

RE 614 – Real Estate Appraisal
Fall 2008
Midterm Exam #1

Dr. Stanley D. Longhofer
TTh 9:30-10:45

1) Barry recently entered into a 99-year ground lease on land owned by Leo. The present value of the rent from this ground lease is \$4 million. Barry develops an industrial building on the property that cost \$7 million to construct. Based on the market rent this location will command, the total market value of this property is \$12 million.

a) Given the above information, how much of the property's value can be attributed to the land and how much to the building?

$$V = \$12 \text{ million}; B = \$7 \text{ million (construction cost)}$$

$$L = V - B = \$5 \text{ million}$$

b) What is the value of Leo's leased fee interest? Why isn't this simply the value of the land?

$$LF = \$4 \text{ million (present value of ground lease payments to Leo)}$$

The value of Leo's leased fee (LF) interest is based on the cash flows he expects to receive from leasing the land. The remaining value of the land accrues to the leasehold interest owned by Barry.

c) What is the value of Barry's leasehold interest? What is the total value of the interests owned by Barry?

Total land value (L) is divided between the leasehold (LH) interest and the leased fee (LF) interest.

$$LH = L - LF = \$5 \text{ million} - \$4 \text{ million} = \$1 \text{ million}$$

$$\text{Thus, the total value of Barry's interests is } B + LH = \$7 \text{ million} + \$1 \text{ million} = \$8 \text{ million}$$

d) Suppose now that industrial rents fall so that the total property value is \$8 million. How does this change affect the value of the following interests:

- Building value

$$\text{No change; } B = \$7 \text{ million}$$

- Total land value

$$L = V - B = \$1 \text{ million}$$

- Leased fee interest

$$\text{No change; } LF = \$4 \text{ million}$$

- Leasehold interest

$$LH = L - LF = -\$3 \text{ million}$$

- Total of all interests owned by Barry

$$\text{Barry's interests} = B + LH = \$7 \text{ million} - \$3 \text{ million} = \$4 \text{ million}$$

- Total of all interests owned by Leo

$$\text{Leo's interests} = LF = \$4 \text{ million}$$

- 2) Consider a property that can be zoned for either retail or office uses. The current use of the property is a single-family residence valued at \$150,000.

Relevant information about the three possible uses is provided in the table below:

	Current Use <u>SF Home</u>	<u>Retail</u>	<u>Office Bldg.</u>
Construction cost	\$125,000	\$550,000	\$975,000
NOI	N/A	\$80,000	\$92,000
Market cap rate	N/A	10%	8.5%
Market value	\$150,000		

- a) Calculate the highest-and-best use of this site as though vacant.

	Current Use <u>SF Home</u>	<u>Retail</u>	<u>Office Bldg.</u>
Total value in use	\$150,000	\$800,000	\$1,150,000
Building value	<u>125,000</u>	<u>550,000</u>	<u>975,000</u>
Land value	\$25,000	\$250,000	\$175,000

The highest-and-best use of the site if vacant is the retail building.

- b) Under the current use (single-family residence), what is the total value of the property, the value of the building and the value of the land?

The total value in use is \$150,000 as given above. The land value is the value in the highest-and-best use, or \$250,000. Thus, the building value is \$150,000 – \$250,000 = – \$100,000. This is negative because the property use should be changed. This economic obsolescence is attributable to the building, not the land value.

- c) Suppose that it would cost \$50,000 to demolish the existing house and prepare the site for new construction. What is the highest-and-best use of the site as currently improved? Explain your answer.

The highest-and-best use of the site as currently improved is a retail building. The cost of acquiring and preparing the land for this use would be \$150,000 + \$50,000 = \$200,000. This is less than the value of the land under the retail use, so it would be worthwhile to tear down the existing home.

- 3) Our textbook states that the appraisal process is a “mix of results and process.” Explain in your own words what is meant by the term “results” and what is meant by the term “process.” Use an example to show how the two work together in appraisals.
- 4) “Being close to an airport has a negative effect on property values.” Comment.
- 5) Consider a parcel of land near the intersection of Kellogg and Meridian in Wichita. For the following land uses, discuss the nearby influences that cause peaks and valleys in the bid-rent surface around this site: Multi-family residential, single-family residential, retail, industrial. Based on your discussion, which land uses do you think are likely to have the highest value for a site near this location.