Behavioral Finance and Real Estate

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Road Map

• Behavioral finance overview
• Prospect theory
  – Loss aversion
  – Risk preferences
  – Endowment effect
• Extrapolative expectations
Behavioral Finance

• Two ingredients to mispricing in financial markets

1. Irrational investors
   – Some investors (often w irrational beliefs) buy/sell to push prices away from fundamental value

2. Limits to arbitrage
   – Impediments/risks exist that keep “rational” investors from undoing the actions of irrational investors

• Real estate market possesses characteristics that make it particularly ripe for mispricing
  1) Many less than fully rational participants
  2) Many limits to arbitrage – e.g., illiquidity of assets, extremely high transactions costs, constraints to short sales
Standard Utility Function

- Utility increases with wealth
- Concavity means risk aversion
Prospect Theory

![Graph showing the value of gains and losses with a steep curve for both positive and negative values, indicating diminishing marginal utility for gains and losses. The graph illustrates how the value of $1,000 is perceived differently at losses compared to gains.]}
Risk Averse Over Gains

Group A:

- Riskless choice: Receive $500 for sure  84%
- Participate in a lottery: 50% to win $1,000 and 50% to win $0  16%

Risk averse in gains

Risk loving in losses
## Risk Seeking Over Losses

### Group A:
- Riskless choice: Receive $500 for sure 84%
- Participate in a lottery: 50% to win $1,000 and 50% to win $0 16%

### Group B:
- Riskless choice: Lose $500 for sure 31%
- Participate in a lottery: 50% to lose $1,000 and 50% to lose $0 69%

- Risk averse in gains
- Risk loving in losses
Prospect Theory

![Graph depicting Prospect Theory](image-url)
Loss Aversion

• Losses are more painful than gains
  – People tend to reject a 50:50 bet to win $110 or lose $100
Loss Aversion Applied to Real Estate

• Sellers facing a loss (relative to purchase price) set higher asking prices than others (also occurs in commercial real estate)
Endowment Effect

• It is hard for us to let go of things that we own

  VS

• Example:
  – I will never buy a bottle of wine that costs $200. In my view, there is no wine worth $200/bottle. I prefer to receive $200 in cash and not a bottle of wine.
  – But... What do I do if I receive a $200 bottle of wine? Drink or sell?
Anchoring

• Asking prices strongly influence perceptions of property values...

• Example: Even among real estate agents

• Example: Out-of-state buyers influenced by prices of real estate in their home market
  – Price of real estate in home market should be irrelevant
Extrapolative Expectations

- Home Prices
- Building Costs
- Population
- Interest Rates
Extrapolative Expectations

- Case-Shiller-Thompson Ten-Year Expectations for Annual Home Price Increase (expected per year change in house price over next 10 years)
Summary

• Psychological biases have important real world implications
  – Loss aversion, endowment effect, extrapolative expectations, anchoring

• Behavioral finance helps identify both opportunities and pitfalls in the stock market and the real estate market
THANKS!