Estate Property Types: Apartment

In this 4-hour session, you will learn the industry-standard P&L (profit and loss) statement line item set-up structure for apartment (multi-family) properties

Topics covered include:

- the nature of all income and expense line items from Gross Potential Rent (GPR) through Before-Tax Levered Cash Flow
- projection formula modeling

Using a pre-formatted tab, a 30-line annual operating projection for an apartment building will be constructed in real-time.

The second part of the tutorial takes the NOI line and weaves it into an acquisition analysis screening tab that integrates purchase, sale, debt and equity elements.

The sections of this analysis are:

- uses of funds
- sources of funds
- sponsor equity
- third party investor equity
- senior acquisition loan
- unlevered projection analysis
- debt schedule
- levered cash flow
- sensitivity tables
- levered summary.

Notes:

APARTMENT / MULTI-FAMILY BUILDING ACQUISITION & INDIVIDUAL UNIT RENOVATION MODELING

Medium/Hard

4 hour

Hands-On

Slide Show

Applicable Real Estate Property Types: Multi-family
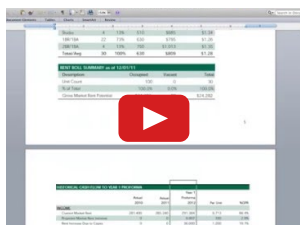
In this 4-hour session, you will learn the collection of technical skills for the pro-forma (projection) modeling for the acquisition and individual unit renovations (with continued operation) of a rental apartment building. The principles and skills taught apply equally to duplexes and 1,000-unit portfolios.

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework and the powerful OFFSET function.

To facilitate your learning, you will begin with a pre-populated rent roll in Excel based on a sample property offering memorandum. You will then input variable values on a pre-formatted assumptions tab, then derive and fill in line item projection formulas on a pre-formatted monthly cash flow tab, and derive and fill in formulas on a pre-formatted annual cash flow summary report.

Instructor support is provided, and an unlocked solution set is included so that you can check your work along the way.

Topics covered include:

- ◦ formula writing involving conditional statements
- ◦ generic projection formula writing
- ◦ integration of historical property data and existing rent roll into your pro-forma
- ◦ modeling of the unit renovation program
- ◦ modeling of any operating expense savings from the renovation/ greening of apartment units
- ◦ modeling of senior acquisition loan financing, the residual equity requirement, and a permanent take-out loan/refinancing
- ◦ property disposition
- ◦ sensitivity analysis modeling around key variables using 2-way data tables.

MIXED-USE APARTMENT / MULTI-FAMILY BUILDING DEVELOPMENT MODELING
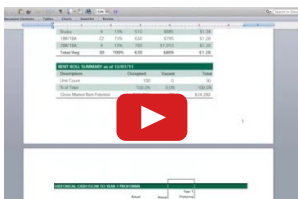
 Medium/Hard

 4 or 6 hour

 Hands-On

Applicable Real Estate Property Types: Multi-family, retail

In this 4- or 6-hour session, you will learn the collection of technical skills for the pro-forma (projection) modeling for the ground-up development, operation and sale of a mixed-use rental apartment building with ground-floor retail and income-producing parking.

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework. To facilitate your learning, you will begin with pre-formatted tabs for lot and building information for a subject development site, apartment unit mix, and capital structure.

With transaction base case assumptions provided for you, you will then derive and fill in line item projection formulas on a standard, pre-formatted monthly sources and uses of funds tab. Next, you will derive and fill in line item projection formulas on a standard, pre-formatted monthly cash flow tab. You will wire the tabs together as applicable. When you have completed all of the hands-on modeling, you will have a fully-working 6-tab model that ends at pre-income tax cash flow to equity.

Instructor support is provided, and an unlocked solution set is included so that you can check your work along the way.

The advanced capital structure you will model includes:

- ◦ sponsor
- ◦ equity partner
- ◦ third party investor
- ◦ mezzanine loan
- ◦ senior construction loan

Topics covered include:

- ◦ site and building information
- ◦ apartment unit and mix details
- ◦ pre-, during- and post-construction project timing elements
- ◦ transaction capital structure
- ◦ formula writing involving conditional statements
- ◦ generic projection formula writing
- ◦ uses of funds: land and acquisition costs, hard costs, soft costs, FF&E costs, financing costs
- ◦ sources of funds: equity, debt
- ◦ cash flows and returns: residential, parking, retail
- ◦ capitalized valuation for sale.

MIXED-USE FOR-SALE CONDOMINIUM BUILDING / HOUSING SUBDIVISION DEVELOPMENT MODELING
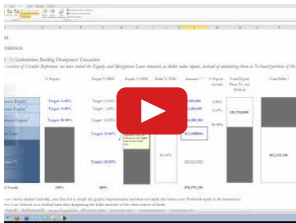
Medium/Hard

4 or 6 hour

Hands-On

Applicable Real Estate Property Types:
Condominium, single family housing

In this 4- or 6-hour session, you will learn the collection of technical skills for the pro-forma (projection) modeling for the ground-up development of a residential for-sale condominium building with for-sale parking and income-producing ground-floor retail, as well as for housing subdivisions.

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework. To facilitate your learning, you will begin with pre-formatted tabs for lot and building information for a subject development site, apartment unit mix, and capital structure.

With transaction base case assumptions provided for you, you will then derive and fill in line item projection formulas on a standard, pre-formatted monthly sources and uses of funds tab. Next, you will derive and fill in line item projection formulas on a standard, pre-formatted monthly cash flow tab. You will wire the tabs together as applicable. When you have completed all of the hands-on modeling, you will have a fully-working 6-tab model that ends at pre-income tax cash flow to equity.

Instructor support is provided, and an unlocked solution set is included so that you can check your work along the way.

The advanced capital structure you will model includes:

- ◦ sponsor
- ◦ equity partner
- ◦ third party investor
- ◦ mezzanine loan
- ◦ senior construction loan

Topics covered include:

- ◦ site and building information
- ◦ apartment unit and mix details
- ◦ pre-, during- and post-construction project timing elements
- ◦ transaction capital structure
- ◦ formula writing involving conditional statements
- ◦ generic projection formula writing
- ◦ uses of funds: land and acquisition costs, hard costs, soft costs, FF&E costs, financing costs
- ◦ sources of funds: equity, debt
- ◦ cash flows and returns: residential, parking, retail
- ◦ capitalized valuation for sale.

MULTI-TENANT COMMERCIAL PROPERTY ACQUISITION MODELING W/ ARGUS CASH FLOW PROJECTION CUSTOMIZATION

. . . .

Medium/Hard

3 hour

Hands-On

Applicable Real Estate Property Types: Office, industrial, retail

In this 3-hour session, you will learn the collection of technical skills for the modeling of the acquisition, operation and disposition of an existing multitenant commercial (office, industrial or retail) property. You will also learn the mathematical mechanics behind how ARGUS Valuation DCF works, and how to integrate an ARGUS cash flow projection into Excel to perform levered, equity partnership and sensitivity analyses.

Topics covered include:

- ◦ standard commercial property line item nomenclature and setup
- ◦ integration of historical property data and existing rent roll into your pro-forma
- ◦ modeling of weighted average expected values based on probability assumptions for future lease expirations or renewals
- ◦ how to quickly build a live Excel-based pro-forma valuation model that links directly to a 11-year cash flow projection from ARGUS
- ◦ modeling of acquisition loan financing, residual equity requirement, and permanent take-out loan/refinancing
- ◦ equity partnership modeling
- ◦ sensitivity analysis on key variables
- ◦ property disposition
- ◦ presentation of transaction returns indicators in an institutional investor-friendly format.

OFFICE PROPERTY OPERATING PROJECTION AND ACQUISITION SCREENING ANALYSIS
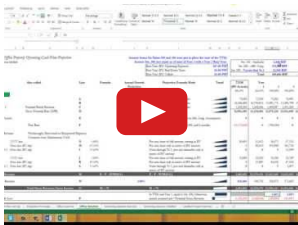
Medium/Hard

4 hour

Hands-On

Applicable Real Estate Property Types: Office

In this 4-hour session, you will learn the industry-standard P&L (profit and loss) statement line item set-up structure for office properties, how to project operating cash flows, and how to screen an acquisition of a property on a levered basis.

Topics covered include:

- ◦ the nature of all income and expense line items from Gross Potential Rent (GPR) through Before-Tax Levered Cash Flow
- ◦ lease types and reimbursement dynamics
- ◦ projection formula modeling

There are three Suites in the property. The assumptions to be used are that leases for Suites 100 and 200 were put in place at the start of the trailing twelve months, and that Suite 300 is vacant currently and will remain vacant through the end of Year 1. Suite 300 rent will commence at the start of Year 2 with Year 2 Base Year.

Suite 100 is a triple-net (NNN) lease, and Suites 200 and 300 are Gross leases (Base Year stop).

Projection formula mathematical descriptions are provided to guide your Excel formula construction.

The second part of the tutorial takes the NOI line and weaves it into an acquisition analysis screening tab that integrates purchase, sale, debt and equity elements.

The sections of this analysis are:

- ◦ uses of funds
- ◦ sources of funds (sponsor equity, third party investor equity, senior acquisition Loan)
- ◦ unlevered projection analysis
- ◦ debt schedule
- ◦ levered cash flow
- ◦ sensitivity tables
- ◦ levered summary

A levered summary table is constructed to evaluate returns for multiple hold durations side-by-side.

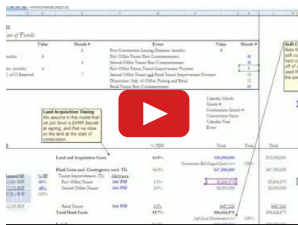# MIXED-USE OFFICE / INDUSTRIAL BUILDING DEVELOPMENT MODELING

. . . .

Medium/Hard

4 or 6 hour

Hands-On

Applicable Real Estate Property Types: Office, industrial, retail

In this 4- or 6-hour session, you will learn the collection of technical skills for the pro-forma (projection) modeling for the ground-up development, operation and sale of an office, industrial or retail property (if office, mixed-use with retail and income-producing parking).

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework. To facilitate your learning, you will begin with pre-formatted tabs for lot and building information for a subject development site, and for capital structure.

With transaction base case assumptions provided for you, you will then derive and fill in line item projection formulas on a standard, pre-formatted monthly sources and uses of funds tab. Next, you will derive and fill in line item projection formulas on a standard, pre-formatted monthly cash flow tab. You will wire the tabs together as applicable. When you have completed all of the hands-on modeling, you will have a fully-working 6-tab model that ends at pre-income tax cash flow to equity.

Instructor support is provided, and an unlocked solution set is included so that you can check your work along the way.

The advanced capital structure you will model includes:

- ◦ sponsor
- ◦ partner
- ◦ third party investor
- ◦ mezzanine loan
- ◦ senior construction loan

Topics covered include:

- ◦ site and building information
- ◦ pre-, during- and post-construction timing elements
- ◦ transaction capital structure
- ◦ formula writing involving conditional statements
- ◦ generic projection formula writing
- ◦ uses of funds: land and acquisition costs, hard & soft costs, FF&E and financing costs
- ◦ sources of funds: equity, debt
- ◦ cash flows and returns: office, industrial, retail
- ◦ capitalized valuation for sale

COMMERCIAL SPACE COMPARATIVE LEASE ANALYSIS FROM BOTH LANDLORD & TENANT PERSPECTIVES

Medium/Hard

2 hour

Hands-On

Applicable Real Estate Property Types: Office, industrial, retail

In this 2-hour session, you will learn the collection of technical skills for the modeling of Full Service, Gross and NNN (triple net) commercial space leases from the perspective of both the landlord and the tenant.

Topics covered include:

- ◦ formula writing involving conditional statements
- ◦ generic projection formula writing
- ◦ rent calculation using percentage-based escalations and dollar-based steps
- ◦ free rent
- ◦ parking and storage rent
- ◦ leasing commissions
- ◦ tenant improvements (TIs) and other expenditures
- ◦ operating expenses and real estate taxes
- ◦ reimbursements
- ◦ cancellation options and penalties
- ◦ net cash flow, and NPV of net cash flow
- ◦ lease Profit & Loss statement impact to tenant
- ◦ rent vs. own analysis from the tenant's perspective.

Notes:

HOTEL PROPERTY ACQUISITION AND RENOVATION MODELING

Medium/Hard

4 hour

Hands-On

Applicable Real Estate Property Types: Hotel

In this 4-hour session, you will learn the collection of technical skills for the pro-forma (projection) modeling for the acquisition and room renovation (with continued operation) and sale of a full-service hotel. The principles and skills taught apply to hotels of other levels of service.

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework and the powerful OFFSET function.

To facilitate your learning, you will input variable values on a pre-formatted assumptions tab, then derive and fill in line item projection formulas on a pre-formatted monthly cash flow tab, and derive and fill in formulas on a pre-formatted annual cash flow summary report.

Instructor support is provided, and an unlocked solution set is included so that you can check your work along the way.

Topics covered include:

- ◦ formula writing involving conditional statements
- ◦ generic projection formula writing
- ◦ integrating historical property operating data into your pro-forma
- ◦ modeling of the room renovation program
- ◦ modeling of senior acquisition loan financing, the residual equity requirement, and a permanent take-out loan/refinancing
- ◦ property disposition
- ◦ sensitivity analysis modeling around key variables using 2-way data tables.

Notes:

HOTEL PROPERTY DEVELOPMENT MODELING

Medium/Hard

4 or 6 hour

Hands-On

Applicable Real Estate Property Types: Hotel, retail

In this 4- or 6-hour session, you will learn the collection of technical skills for the pro-forma (projection) modeling for the ground-up development, operation and sale of a full-service hotel with ground-floor retail and income-producing parking.

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework. To facilitate your learning, you will begin with pre-formatted tabs for lot and building information for a subject development site, building size and capital structure.

With transaction base case assumptions provided for you, you will then derive and fill in line item projection formulas on a standard, pre-formatted monthly sources and uses of funds tab. Next, you will derive and fill in line item projection formulas on a standard, pre-formatted monthly cash flow tab. You will wire the tabs together as applicable. When you have completed all of the hands-on modeling, you will have a fully-working 6-tab model that ends at pre-income tax cash flow to equity.

Instructor support is provided, and an unlocked solution set is included so that you can check your work along the way.

The advanced capital structure you will model includes:

- sponsor
- equity partner
- third party investor
- mezzanine loan
- senior construction loan

Topics covered include:

- site and building information
- space programming
- pre-, during- and post-construction project timing elements
- transaction capital structure
- formula writing involving conditional statements
- generic projection formula writing
- uses of funds: land and acquisition costs, hard costs, soft costs, FF&E costs, financing costs
- sources of funds: equity, debt
- cash flows and returns: hotel, retail
- capitalized valuation for sale.

RETAIL PROPERTY OPERATING PROJECTION AND ACQUISITION SCREENING ANALYSIS

Medium/Hard

4 hour

Hands-On

Applicable Real Estate Property Types: Retail

In this 4-hour session, you will learn the industry-standard P&L (profit and loss) statement line item set-up structure for multi-tenant retail properties, how to project 10 years of operating cash flows, and how to screen an acquisition of a property on a levered basis.

Topics covered include:

- the nature of all income and expense line items from Gross Potential Rent (GPR) through Before-Tax Levered Cash Flow
- lease types and reimbursement dynamics
- projection formula modeling.

There are three Suites in the hypothetical property. The assumptions to be used are that the leases for Suite 100 (Starbucks, in-line) and Suite 200 (Walmart, anchor) were put in place at the start of the trailing twelve months and extend beyond the projection analysis end date. Suite 300, which comprises 24% of the center square footage, is currently vacant and will remain vacant through the end of Year 1. Suite 300 rent will commence at the start of Year 2 with a Year 2 Base Year and its tenancy will extend beyond the projection analysis end date.

While Suites 100 and 200 are triple-net (NNN) leases, the lease for Suite 300 is a Gross lease (Base Year stop) to provide exposure to full service lease reimbursement calculations.

Projection formula mathematical descriptions are provided to guide your Excel formula construction.

The second part of the tutorial takes the property NOI line and weaves it into an acquisition analysis screening tab that integrates purchase, sale, debt and equity elements.

The two senior debt financing options modeled are an amortizing loan without any future funding amounts available for the Year 1-2 tenant improvements and leasing commissions related to Suite 300, and an interest-only loan with delayed draw capacity for the near-term capital costs.

The sections of this analysis are:

- uses of funds
- sources of funds (sponsor equity, third party investor equity, senior acquisition Loan)
- unlevered projection analysis
- debt schedule
- levered cash flow
- sensitivity tables.

The resulting levered cash flow returns metrics are net cash flow, IRR, multiple on equity and NPV, allowing you to assess the valuation of the property.

In addition, a levered summary table is constructed to evaluate returns for multiple hold durations side-by-side.

RETAIL PROPERTY DEVELOPMENT MODELING

Medium/Hard

4 or 6 hour

Hands-On

Applicable Real Estate Property Types: Retail

In this 4- or 6-hour session, you will learn the collection of technical skills for the pro-forma (projection) modeling for the ground-up development, operation and sale of a multi-tenant retail plaza. The principles and skills taught also apply to single tenant properties.

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework. To facilitate your learning, you will begin with pre-formatted tabs for lot and building information for a subject development site, building size and capital structure.

With transaction base case assumptions provided for you, you will then derive and fill in line item projection formulas on a standard, pre-formatted monthly sources and uses of funds tab. Next, you will derive and fill in line item projection formulas on a standard, pre-formatted monthly cash flow tab. You will wire the tabs together as applicable. When you have completed all of the hands-on modeling, you will have a fully-working 6-tab model that ends at pre-income tax cash flow to equity.

Instructor support is provided, and an unlocked solution set is included so that you can check your work along the way.

The advanced capital structure you will model includes:

- sponsor
- equity partner
- third party investor
- mezzanine loan
- senior construction loan

Topics covered include:

- site and building information
- space programming
- pre-, during- and post-construction project timing elements
- transaction capital structure
- formula writing involving conditional statements
- generic projection formula writing
- uses of funds: land and acquisition costs, hard costs, soft costs, FF&E costs, financing costs
- sources of funds: equity, debt
- cash flows and returns: hotel, retail
- capitalized valuation for sale.

SINGLE TRANSACTION EQUITY JOINT VENTURE PARTNERSHIP & WATERFALL MODELING (LEVEL 3) BOOTCAMP
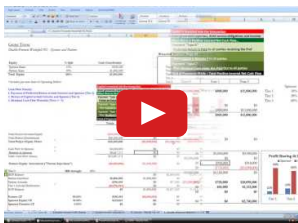
Medium/Hard

4 hour

Hands-On

Slide Show

Applicable Real Estate Property Types: All income producing and unit sales-based

This is the training content for Level 3 REFM Certification in Excel for Real Estate. The test is free and may be taken online at anytime here.

In this 4-hour session, you will learn about how to model equity joint venture partnerships for individual property transactions, both developments and acquisitions. "Dollars in" (capital contributions) and "dollars out" (partitioned levered cash flows) to all equity players will be studied in detail.

Topics covered include:

- rationale behind targeting disproportionate returns to the sponsor
- how to achieve disproportionate returns through fees and cash flow partitioning
- preferred return overview
- preferred return variations with respect to priority of payment
- preferred return in context
  - payment types A, B and C
- nature of preferred return
  - non-compounded and compounded
  - non-cumulative and cumulative
- waterfall distribution overview
- promote (carried interest) mechanism overview and modeling
- ook-back internal rate of return (IRR) method
- 3-Tier waterfall modeling
- double-promote, 5-tier waterfall modeling
- alternate compounding periods: monthly, daily, quarterly
- sample partnership structures.

CORE- AND CORE-PLUS PRIVATE EQUITY FUND MODELING

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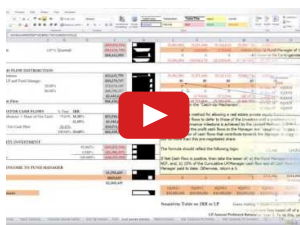
Medium/Hard

4 hour

Hands-On

Slide Show

Applicable Real Estate Property Types: All income producing

In this 4-hour session, you will learn big picture real estate private equity fund basics, the general legal structure of funds based in the U.S., and how to model transaction-level, transaction partner-level, fund-level, general partner (GP) and limited partner (LP) projections for core- and core-plus real estate private equity funds.

To set the proper skills and knowledge foundation, you will first learn about formula writing involving conditional statements, as well as REFM's generic projection formula framework.

To facilitate your learning, you will begin with a pre-formatted prototypical individual transaction tab, on which you will derive and fill in line item projection formulas starting at Net Operating Income and ending at Levered Cash Flow (interest-only financing is assumed).

Next, on a pre-formatted fund-level tab, you will derive and fill in line item projection formulas starting at Investment Net Cash Flow and ending at pre-income tax partner-level Levered Cash Flows.

Last, you will derive and fill in line item projection formulas on a pre-formatted individual transaction-level partner-level promote tab.

You will wire the tabs together as applicable. When you have completed all of the hands-on modeling, you will have a fully-working model.

Topics covered include:

- ◦ modeling net cash flow for a typical acquisition
- ◦ rolling up of multiple investments to the fund level
- ◦ projection of fund manager asset management fees
- ◦ partitioning of cash flows to the limited and general partner ownership interests based on a typical fund catch-up structure
- ◦ modeling of individual transaction partner promote structure
- ◦ fund-level claw-back.

SINGLE PROPERTY TRANSACTION DEBT FINANCING MODELING

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Medium/Hard

4 hour

Hands-On

Slide Show

Applicable Real Estate Property Types: All income producing and unit sales-based

In this 4-hour session, you will learn all about debt financing as it relates to a single property transaction (i.e., not CMBS or RMBS structured finance).

Topics covered include:

◦ capital structure
◦ what debt financing is and why it is used
  ◦ concepts of security and collateral
  ◦ basic modeling example of positive leverage to equity returns
    ◦ risks of using leverage
◦ acquisition loan debt financing simulation in Excel:
  ◦ interest-only payment calculation
  ◦ amortizing loan unctions (for both monthly and annual payment frequency):
    ◦ total payment (PMT)
    ◦ loan constant derivation
    ◦ interest portion of payment (IPMT)
    ◦ principal portion of payment (PPMT)
    ◦ cumulative principal paid (CUMPRINC)
    ◦ cumulative interest paid (CUMIPMT)
◦ amortization table creation:
  ◦ with interest-only period integration
  ◦ with pre-payment event integration
◦ acquisition loan sizing methods:
  ◦ purchase price vs. total unleveraged uses of funds
  ◦ loan-to-value (LTV) and loan-to-cost (LTC)
  ◦ debt service coverage ratio (DSCR)
  ◦ debt yield
◦ loan fees
◦ re-financing loan sizing
◦ mezzanine financing:
  ◦ modeling subordination of both debt service payment and loan repayment
  ◦ modeling participation in income post-debt service payment
◦ land loan modeling
◦ construction financing:
  ◦ differences between acquisition and construction loans
  ◦ loan sizing
  ◦ funded interest (interest reserve) calculation and modeling
  ◦ sources of repayment: income-producing assets vs. unit-sales assets
◦ interim (bridge) loan modeling
◦ construction-to-perm loan modeling
◦ line of credit/self-financing project modeling.

DISTRESSED COMMERCIAL MORTGAGE NOTE ACQUISITION MODELING

Medium/Hard

1.5 hour

Hands-On

Slide Show

Applicable Real Estate Property Types: All income producing

In this 1.5-hour session, you will learn about this less visible but potentially highly profitable way of investing in real estate, and how to properly model the acquisition of a distressed mortgage note.

Topics covered include:

- what makes a commercial mortgage note distressed in nature
- the various elements that comprise a mortgage note investment, including:
  - collateral value and note face value at original underwriting
  - current remaining loan principal
  - nominal and default interest rates
  - receiver collections
- how to model the acquisition of a mortgage note:
  - all cash or with acquisition debt
  - with and without ongoing debt service
  - with and without cash flows after foreclosure but before final sale
- how to model exit opportunities:
  - sale of note
  - partial pay down
  - sale of the underlying collateral.

Notes:

Clients Include:

Vornado Realty Trust

The JBG Companies

Clark Enterprises

Skanska USA Commercial Development

Alvarez & Marsal

Abu Dhabi Investment Authority

GTIS Partners

LNR Property

Paul Hastings

DLA Piper

Crescent Communities

Prudential Real Estate Investors

Peterson Companies

Prometheus Realty

Top university MBA, masters and bachelor degree programs

ABOUT REFM

THE TRAINER OF CHOICE FOR COMMERCIAL REAL ESTATE EDUCATION AND MICROSOFT EXCEL-BASED FINANCIAL MODELING SKILLS

REFM is the premier financial modeling solutions provider for Excel-based financial spreadsheet models, financial modeling training, and financial modeling consulting for real estate transactions of all types.

REFM provides its customers with the advanced financial modeling knowledge, tools and skills they need to successfully model their transactions and present them with confidence internally and to potential partners, lenders and investors. REFM's educational training is offered through digital self-study video tutorials and live group training seminars. REFM also provides private consulting services.

Based in Atlanta, REFM was founded by Bruce Kirsch in 2009. REFM has trained thousands of new and experienced real estate professionals in financial modeling from a wide variety of real estate businesses, organizations and institutions, including private equity, development, brokerage, trade groups and government.

REAL ESTATE FINANCIAL MODELING

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