

RE 618 / Fin 618 – Real Estate Investment Analysis

Introduction to Commercial Property Markets Lecture Notes

1) Boring Administrative Stuff

a) The complete syllabus and other information can be found on the class website at <http://webs.wichita.edu/longhofer/re618.htm>.

b) Please make sure you set your WSU e-mail account to forward to the e-mail address of your choice. You can do this by logging into MyWSU. While you are there, you should update your address, phone number, and other personal information as well.

2) Real Estate Markets

a) Central question: What gives real estate value?

b) Real estate markets can be analyzed in two distinct, but related ways

- Real estate _____ markets

- Real estate _____ markets

3) Real Estate Asset Markets

a) Individuals and institutions often real estate because of the cash flows it generates, not because they want to occupy the space

- Investment opportunities in real estate include
- As an investment, real estate must compete with other capital market assets
 - Real estate is attractive as an investment if, on a risk-adjusted basis, its expected return is _____ than what the investor could earn elsewhere

b) Measuring Real Estate Returns

- The *holding period return* is the sum of the capital gain return and the income return or cap rate:

$$\begin{aligned} HPR &= \frac{P_t - P_{t-1} + D_t}{P_{t-1}} \\ &= \frac{P_t - P_{t-1}}{P_{t-1}} + \frac{D_t}{P_{t-1}} \end{aligned}$$

c) Returns on selected security classes:

Security	Mean Return	Standard Deviation	Coef. of Variation
T-Bills	1.14%	0.52%	0.46
Govt. Bonds	1.95%	2.66%	1.37
NCREIF	1.83%	2.26%	1.23
Equity REITs	2.55%	9.20%	3.61
S&P 500	2.73%	8.36%	3.06
CPI	0.74%	0.80%	0.57

Source: Bruggeman & Fisher text, chapter 22

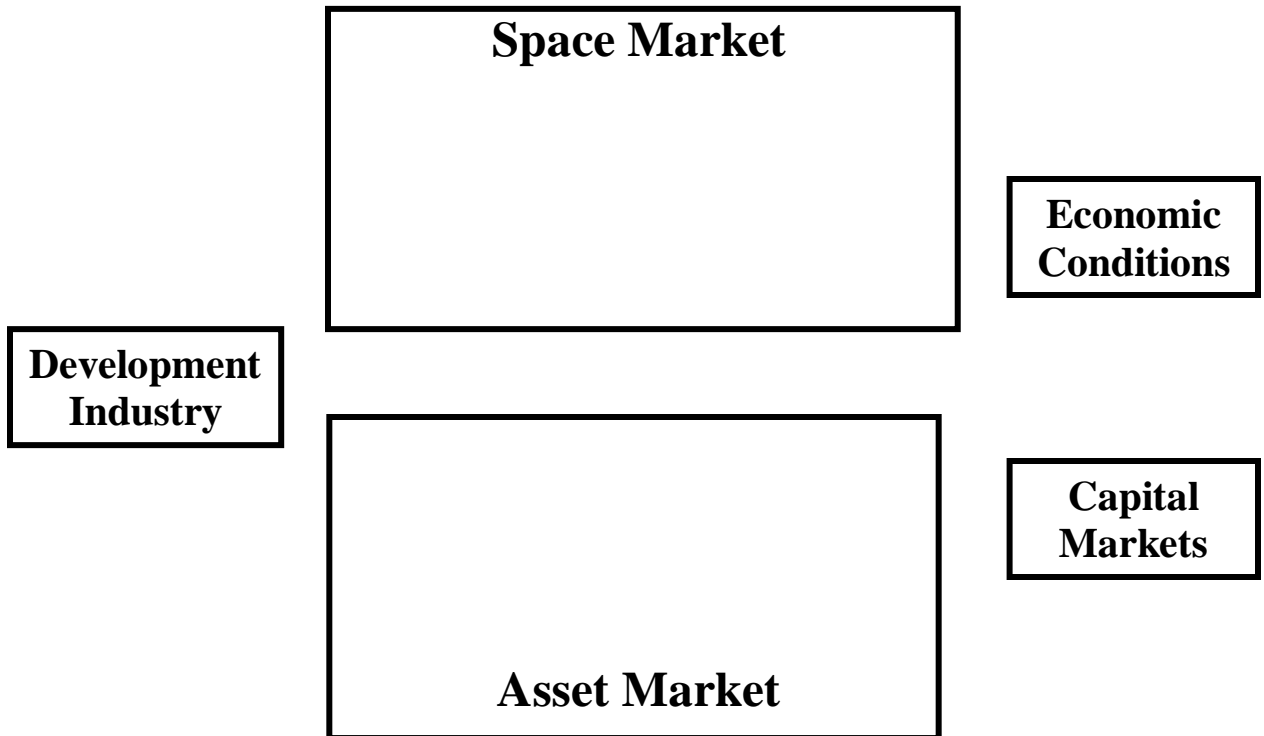
- NOTES:

- NCREIF (National Council of Real Estate Investment Fiduciaries) represents unlevered equity investments in real estate – Direct returns on properties based on income earned and appraisals of the properties themselves.
- Equity REITs (Real Estate Investment Trusts) are the total return (dividend & capital gain) on REITS that specialize in equity investments in real estate. These represent levered returns.
- Risk is measured by the *standard deviation* of quarterly returns.
- The *coefficient of variation* is the standard deviation divided by the mean return and measures the risk per unit of return – low numbers are good.

- Information to note:

- The mean return from unlevered real estate is similar to _____.
Notice, however, that real estate investments are _____ than these securities.
- The mean return from levered real estate is similar to _____.
This, too, is _____ than its equity counterpart.

4) Integrating Real Estate Space and Asset Markets



5) Real Estate Space Markets

a) By far the most important characteristic of real estate is its _____.
The other important characteristics of real estate arise from this characteristic:

- All real estate markets are _____.
- Each parcel of real estate is _____.
- Real estate is _____. There is a limited supply of land to fit any particular economic purpose.
- Searching for and gathering information about real estate is _____.
- Land uses are _____.

The physical and economic characteristics of real estate imply that it is misleading to speak of “the” real estate space market.

b) Different markets are defined by:

- _____
- _____
- _____

c) Types of real estate

- Single-family residential markets

- Multi-family residential markets
 - *Quality* – Different properties are typically classified by a quality rating (e.g., Class A, Class B, or Class C). These classifications are fuzzy and subjective, but general characteristics are common:
 - Class A – Newer buildings with luxury amenities in prime locations
 - Class B – Somewhat older buildings (10-30 years), or newer buildings in less desirable locations or without certain amenities
 - Class C – Much older buildings in less desirable neighborhoods
 - *Structure* – High-rise, mid-rise, or low-rise (garden) apartments.

- Commercial office markets
 - *Quality* – Classes A, B, & C
 - Class A – command the highest rents because of prestigious tenants and location
 - Class B – slightly lower rents because of less desirable location, fewer amenities, or inefficient layout
 - Class C – Were once class A or B are older, reasonably well-maintained, but below current market standards

IREM lists 12 fundamental criteria for classifying office buildings: location, ease of access, prestige, appearance, lobby, elevators, corridors, office interiors, tenant services, mechanical systems, management, and tenant mix

- Retail properties
 - *Quality* – Different classes are measured much the same way as with office properties. But the quality and viability of tenant plays an even more important role.
 - *Structure* – Shopping centers are often categorized by their size or intended market area.

Shopping Center Type	Size in Sq. Ft.	Anchor Tenant	Market Area Population
Neighborhood center	30,000 – 100,000	Supermarket or drugstore	1,000 – 2,500
Community center	100,000 – 300,000	Junior or variety department stores	40,000 – 150,000
Regional center	300,000 – 750,000	One or more full-line department stores	150,000 or more

- Freestanding retail
- Specialty shopping centers
- Power centers

d) Industrial Space Markets

- *Quality* – Industrial properties are less likely to be classified by quality. More likely to be referred to as “obsolete,” “older,” or “newer” space. The type of space is a more important descriptor.

- *Structure* – Some have described industrial properties are “roofs with parking lots.”
 - Bulk warehouse

 - Office/warehouse

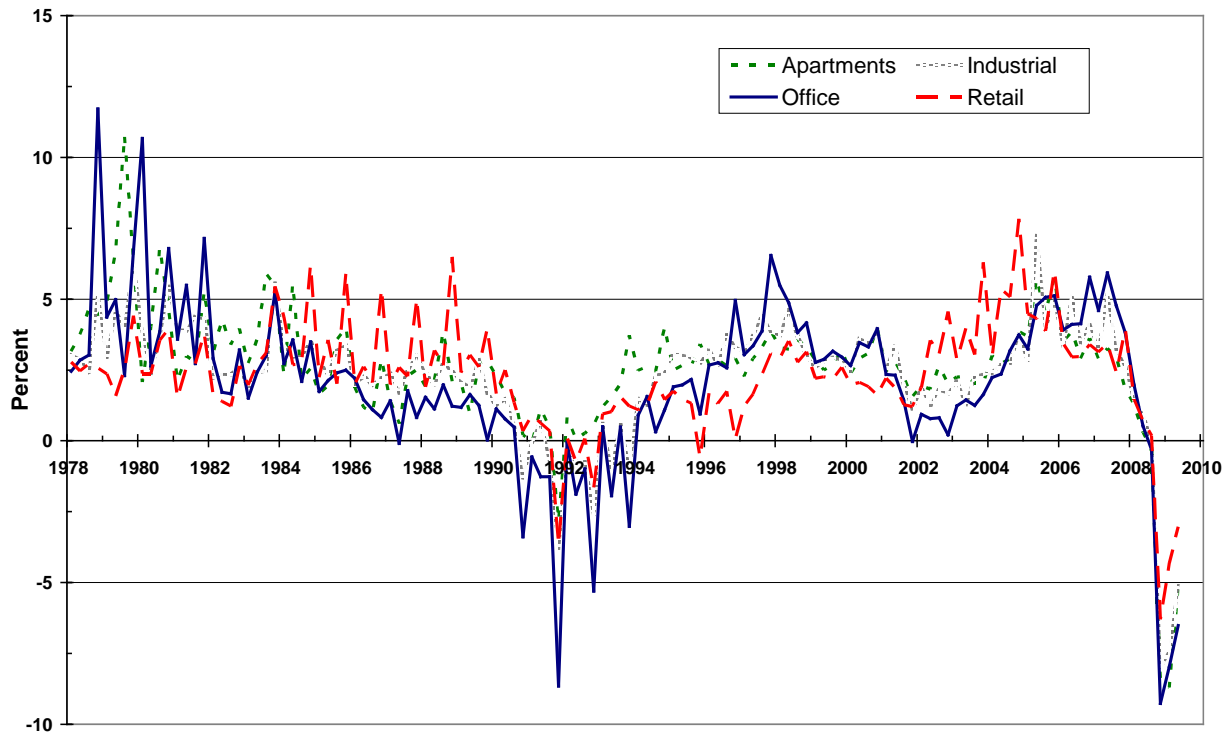
 - R&D

 - Office/tech

 - Light manufacturing and “flex” space

 - Plants and factories

6) Quarterly Investment Returns by Property Type



7) Annual Investment Returns by Property Type

	Mean Return	Standard Deviation	Coef. of Variation
Apartments	9.51%	4.88%	0.51
R&D	8.43%	8.82%	1.05
Warehouse	8.33%	6.00%	0.72
CBD office	5.80%	9.26%	1.60
Suburban office	5.10%	8.84%	1.73
Community retail	8.12%	4.60%	0.57
Regional malls	8.97%	6.80%	0.76
Total NCREIF index	7.33%	6.28%	0.86

Source: Pagliari, Lieblich, Schaner, & Webb. "Twenty Years of the NCREIF Property Index." *Real Estate Economics*, vol. 29, no. 1, Spring 2001, pp. 1-28.

- 8) Understanding Supply and Demand for Real Estate
a) Classical model of supply and demand



b) Supply and demand in real estate space markets



c) Market response to an increase in demand

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