Chapter 1

The Nature of Real Estate and Real Estate Markets

Real Estate is Property

- Two types of property:
  - Tangible
    - Physical assets that can be owned
    - Can be real or personal property
  - Intangible
    - Non-physical assets such as stocks, bonds, mortgages, leases.

The Term “Real Estate” Used Three Ways

1. Real estate as a tangible asset:
   - Structures (improvements on the land)
   - Improvements to the land
     - Excavation and fill
     - Sewers and other utilities
     - Roads and driveways
   - “Raw” land

2. Real estate as a bundle of rights
   - Exclusive possession of the real property
   - Use or enjoyment
     - Can use as rental property to generate cash flow
   - Disposition
   - Can be unbundled in many ways

3. Real estate as an industry and profession
   - Brokerage
   - Development
   - Leasing
   - Property management
   - Asset management
   - Real Estate Law
   - Appraisal
   - Market consulting
   - Counseling
   - Planning
   - Government regulation and taxation
   - Housing assistance
   - Mortgage finance
   - Construction finance
   - Long-term finance
   - Investment management

Real Estate in the Economy

- Half of the world’s wealth
- Generates over 28% of U.S. gross domestic product (GDP)
  - Housing alone accounts for almost 20%
- Generates nearly 70% of local government revenue (property tax)
- Creates jobs for nearly 9 million Americans
Land Use in the United States: 2003

<table>
<thead>
<tr>
<th>Land Use</th>
<th>1982 Land Use (mil. of acres)</th>
<th>% of total</th>
<th>2003 Land Use (mil. of acres)</th>
<th>% of total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Developed land</td>
<td>73</td>
<td>4</td>
<td>106</td>
<td>6</td>
</tr>
<tr>
<td>Water areas and federal land</td>
<td>448</td>
<td>23</td>
<td>452</td>
<td>23</td>
</tr>
<tr>
<td>Cropland</td>
<td>420</td>
<td>22</td>
<td>364</td>
<td>19</td>
</tr>
<tr>
<td>CHP land</td>
<td>0</td>
<td>0</td>
<td>32</td>
<td>2</td>
</tr>
<tr>
<td>Rangeland</td>
<td>1,151</td>
<td>7</td>
<td>1,176</td>
<td>6b</td>
</tr>
<tr>
<td>Forestry</td>
<td>416</td>
<td>21</td>
<td>405</td>
<td>21</td>
</tr>
<tr>
<td>Other rural land</td>
<td>403</td>
<td>21</td>
<td>409</td>
<td>21</td>
</tr>
<tr>
<td>Totals</td>
<td>1,938</td>
<td>100</td>
<td>1,938</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: U.S. Department of Agriculture, National Resources Inventory 2003 Annual MRI. http://www.nrcs.usda.gov/nri/annual/MRI. Note that Alaska and Hawaii are not included in the tabulated figures.

Aggregate Market Values of Selected Asset Categories: 2008

<table>
<thead>
<tr>
<th>Market Category</th>
<th>Value (billions)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Estate (nonag.)</td>
<td>83,510</td>
</tr>
<tr>
<td>Corporate Equities</td>
<td>14,420</td>
</tr>
<tr>
<td>Mortgage Debt (all prop. types)</td>
<td>12,460</td>
</tr>
<tr>
<td>Corporate &amp; Foreign Bonds</td>
<td>10,460</td>
</tr>
<tr>
<td>U.S. Treasury Securities</td>
<td>9,460</td>
</tr>
<tr>
<td>Municipal Securities</td>
<td>8,460</td>
</tr>
</tbody>
</table>

Note: Real estate (nonagreement) includes developed land. It does not include water areas, other rural land, forest land, or other nonagreement land. The value of nonagreement and noncommercial real estate is used to value of owner occupied housing from The Flow of Funds Accounts, plus the value of available commercial real estate from J.P. Morgan Investment Management.

U.S. Household Wealth: 2008

<table>
<thead>
<tr>
<th>Asset/Liability Category</th>
<th>3rd Qtr. 2008 (in billions)</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tangible assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Housing</td>
<td>$15,101</td>
<td>27%</td>
</tr>
<tr>
<td>Consumer durables</td>
<td>$8,456</td>
<td>15%</td>
</tr>
<tr>
<td>Nonresidential tangible assets</td>
<td>5,906</td>
<td>10%</td>
</tr>
<tr>
<td>Financial assets</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Corporate equity market funds</td>
<td>7,516</td>
<td>13%</td>
</tr>
<tr>
<td>Equity in and corporate bonds</td>
<td>6,091</td>
<td>11%</td>
</tr>
<tr>
<td>Stocks &amp; mutual fund shares</td>
<td>11,485</td>
<td>21%</td>
</tr>
<tr>
<td>Pension assets (excluding insurance)</td>
<td>11,460</td>
<td>21%</td>
</tr>
<tr>
<td>Other securities</td>
<td>2,937</td>
<td>5%</td>
</tr>
<tr>
<td>Noncorporate business equity</td>
<td>7,712</td>
<td>13%</td>
</tr>
<tr>
<td>Total assets</td>
<td>71,113</td>
<td>100%</td>
</tr>
<tr>
<td>Home mortgages (excluding lines of credit)</td>
<td>10,971</td>
<td>15%</td>
</tr>
<tr>
<td>Other debt</td>
<td>5,005</td>
<td>7%</td>
</tr>
<tr>
<td>Total liabilities</td>
<td>16,272</td>
<td>100%</td>
</tr>
<tr>
<td>Net worth</td>
<td>$10,839</td>
<td></td>
</tr>
<tr>
<td>Owner's equity in real estate</td>
<td>$ 8,530</td>
<td></td>
</tr>
<tr>
<td>Owner's equity as a percent of housing and net worth</td>
<td>65%</td>
<td>100%</td>
</tr>
</tbody>
</table>


Selected Household Assets as a Percentage of Total Assets

Real Estate Values are Determined by Interactions in Three Sectors

- User (Space) Markets
- Capital Markets
- Governmental Sector

Space vs. Property vs. Capital Markets

**User Market:**
- Market for the physical real estate
- “Buyers” receive right to use space
  - sometimes called “space” market or “rental market”
- Where rental rates are determined
User Market
- On demand side:
  - individuals, households, & firms who require space either for consumption or production purposes
- On supply side:
  - real estate owners/operators who rent space to tenants

Segmentation of User/Space Markets
- Both demand & supply side of user markets are very specific to location & building type
  - Implies user/space markets are highly segmented!
    - Compare to nationally integrated markets (gasoline, steel, financial capital; i.e., homogeneous commodities that can be moved from place to place)

Segmentation of User Markets
- Because of segmentation, rental prices for physically similar space can vary widely
  - across locations, &
  - across property types.

Capital Markets
- RE competes for funds in capital market with other asset classes, such as stocks and bonds
- Investors select a mix of investments based on expected returns & risk
- Bidding by investors determines:
  - risk free rates of various maturities (i.e., the Treasury “yield” curve)
  - required risk premiums for risky investments

Public Capital Markets
- Small homogeneous units (shares) of ownership in assets trade in public exchanges
- Many buyers and sellers
- Price quotes available for all to see
- Characterized by a high degree of liquidity
- Informationally efficient

Private Capital/Property Markets
- Absence of centralized market (or even price lists)
- Assets trade infrequently in private transactions (thus a lack of transparency)
- Common for “whole” assets to be traded in a single transaction (indivisibility)
- Less liquidity than public markets
- Higher transaction costs
Property (Asset) Market
- Market for ownership claims to RE assets
- Buyers/owners receive rights to cash flows generated by leasing space to tenants
- Demand (supply) side of property market is made up of investors wanting to buy (sell) property
- Property market is integrated, not segmented like space market
  - i.e., investment capital can come from anywhere

The Four Quadrants of Real Estate Capital Markets

<table>
<thead>
<tr>
<th></th>
<th>Private (directly held)</th>
<th>Public (indirectly held)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Equity/owners</td>
<td>Individuals, partnerships, firms, &amp; institutions</td>
<td>Investors in publicly traded real estate companies &amp; equity REITs</td>
</tr>
<tr>
<td>Debt/lenders</td>
<td>Commercial banks, savings institutions, credit unions, mortgage banks, insurance companies, private lenders</td>
<td>Investors in mortgage-backed securities and mortgage REITs</td>
</tr>
</tbody>
</table>

Characteristics of Real Estate Markets
- Heterogeneous products
- Immobile products
- Localized markets
- Segmented markets
- Privately negotiated deals with high transaction costs

End of Chapter 1