

Lesson 3: The Market Environment - Study Materials

Slide 1: Overview



Professor's Comments (audio)

Lesson's Key Topics	
<ul style="list-style-type: none">■ The Market Environment (slide 2)■ Companies and Real Estate (slides 3-6)■ Advantages and Disadvantages of Owning Real Estate (slide 7)	<ul style="list-style-type: none">■ The Real Estate Pricing Puzzle (slides 8-12)■ Conclusion (slide 13)

Assigned Reading

None.

Slide 2: The Market Environment

Definition

The **market environment** is one of four environments that need to be analyzed in order to assess the investment climate and market conditions. Information about the market environment can be costly to obtain.



Slide 3: Companies and Real Estate

Listen to your professor's introduction to this topic (video length 00:06:05)



Slide 4: Companies and Real Estate (Cont'd)

Companies own real estate for the following reasons:

Stocks and Bonds

- There are a limited number of stocks and bonds
- Studies show that real estate outperforms stocks and bonds
- Studies show that real estate offers higher returns with no increase in risk compared with other investments
- Real estate provides higher overall returns with lower variance if one does not require a high level of liquidity



The Morguard Index of the Toronto Stock Exchange

- The Morguard Index of the Toronto Stock Exchange (TSX) indicates high returns and low risk
- The Morguard Index uses proxy data (appraisal values) which can cause inaccuracies because it fluctuates with market conditions
- The Morguard Index uses quarterly appraisal values to determine returns
- Studies on the Morguard Index show annual data, making it difficult to analyze the data

Appraisal Values and Actual Values

- Studies do not determine the relationship between appraisal values and actual values
- If appraisal values are understated or overstated, they will cause errors in returns

Slide 5: Companies and Real Estate (Cont'd)

Appraisers

- If, for example, an appraiser deliberately understates the value of a house, he or she indirectly increases the rate of return for the client. If he or she overstates the value of the house, it decreases the rate of return. The following example illustrates this.



- **Example:**

Cash Flow = \$10,000

True Market Value = \$100,000

If you hire an **honest appraiser**, he or she will inform you that your rate of return is 10.00% (simply divide the cash flow by the market value: $\$10,000/\$100,000$).

A **dishonest appraiser** will downplay the market value and inform you that your property is only worth \$90,000, and by doing so he or she has increased your rate of return to 11.11% ($\$10,000/\$90,000$).

A **bad appraiser** who overvalues the property decreases your rate of return. If he or she states that the value is \$105,000, your rate of return is only 9.52% (\$10,000/\$105,000).

Slide 6: Companies and Real Estate (Cont'd)

Information Costs

- The real estate market is segmented (residential, commercial (retail and office), industrial, special purpose and others) which increases information costs
- The real estate market is also segmented based on local market conditions
- Information costs increase the cost of operating real estate portfolios
- Information is difficult to find (commercial, industrial, special purpose) because of low turnover or low number of transactions given in a special period, compared to residential
- Information on real estate (if low turnover) is available through proxy (the use of appraisal values) which increases information costs



Capital Gains

- Capital gains make up a large portion of estimated returns (capital gains equal selling price minus original costs)
- Miles and McCue's study for a regional real estate portfolio indicates that only 14% is market related (not diversifiable), whereas 86% is diversifiable

Slide 7: Advantages and Disadvantages of Owning Real Estate

Advantages	Disadvantages
<ul style="list-style-type: none"> ■ Real estate segmented geographically: different cities, municipalities, priced/reacts differently to market conditions. It increases information costs (different markets and tenants). This characteristic of real estate permits the investor to diversify his portfolio in two possible ways: Invest in one type of real estate in different cities, e.g. invest only in residential in Anjou, Cote-Saint-Luc, NDG, DDO, etc. Invest in different types of real estate such as residential, commercial and 	<ul style="list-style-type: none"> ■ Diversification benefits and information costs. ■ Barrier to entry (large amount of money required). Real estate segmented by wealth (approximately 25% down payment). ■ Different type of expertise required. ■ Imperfect competition (barrier to entry) and information costs (paid prior to investing) i.e. inefficient

<p>industrial in only one city.</p> <ul style="list-style-type: none"> ■ By diversifying, the investor can reduce his information costs significantly. ■ Real estate is segmented by asset type: residential, commercial, industrial, special purpose (e.g. old people's home), and others (land). ■ Segmented market implies disequilibrium, i.e. costs (price) not equal to value. ■ Market segmentation suggests the possibility of lowering risk through diversification. 	<p>market which creates opportunities.</p> <ul style="list-style-type: none"> ■ Higher information costs if investing in different segments.
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Slide 8: The Real Estate Pricing Puzzle

Listen to your professor's introduction to this topic (video length 00:09:48)



Slide 9: The Real Estate Pricing Puzzle (Cont'd)

Why Is Real Estate a Puzzle?

- The present model (Capital Asset Pricing Model – CAPM) being used to value real estate is doing a poor job because it does not consider cash payments.

Performance Justifies the Development of New Models

The market should develop new models because:

- The performance of real estate compared to the other investments in the market justifies this
- Studies show that companies are including large amounts of money in real estate in their portfolios
- The performance of real estate investments outperforms other investments in the market as many studies have indicated
- There is enough order in the financial market to justify this
- Companies hire specialists in real estate for consulting services and to write reports on how good the market is for real estate investments. The companies know that the report will favour investing in real estate prior to acquiring the professional services; they simply need a professional's name on the report. This is what "studies are done only in



good times" implies; it is very rare to find any study conducted when markets are down. Furthermore, inefficiency also exists due to appraisers manipulating the numbers to their advantage and thus increasing rates of return as the above-mentioned example illustrates. Finally, current models do not capture the qualitative aspects that are taken into consideration during a real estate transaction. As mentioned earlier, they only consider risk and return, which is not sufficient.

Slide 10: The Real Estate Pricing Puzzle (Cont'd)

Problems with Data

- Appraisal values estimated by the appraiser are not the same as the actual values (actual selling price). True market value can only be found when the property is sold; we hire an appraiser to determine a property's value prior to selling. The value they return is known as a proxy. Appraisers have the habit of downplaying numbers so that when a buyer offers a bid near the true market value one will be pleased with this work.



- Short-run evaluation when real estate investments are long-term investments.
- Sample size will cause sampling errors; i.e., 1/100 compared to 1/99 does not contain much estimation error; however, in real estate the sample size is smaller and therefore the difference between $\frac{1}{4}$ and $\frac{1}{2}$ is quite significant.
- Un-levered basis (assumed no leverage or debt, 100% down payment). Un-leveled property is that which is purchased with cash only (no loan used).
- Data problems, in addition to the conclusion that real estate gives higher returns and has lower risk compared with other investments, are questionable.

Slide 11: The Real Estate Pricing Puzzle (Cont'd)

Reasons for Lower Variance

Three possible reasons for lower risk (or variance)

- Rent income is less risky than other income because of contractual agreements or leases
- Stocks and bonds are affected by other factors such as human resources, lumpy investments, immobility and market segmentation
- Management costs are not accounted for in the analysis

So, less risk or variance would be expected. However, less risk or variance does not mean excess return.



Slide 12: The Real Estate Pricing Puzzle (Cont'd)

Portfolio Implications

- Real estate is negatively correlated compared to the stock market.
- Data problems versus high percentage of portfolio: problems with appraisal values should not stop you from investing in real estate.
- Diversification benefits possible within same market (to reduce information costs), i.e. do not have to evaluate different classes of real estate such as residential, commercial and office.
- Price should reflect mean evaluation of investors.
- Prices should reflect highest and best use, but not true in real estate because a) there is no short selling; b) price adjustment is slower; and c) optimistic opinion (pessimistic will not buy).
- Prices are biased upwards because of the sequential bidding process.
- Real estate prices vary between the average value of potential buyers and the best use of the property.
- Some price inefficiency exists: markets are segmented and not everyone has the capital required to conduct a feasibility study; therefore, inefficiency arises.



Slide 13: Conclusion

- Historical models used in the stock market such as the Capital Asset Pricing Model

(CAPM) and the Arbitrage Pricing Model (APM) have proved to be unsuccessful in real estate.

- The Summation approach still works best.
- A gap exists (market price versus mean expected).
- Optimists buy and no short selling, i.e., price estimate less than market price.
- The studies provide a balanced view of current issues.
- There is a need for redefined models.
- Future studies should show or explain how a qualitative variable (i.e., a house is on a corner, pay is in cash, etc.) affects the property value.