Real Estate Financial Modeling's

Introduction to the Real Estate Business

REFM

Model for Success™

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Agenda

- Types of real estate
- Sources of real estate investment capital
- How capital is used to create value in real estate
- Investment objectives and methods
- Introduction to valuation of real estate

Overview

- Residential and commercial real estate are worth tens of trillions of $ in the U.S. alone
- Everything from homes to apartments to hotels to malls to office buildings
- Often a major portion of corporate assets
- Residential real estate is greater in value than CRE; often a family's or individual's largest investment

Types of residential real estate

Single-family detached houses

Attached townhouses

Types of commercial real estate

Office

- commercial – urban central business district (highrise & midrise)
  - Class A – The GM Building
  - Class B (decreasing quality and location)
  - Class C
- commercial – suburban (generally midrise)
  - Class A, B, C
- medical

Types of commercial real estate

Multifamily

- apartments, condominiums and cooperatives
- small properties / suburban garden apartments
- urban midrise & highrise

Types of commercial real estate

Hotels and Resorts

- limited service – Motel 6
- extended stay – Residence Inn
- full service – Marriott
- luxury resort – Four Seasons

Types of commercial real estate

Industrial

- heavy industrial (manufacturing) facilities
- light assembly
- storage and distribution facilities
- research and development facilities

Types of commercial real estate

Retail

- shopping center / regional center / strip commercial
- super regional centers
- community center / neighborhood center
- convenience center / specialty center
- big box stores

Types of commercial real estate

Other

- self-storage
- golf courses
- student housing
- assisted living
- health care
- educational institutions
- farmland and forest

Types of real estate capital providers

Private

- individuals and families
- investment firms

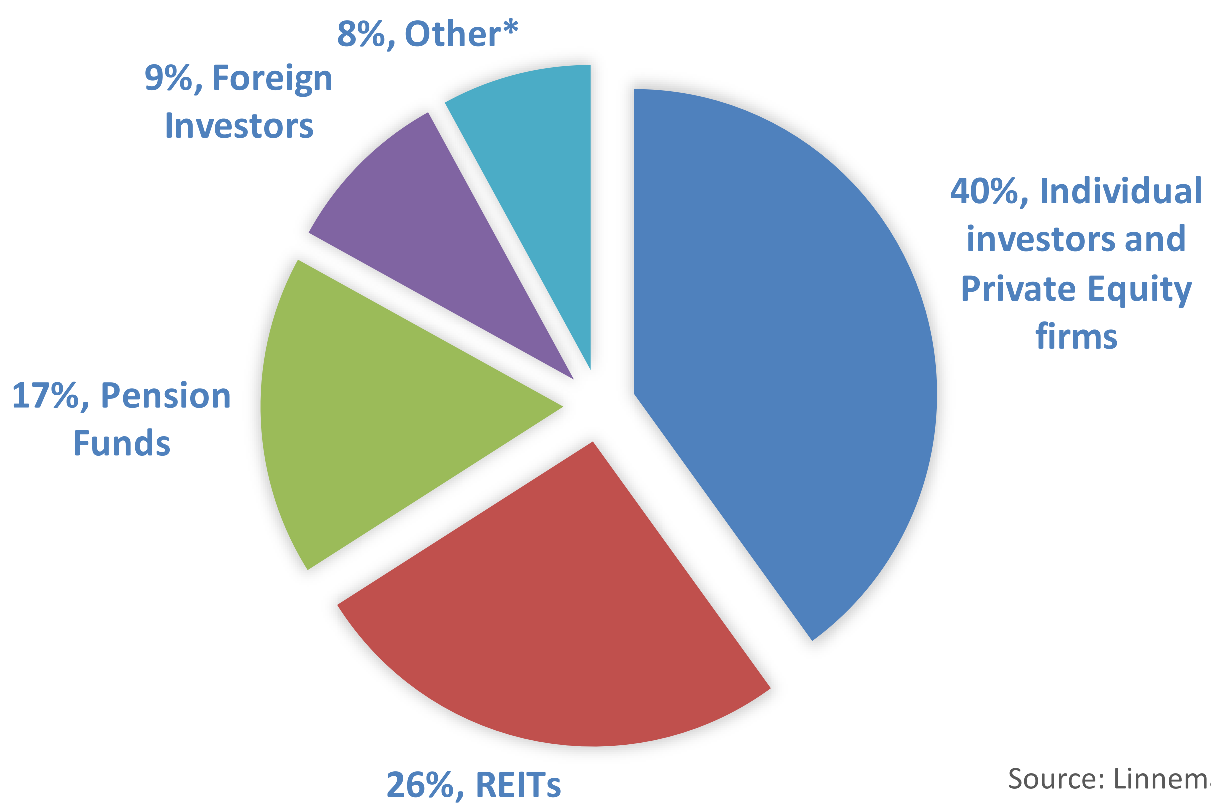
Real Estate Investment Trusts (REITs)

- equity, mortgage, hybrid

Non-REIT

- pension funds and endowments
- insurance companies
- private equity funds
- investment and commercial banks
- governments

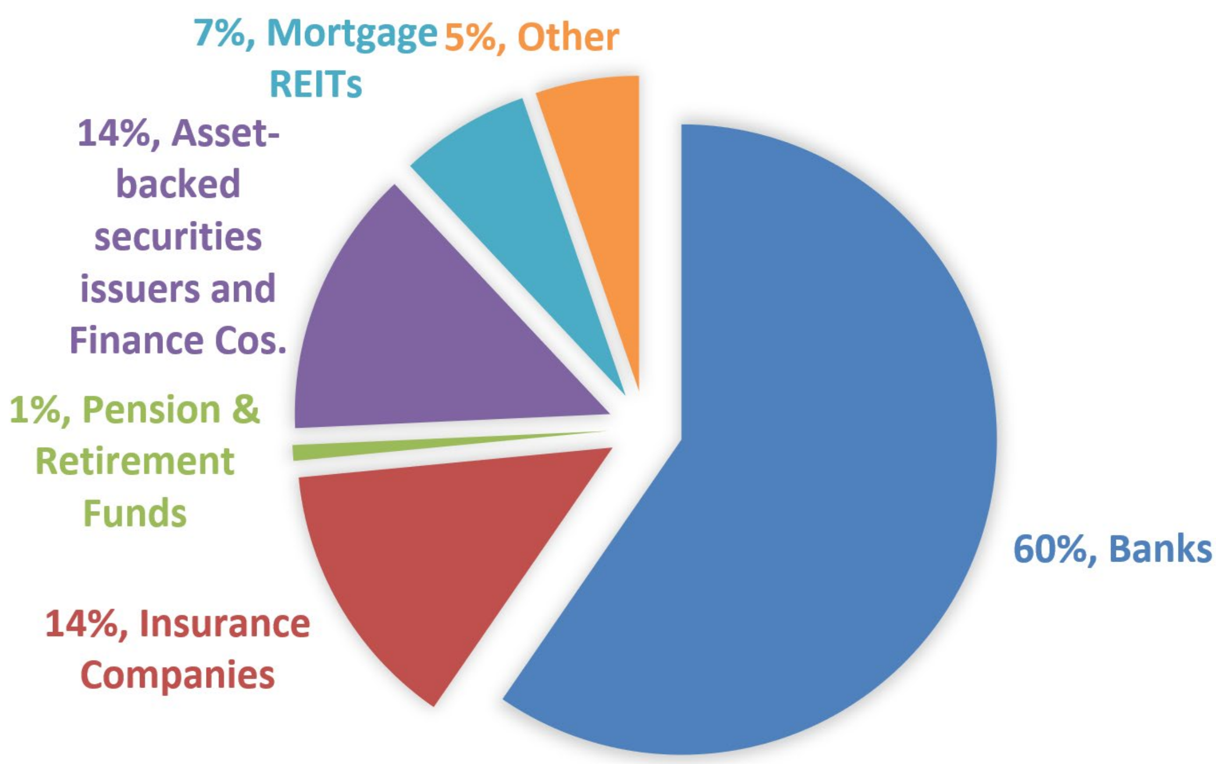
Sources of U.S. CRE equity capital (~$1.2 Trillion)



Source: Linneman Associates, 2018

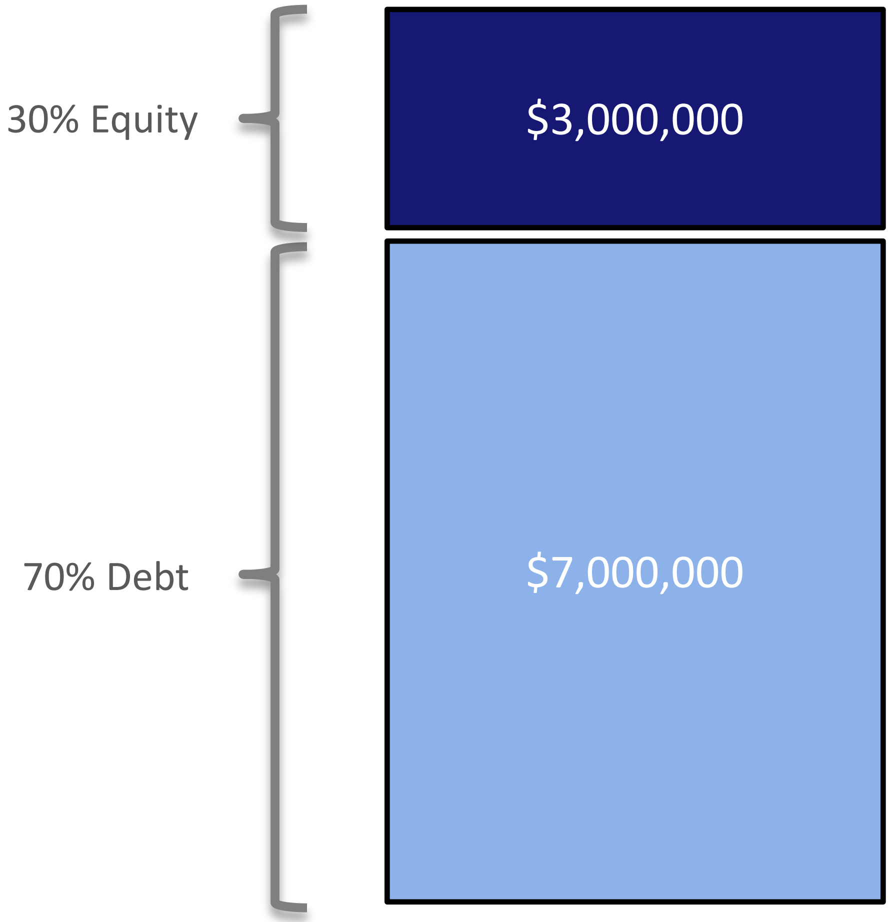
* Life insurance companies, private financial institutions and public untraded funds

Sources of U.S. CRE debt capital (~$2.6 Trillion)



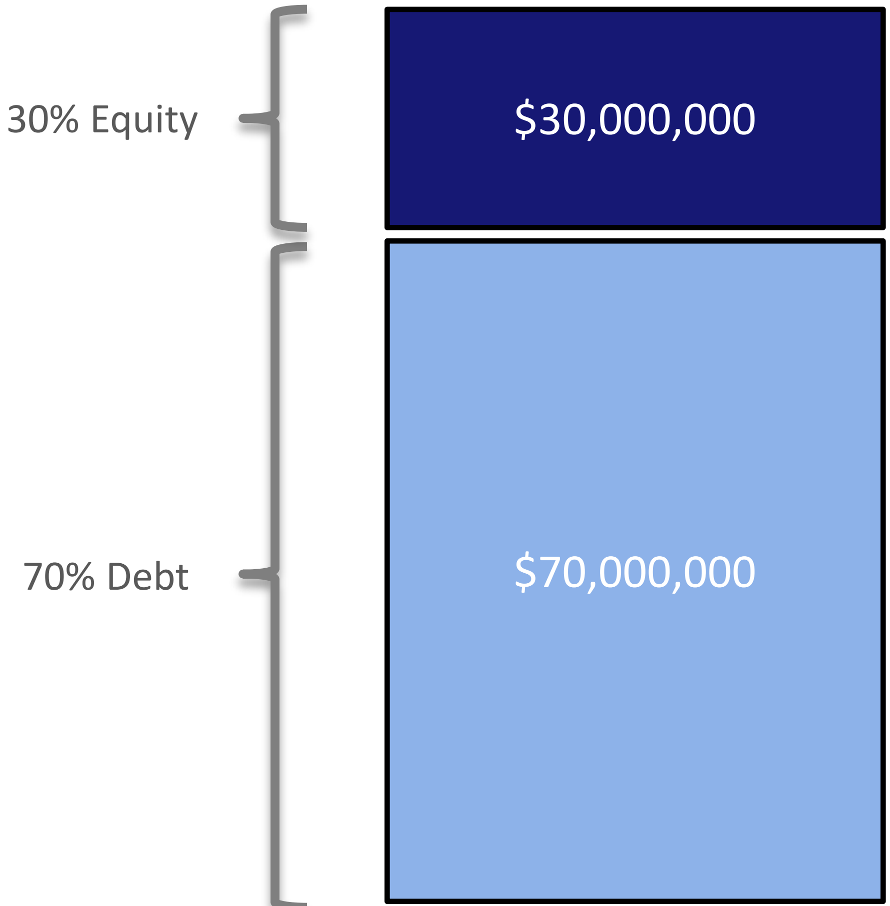
Source: Linneman Associates, 2018

Illustrative $10MM transaction capital structure



General equity breakdown
10% from deal sponsor
90% from equity investor

Illustrative $100MM transaction capital structure



General equity breakdown
10% from deal sponsor
90% from equity investor

The two main ways to make money in real estate

- Capital provider
  - equity investor (owner)
  - lender
- Service provider to capital providers
  - property manager/service provider
  - asset manager, investment banker

How capital is used to create value

- Acquisition and operation of an existing rental property
    - attractiveness of an in-place rent stream
    - property appreciation over time

How capital is used to create value

- Rehabilitation/repositioning of existing property
  - maintain the current use of the property, but improve its physical characteristics/systems
    - change a hotel's "flag"
  - market it differently to improve tenant base

How capital is used to create value

- Conversion from one use to another use
  - industrial to residential lofts
  - warehouse to office

How capital is used to create value

- Land entitlement
  - getting all governmental approvals required to develop a project on a site
    - subdivision of land zoned as farmland into residential lots

How capital is used to create value

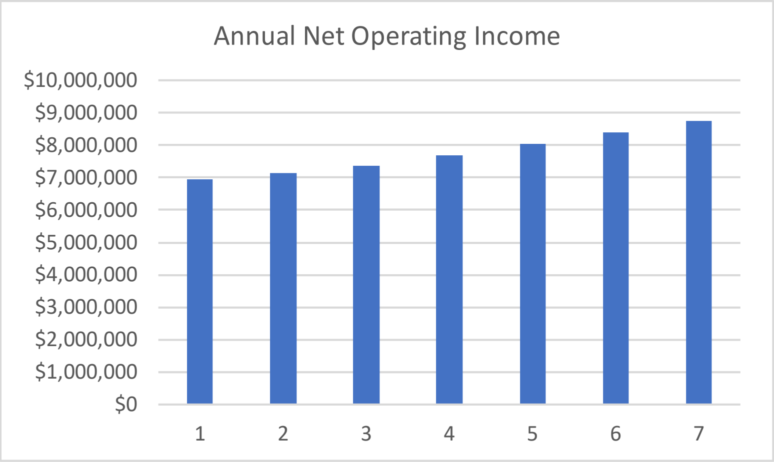
- Rezoning to a “higher and better use”
  - residential to commercial

How capital is used to create value

- Land (horizontal) and property (vertical) development
  - residential
  - commercial

Investment objectives

- acquire or develop an income stream and grow it over time



- recoup one’s investment and take a profit

- exit the investment

Executing on investment objectives

- How to maximize cash flow from a property
  - raise rents on space that is full
  - lease up vacant blocks of space to get them generating income
  - reduce operating expenses
    - upgrade to LED bulbs, spread administrative costs
    - defer maintenance
  - get a favorable property tax re-assessment
  - offer ancillary property services
  - refinance in-place debt at a lower interest rate
  - pay down interest-only debt
  - accelerate depreciation via cost segregation (post-income tax basis)

Executing on investment objectives

- Recouping of investment and profit taking
  - condominium (ownership interest) sale
  - property sale/leaseback
  - refinancing of existing debt
  - fee simple disposition (sale)

Valuation of residential real estate

- Primary residences are bought primarily with our hearts, not our heads ("the kitchen sells the house"[or doesn't])

- **Families** generally buy a "school district that comes with a house"

- It boils down to subjective willingness to pay and the ability of the property to appraise high enough to unlock the desired loan amount

SCHOOL RATING		SCHOOL RATING	
9 out of 10	Lin Elementary	6 out of 10	Parkside Elementary
9 out of 10	Inman Middle	3 out of 10	King Middle
5 out of 10	Grady High	3 out of 10	Maynard H. Jackson- Jr. High

Valuation of commercial real estate

- How does the market determine property values?
  - Four main valuation methods
    1. Discounted Cash Flow model, to solve for the Net Present Value
    2. Cap Rates and Comparable Sales
    3. Replacement Cost
    4. Residual Land Valuation

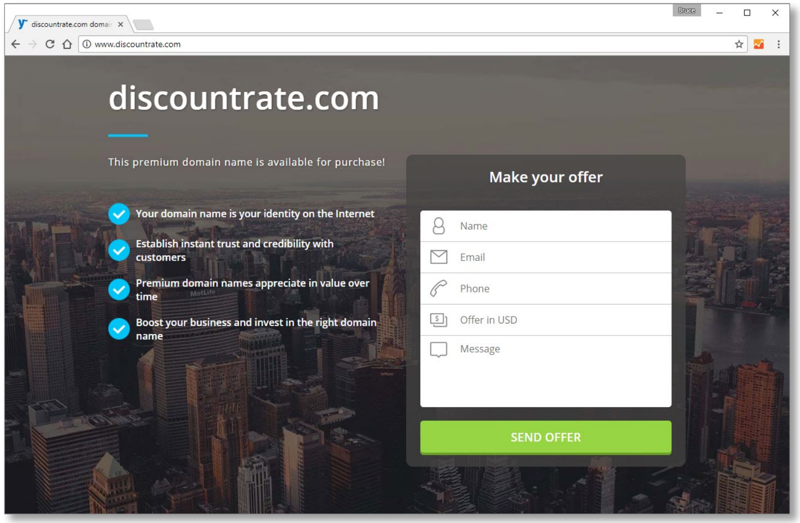
Valuation method #1: Discounted Cash Flow (DCF) Model

- Just like companies, properties can be valued based on the *expected value* of their future cash flows
- In analyzing these future cash flows, we discount them to a present value based on risks as they apply specifically to the contemplated transaction
- These future values are first modeled based on income and expense growth assumptions

Valuation method #1: Discounted Cash Flow (DCF) Model

- The discount rate selected should represent the opportunity cost percentage return that a similarly-risky alternative investment would have provided

- Discount rate selection is highly subjective; there is no verifiable “right” rate to choose unfortunately



Valuation method #1: Discounted Cash Flow (DCF) Model

- The higher the Net Present Value produced by the DCF analysis, the more financially attractive the perception of the opportunity

- An NPV that is negative represents an investment to avoid

Valuation method #2: Cap Rate and Comparable Sales

- Cap rate/comparable sales valuation poses the question:
  - What cap rates have other similarly sophisticated parties recently paid for nearby assets with cash flow streams similar in nature to the subject property?

Valuation method #2: Cap Rate and Comparable Sales

$$\text{Cap Rate} = \frac{\text{NOI}}{\text{Purchase Price}} = \text{\% Yield}$$

- The reciprocal of the cap rate is the income multiple (Purchase Price/Net Operating Income).

Valuation method #2: Cap Rate and Comparable Sales

- Cap rates paid in recent comparable sale transactions can be used to value the subject acquisition

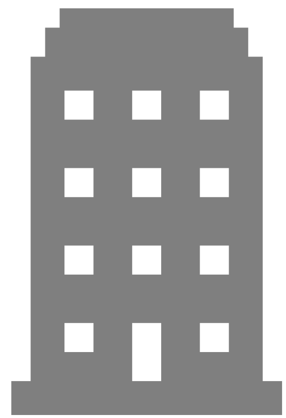
- Finding good comps is sometimes very hard, though, as there are so many nuances and unique elements in each transaction
  - tenant composition
  - date of sale
  - submarket
  - size of property
  - age of property

Valuation method #3: Replacement Cost

- If I could build the building instantly and get the same tenants, what would it cost to do so?
  - If much *less* than what I intend to pay, then I am overpaying (i.e., developing the asset makes more sense instead of buying it)
  - If much *more* than what I intend to pay, then I am likely not overpaying, and am shielded from near-term development of new competitive supply

Triangulation of results of the methods

Discounted cash flow



Cap rate/comparable sales

Replacement cost

Valuation method #4: Residual Land Valuation

- Developable land is worth what can be built upon it.

- The developer asks:
    - What can I **afford** to pay for the land given assumptions related to non-land development costs, future operating asset income and expenses, and desired profit margin?

Valuation method #4: Residual Land Valuation

- Developers use **<u>residual land valuation</u>** as one method of deciding what to offer for a development site (the other is comps)

Element	Developer's internal monologue
Estimated income	What can I build? What can I get in income (rent/sales)?
Less est. cost (excl. land)	What will it cost me in total to build, operate and stabilize/sell out?
Less required equity return	What pre-tax margin do I and my investors need to make? *
= Residual Land Value	This is what the land is worth for the contemplated project

* For income-producing properties, this is measured as **Yield on Cost**: Stabilized Net Operating Income / Total Project Cost. For unit-sales properties, this is measured as **Profit Margin**: Net Cash Flow / Gross Sales Proceeds.

- This is first performed on a back of the envelope basis, and if promising, then on a more detailed DCF basis