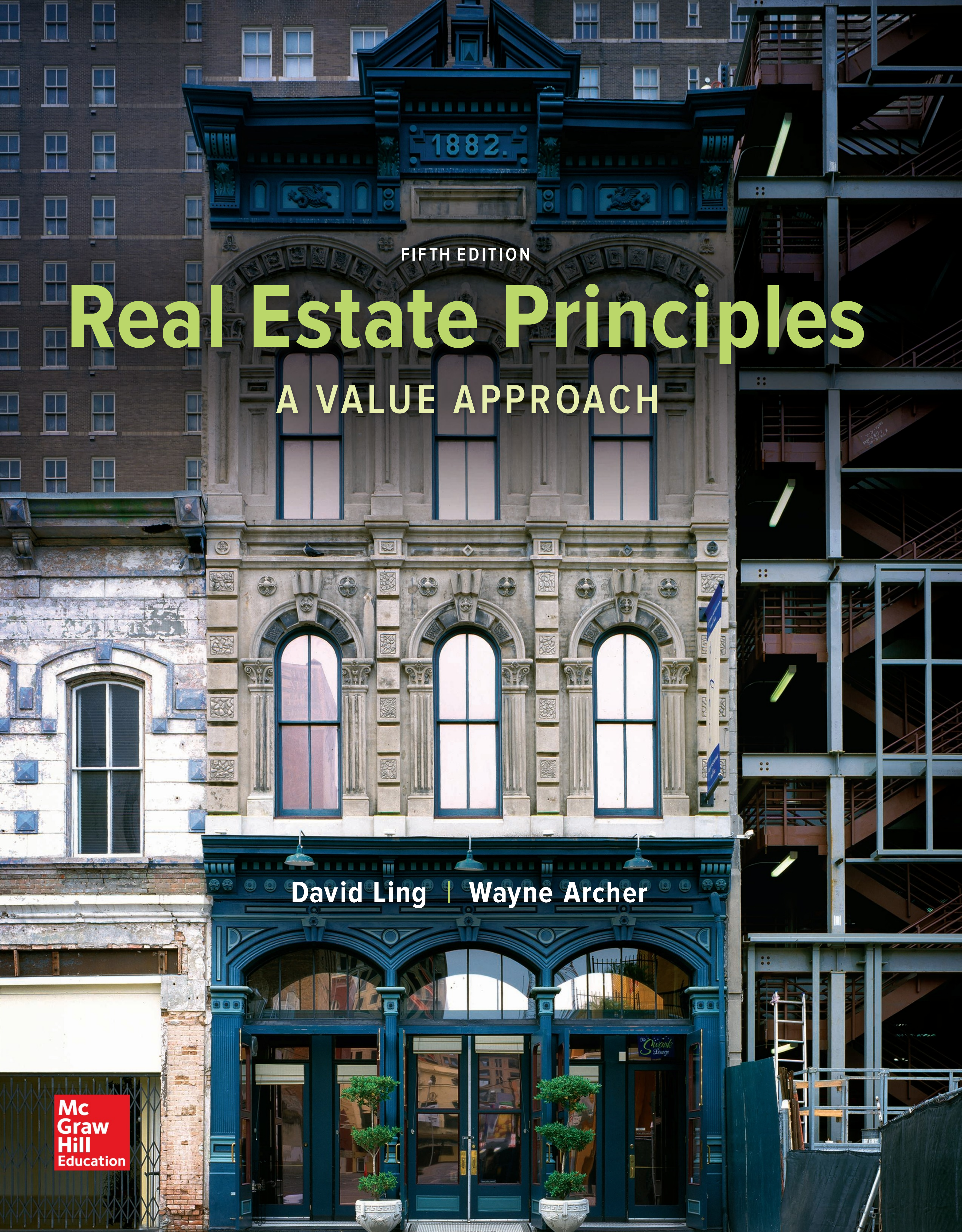
FIFTH EDITION

Real Estate Principles

A VALUE APPROACH

David Ling | Wayne Archer



McGraw Hill Education

Real Estate Principles

A Value Approach

Fifth Edition

The McGraw-Hill/Irwin Series in Finance, Insurance, and Real Estate

Stephen A. Ross,
Franco Modigliani Professor of Finance and Economics,
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Consulting Editor

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Real Estate Principles

A Value Approach

Fifth Edition

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McGraw Hill Education

REAL ESTATE PRINCIPLES: A VALUE APPROACH, FIFTH EDITION

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Dedications

To my wife, Lucy, for her continued patience and understanding during this latest revision of the book and to our children, Alex, Sarah, and Rebecca, who have really tried to understand why Dad spends so many nights and weekends working in his home office.

—DCL

To my wife, Penny, who has always matched our efforts in this book with an equal measure of her devotion, support, and assistance; to our children Stephen, John, and Jennifer, who generously supported me with enthusiasm for the task; and to my mother and Penny's mother, who always kept the faith that I would do something useful with my "typewriter."

—WRA

About the Authors

DAVID C. LING

David C. Ling is the McGurn Professor of Real Estate at the University of Florida. Professor Ling received an MBA (1977) in finance and a Ph.D. (1984) in real estate and economics from The Ohio State University. His academic and professional publications have included articles on housing policy and economics, mortgage markets and pricing, private commercial real estate investments, publicly traded real estate companies, and performance evaluation.

During 2000 Professor Ling served as President of the American Real Estate and Urban Economics Association (AREUEA). From 2000 to 2005, he also served as editor of *Real Estate Economics.* Professor Ling serves on numerous journal editorial boards including *Real Estate Economics,* the *Journal of Real Estate Finance and Economics,* the *Journal of Housing Economics,* and *The Journal of Real Estate Research.* In 2011, Professor Ling was the recipient of the George Bloom Award, which is presented annually by the Directors of the American Real Estate and Urban Economics Association for "outstanding contributions to the field of real estate academics." In 2010, he was awarded the David Ricardo Medal by the American Real Estate Society, which is ARES's highest honor "in recognition of research productivity and influence over a twenty year period."

Professor Ling has provided research and consulting services to several state and national organizations including the Federal National Mortgage Association, the National Association of Home Builders, the National Association of Realtors, the Florida Association of Realtors, and the CCIM Institute. He is a Fellow of the Homer Hoyt Institute, a faculty member of the Weimer School of Advanced Studies in Real Estate, a board member and Fellow of the Real Estate Research Institute, a member of the National Association of Real Estate Investment Trusts's Research Council, and a Fellow of the Royal Institution of Chartered Surveyors (FRICS).

Additional information on Professor Ling is available at http://warrington.ufl.edu/departments/fire.

WAYNE R. ARCHER

Wayne R. Archer is the William D. Hussey Professor at the Warrington College of Business, University of Florida. He is Executive Director of the Bergstrom Center for Real Estate Studies. He received a Masters in economics from Wichita State University (1968) and a Ph.D. in economics from Indiana University (1974). He has been a faculty member at the University of Florida since 1971. From 1979 through 1981, he served as a visiting researcher at the Federal Home Loan Bank Board and Federal Savings and Loan Insurance Corporation. His research publications include articles on office markets, house price indices, mortgage prepayment, mortgage pricing, and mortgage default risk.

Professor Archer is a member of the American Real Estate and Urban Economics Association, where he has served on the board of directors, and also is a member of the American Real Estate Society. He served on the editorial board of *Real Estate Economics.* He is a Fellow of the Homer Hoyt Institute.

Professor Archer has worked in industry education throughout his academic career, including service as the educational consultant to the Florida Real Estate Commission from 1985 to 1999. Among additional roles, he served as a regular faculty member in programs of the Mortgage Bankers Association of America, in the Institute of Financial Education affiliated with the U.S. League of Savings and Loan Associations, and, more recently, with Freddie Mac. In addition, he has provided consulting services to industry and government from time to time throughout his career.

Additional information on Professor Archer is available at http://warrington.ufl.edu/departments/fire.

Brief Table of Contents

Preface

The study and practice of real estate draws on a multitude of disciplines including architecture, urban and regional planning, building construction, urban economics, law, and finance. This diversity of perspectives presents a challenge to the instructor of a real estate principles course. Depending on their backgrounds and training and on the interests of the students, some instructors may choose to emphasize the legal concepts that define and limit the potential value of real estate. Other instructors may focus more on licensing and brokerage issues (popular topics with many students) or on the investment decision-making process. Still others may feel that real estate market and feasibility analysis should be the core topics in a principles class. In short, one of the difficulties in teaching an introductory real estate course is that there appear to be too many "principles." The critical question thus becomes: What framework should be used to teach these principles?

Although the subject of real estate can be studied from many perspectives, we have adopted the value perspective as our unifying theme. Why? Because value is central to virtually all real estate decision making including whether and how to lease, buy, or mortgage a property acquisition; whether to renovate, refinance, demolish, or expand a property; and when and how to divest (sell, trade, or abandon) a property. Thus, whether a person enters the business of real estate in a direct way (e.g., development and ownership), becomes involved in a real estate service business (e.g., brokerage, property management, consulting, appraisal), or simply owns a home, he or she must continually make investment valuation decisions or advise others on their decisions. The key to making sound investment decisions is to understand how property values are created, maintained, increased, or destroyed.

Once value is established as the central theme, all other concepts and principles of real estate analysis can be built around it. Legal considerations, financing requirements and alternatives, income and property tax considerations, and local market conditions all are important primarily in the context of how they affect the value of the property. For example, in Part 2 students will study growth management and land use regulations. Although these concepts have great interest from a political and public policy perspective, they are important from a real estate view primarily because of their potential effects on property rents and values. Similarly, the "imperfections" in real estate markets discussed in Part 3—such as the lack of adequate data, the large dollar value of properties, and the immobility of land and structures—are of interest primarily because of their effects on market values. Our objective is to provide the reader with a framework and a set of valuation and decision-making tools that can be used in a variety of situations.

The Fifth Edition

Since the publication of *Real Estate Principles: A Value Approach,* Fourth Edition, continued changes have come upon the world of real estate. This is true in transactions and brokerage with continued advancement of electronic marketing and the arrival of completely new forms and procedures for most real estate transactions, it is true in valuation with the expansion of automated valuation systems, a new version of the Uniform Residential Appraisal Report, and of new residential and commercial property data sources, and it is true in development and construction with the shift to "green" building. But it is still more true in real estate finance and capital sources where the dramatic advancement of internet lending and the implementation of the "Dodd-Frank" Act have displaced traditional practices, procedures and players, in mortgage finance. For investment property, the new players tend to be neither debt nor equity, but integrated entities who create a "capital structure," and even the ownership structure, for the property. In addition, there continues to be change with profound and far-reaching implications in a world where we now understand that both residential and commercial property values can go down as well as up. This realization colors the demand for home ownership as well as every aspect of real estate investment, finance, and transactions for the foreseeable future.

Changes in This Edition

- The Test Bank has been expanded by 5-10 questions per chapter.
- *Industry Issues* are updated throughout the text to reflect current issues and concerns in the real estate industry.
- All web links and web search exercises are revised and updated.
- Data, charts, and graphs have been updated wherever possible throughout the text.
- Chapter 1: The discussion of the role of government and the production of real estate assets is updated.
- Chapter 2: Numerous clarifications and updates have been made throughout the chapter. New material on condominiums has been added along with a related new Industry Issue.
- Chapter 3: All content is updated.
- Chapter 4: All content is updated, along with numerous clarifications. In addition, new topics are added, including form based zoning, and a summary overview of restrictions on real property.
- Chapter 5: The effect of the Great Recession is incorporated. References are expanded and updated. The use of aerial photos to depict changing urban patterns is refined.
- Chapter 6: All content is updated. New tools of market analysis are examined, including the use if exclusion analysis, use of proxy variables and use of analogy.
- Chapter 7: The chapter is updated to reflect recent changes in Uniform Standards for Professional Appraisal Practice (USPAP) that governs the appraisal process. The latest version of the Uniform Residential Appraisal Report (URAR) is included.
- Chapter 8: The Centre Point office building example is updated to reflect current mortgage rates and other market conditions. Additional practice problems on direct capitalization are added to the end-of-chapter problems.
- Chapter 9: All charts are updated. Discussion of foreclosure is expanded along with owner choices in case of a financially "underwater" residence, including the process of a short sale. Discusson of the Dodd-Frank Wall Street Reform and Consumer Protection Act is expanded, along with the Consumer Financial Protection Bureau and new forms and procedures required for home mortgage loans.
- Chapter 10: All the data and examples are updated. All FHA, VA, and conventional prime residential loan requirements and lender guidelines are updated. New topics include expanded discussion of "piggyback" mortgages and Qualified Mortgages.
- Chapter 11: Numerous topics have been clarified and all tables, charts, and examples have been updated. The terminology is updated to reflect current industry usage. Discussion of mortgage banking has been updated to reflect changes in the nature of that industry. A new industry issues topic has been added on the rent vs buy decision. Finally discussion is added on the new public policy focus in home mortgage lending: ability to pay.
- Chapter 12: A new *Industry Issues* insert is included on the question of who should use a broker. The example listing agreement form has been replaced with an updated version. All information and examples are updated and discussions are expanded or clarified.
- Chapter 13: The Dodd-Frank Act has resulted in complete change in the forms and procedures for home mortgage lending and for virtually all home sale closings. These changes have been fully incorporated in the chapter. Also, a new section has been added on the increasingly common practice of escrow and electronic closings.

- Chapter 15: The discussion of the trade-off between discount points and contract mortgage rates has been expanded.
- Chapter 16: Revisions reflect ongoing changes in the typical permanent loan origination process, recourse versus nonrecourse loans, the level of available commercial mortgage rates, and other typical loan terms. The discussion of alternative capital structures has been expanded. A discussion of participating mortgages has been added.
- Chapter 17: There is expanded discussion of private equity funds to reflect their surge in importance in recent years. The section on real estate investment trusts (REITs), including their recent return performance, has been completely updated. Updated data support the revised discussion of the sources of commercial real estate debt and equity.
- Chapters 18 and 19: The Centre Point office building example is updated, as are the data on capitalization rates.
- Chapter 20: All tax rates and data are updated. A brief discussion of the impact of the 2012 American Taxpayer Relief Act on real estate taxation is added. The Centre Point office building example is updated.
- Chapter 22: The discussion of lease terms and conditions is updated to reflect recent changes and industry standards. There is expanded discussion of nonmonetary lease clauses and terms.
- Chapter 23: All data and information have been updated. New discussion is added concerning appropriate criteria in development decisions.

Intended Audience

Real Estate Principles is designed for use in an introductory real estate course at both the undergraduate and graduate levels, though some chapters may be used by instructors teaching courses focused on real estate market analysis, finance, and investment. In terms of background or prerequisites, some familiarity with basic economics and business finance principles is helpful and will allow the instructor to move more quickly through some of the material (especially Parts 1, 3, 6, and 7). However, the book is designed to be largely self-contained. As a result, students with different backgrounds will find the text accessible. In particular, the direct use of discounting and other time-value-of-money techniques is limited to Parts 6–8, allowing the text to be used by students with little or no background in time-value-of-money techniques.

Organization

Part 1 of the book provides an overview of real estate and real estate markets. In Part 2, we provide an overview of the legal foundations of value and discuss the significant influence that federal, state, and local governments and agencies have on real estate decision making and property values. In Part 3, we discuss the market determinants of value, how the benefits and costs of ownership can be forecasted, and how real estate appraisers convert these estimates of future cash flows and expenses into estimates of current market value.

Part 4 discusses the financing of home ownership, including the law that underlies residential mortgage contracts, the most common types of mortgages used to finance home ownership, and the lenders and other capital market investors that provide funds for residential mortgage loans. In addition to financing their real estate acquisitions, owners must navigate the often time-consuming and complex waters associated with acquiring and disposing of real property. The brokering and closing of real property transactions is presented in Part 5.

Parts 1–5 (Chapters 1–13) do not require knowledge of discounting and time-value-of-money techniques; thus, these chapters are accessible to students with limited or no background in finance and economics. Although basic time-value concepts are at the heart of this book, not every student studies them before encountering a real estate course. We have separated the formal application (though not the underlying ideas) of time-value into one section (Part 6). This enables the instructor to choose when and how these concepts will be put before the student—whether before, parallel with, or after the student is introduced to the real estate content. Indeed, one option is for the student to complete Chapters 1–13 without interjection of formal time-value instruction. Further, this nontechnical approach can be extended to Chapters 16–18, as noted below.

In Part 6, we introduce the formal applications of compound interest and present value that are often key to a deeper understanding of mortgage calculations and the valuation of income-producing properties, such as office buildings and shopping centers. For students who have had basic economics and business finance courses, Chapters 14 and 15 of Part 6 may contain substantial review. For others, these chapters contain new concepts that will require study and practice to master. Instructors wishing to bypass Part 6 can move directly from Part 5 to Chapters 16–18. However, instructors wishing to dig more deeply into commercial real estate financing and investing should review or cover in detail Chapters 14 and 15 before proceeding with coverage of Part 7. We note that the three chapters contained in Part 8 also do not assume knowledge of time-value-of-money techniques.

Although we recommend the material be covered in the order presented in the text, Parts 2 through 8 can generally be covered in any order, depending on the preferences of the instructor and the primary focus of the course. For example, instructors who prefer to cover the investment material first may elect to move directly to Parts 6 and 7 immediately after Part 1.

Regardless of the emphasis placed on the various chapters and materials, we believe strongly that an introductory course in real estate should be as substantive and challenging as beginning courses in fields such as accounting, economics, and finance. The course should go beyond definitions and the discussion of current professional practice. Moreover, its focus should be on real estate principles and decision tools, not simply the current rules and practice for transactions that are so important to real estate sales licensing and brokerage.

David C. Ling

Wayne R. Archer

Main Features

We have included many pedagogical features in this book that will be valuable learning tools for your students. This overview walks through some of the most important elements.

Learning Objectives

Each chapter begins with a summary of the objectives of the chapter and describes the material to be covered, providing students with an overview of the concepts they should understand after reading the chapter.

LEARNING OBJECTIVES

After reading this chapter you will be able to:

1 Explain the role of transportation modes and natural resources in the location and evolution of cities.

2 Define economic base activities, distinguish them from secondary activities, and explain the role of both in the growth or decline of a city.

Chapter Outlines

A chapter outline is featured among each chapter opener. Each outline lists the chapter headings and subheadings for a quick reference for both professors and students.

OUTLINE

Introduction
- Market Misjudgments in Real Estate
- Minimizing Market Errors

The Creation, Growth, and Decline of Cities
- Where Cities Occur
- The Economic Base of a City
- Resources of a City: The Supply Side of Urban Growth

The Shape of a City
- Demand for Proximity and Bid-Rent Curves
- Bid-Rent Curves, Urban Land Uses, and Land Value Contours
- Changing Transportation, Changing Technology, and Changing Urban Form

Chapter Introductions

The first section of each chapter describes the purpose of reading each chapter, and provides links between the different concepts.

Introduction

Most of the real property in the United States is privately owned. If real estate markets worked well, this should allow market forces to determine land uses quite effectively. Unregulated competitive bidding would bring about the most productive use of each parcel, and the price paid for the parcel would exactly reflect its usefulness, much as described in Chapter 5. But this does not completely happen for several reasons. One of the reasons is because of **externalities:** the unintended and unaccounted for consequences of one land user upon others. For example, the creation of a shopping center on a site may cause harm to neighbors through increased traffic delays, noise, increased storm runoff across neighboring land, "light pollution," or other visual or environmental deterioration. Another problem that arises is that buyers of property suffer from incomplete information. Once a structure is built

Main Features

Key Terms

Key terms are indicated in bold within the text for easy reference. A list of key terms from each chapter plus page references can be found in the end-of-chapter material. The glossary contains the definitions of all key terms.

Market Value, Investment Value, and Transaction Prices

Before discussing the framework for estimating the market value of real estate, it is important to distinguish among the concepts of market value, investment value, and transaction price. Real estate appraisers generally define the **market value** of a property as its most probable selling price, assuming "normal" sale conditions.[1] Alternatively, it can be viewed as the value the typical (imaginary) participant would place on a property. The concept of market value rests upon the presence of willing buyers and sellers freely bidding in competition with one another. It is the result of the interacting forces of supply and demand. If real estate markets were perfectly competitive, market value would equal the most recent transaction price.

Industry Issues

These boxes, located in almost all chapters, feature current and interesting real-world applications of the concepts discussed in the chapters.

1-2 INDUSTRY *ISSUES*

Selling Real Estate on eBay

eBay Real Estate is not quite an auction. Because of the wide variety of laws governing the sale of real estate, eBay auctions of real property are not legally binding offers to buy and sell. When a real estate auction ends, neither party is obligated (as they are in other eBay auctions) to complete the transaction. The buyer and seller must get together to consummate the deal.

Nonetheless, eBay Real Estate sales are popular, and the gross sales are growing by leaps and bounds. You do not have to be a professional real estate agent to use this category, although that kind of pro experience may help when it comes to closing the deal. If you know land and your local real estate laws, eBay gives you the perfect venue to subdivide those 160 acres in Wyoming that Uncle Regis left you in his will.

For less than the cost of a newspaper ad, you can sell your home, condo, land, or even timeshare on eBay Real Estate in the auction format.

More information on real estate auctions is provided by the National Association of Realtors: www.realtor.org/auction/the-basics-benefits.

Source: Collier, Marsha, *Starting an eBay Business for Dummies* 4e. John Wiley 2011.

Real Estate Applications

These boxes, located in select chapters, offer case applications of key topics.

6. **SELLER OBLIGATIONS**: In consideration of the obligation of BROKER, SELLER agrees to:

(A) Cooperate with BROKER in carrying out the purpose of this Agreement, including referring immediately to BROKER all inquiries regarding the Property's transfer, whether by purchase or any other means of transfer;
(B) Provide BROKER with keys to the Property and make the Property available to BROKER to show during reasonable times;
(C) Inform BROKER prior to leasing, mortgaging or otherwise encumbering the Property;
(D) Indemnify BROKER and hold BROKER harmless from losses, damages, costs and expenses of any nature, including attorney's fees, and from liability to any person, that BROKER incurs because of (1) SELLER's negligence, representations, misrepresentations, actions or inactions, (2) the use of a lock box, **(3) the existence of undisclosed material facts about the property. This clause will survive BROKER'S performance and the transfer of title**;
(E) Perform any act reasonably necessary to comply with FIRPTA (Internal Revenue Code Section 1445);
(F) Make all legally required disclosures. SELLER represents that the Property has no known latent defects and SELLER knows of no facts materially affecting the value or desirability of the Property which are not readily observable except the following (Please check) ☐ SELLER's property disclosure form or ☒ None
Subsequent to the execution of this agreement SELLER will immediately disclose in writing to BROKER any new material facts that have arisen that might affect the value or desirability of the property. (Note: failure to fully disclose may expose the SELLER to claims for damages and/or other legal remedies); and,
(G) To, in the sole determination of SELLER, consult appropriate professionals for related legal, tax, property condition, environmental, foreign reporting requirements and other specialized advice.

7. **INTERNET DISPLAYS**: I understand and acknowledge that, if I have elected under option "(A)" to withhold authorization to display the listed Property on the Internet, consumers who conduct searches for listings on the Internet will not see information about the listed Property in response to their search.

(A) RG PO **(Initial)** The Broker ☒ is or ☐ is not authorized to display the listed Property on the Internet. (If Broker is not authorized to display listed Property on the Internet, then (B), (C), and (D) do not apply.)

Career Focus

These boxed readings provide students with valuable information on the many different career options available to them, and what those positions entail.

CAREER *FOCUS*

Urban and Regional Planners

Planners develop land use plans to provide for growth and revitalization of communities, while helping local officials make decisions ranging from broad urban problems to new community infrastructure. They may participate in decisions on alternative public transportation system plans, resource development, and protection of ecologically sensitive regions. Planners also may be involved with drafting legislation concerning local community issues.

Urban and regional planners often confer with land developers, civic leaders, and public officials. They may function as mediators in community disputes and present alternatives acceptable to opposing parties. Planners may prepare material for community relations programs, speak at civic meetings, and appear before legislative committees and elected officials to explain and defend their proposals. Planners rely heavily on sophisticated computer-based databases and analytical tools, including geographical information systems (GISs).

Most entry-level jobs in federal, state, and local government agencies require a master's degree in urban or regional planning, urban design, geography, or a similar course of study. Planners must be able to think in terms of spatial relationships and visualize the effects of their plans and designs. They should be flexible and able to reconcile different viewpoints and to make constructive policy recommendations. The ability to communicate effectively, both orally and in writing, is necessary for anyone interested in this field.

In 2015 80 percent of planners earned between about \$43,000 and \$102,000, with a median of \$68,220.

Source: Summarized from The Occupatoinal Outlook Handbook. U.S. Department of Labor.

Main Features

Website Annotations

Websites are called out in the margins in every chapter and include a notation of what can be found by visiting them.

www.houstontx.gov/legal/deed.html

An unusually descriptive local government explanation of deed restrictions, their use and enforcement in Texas, where deed restrictions can replace zoning.

Concept Check

Every major section contains one or more questions for review. This feature helps students test their understanding of the material before moving on to the next section. Solutions to each Concept Check are provided at the end of each chapter so students can check their answers.

✓ Concept Check

7.2 Assume a house is listed for sale for which you would be willing to pay up to $200,000. The seller has put the property on the market with an asking price of $180,000. List some possible reasons why your investment value exceeds that of the seller. Is the price you pa likely to be closer to $200,000 or $180,000? Explain.

Calculator Keystrokes

Found in applicable chapters, calculator keys are shown with values to help guide students through numerical calculations.

year-end deposits. What is the relationship between the standard future the annuity due result? Note that the $5,801.91 annuity due solution ca multiplying the solution to the regular annuity problem by 1 plus the peri [i.e., $5,801.91 = $5,525.63 × (1 + 0.05)].

Figures & Tables

This text makes extensive use of real data and presents them in various exhibits. Explanations in the narrative, examples, and end-of-chapter problems will refer to many of these exhibits.

Exhibit 3-2 Creating Evidence of Title

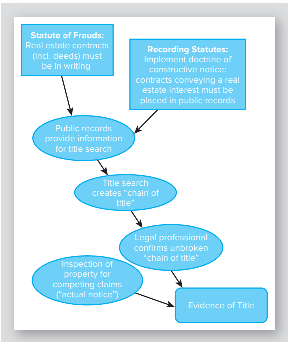
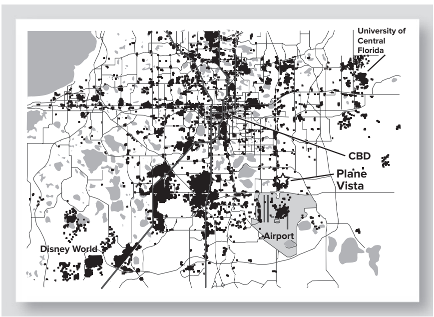


Exhibit 6-10 Where People Work in Orlando



End-of-Chapter Features

Chapter Summary

Each chapter ends with a short section that highlights the important points of the chapter. This provides a handy study tool for students when they review the chapter.

Summary

This chapter surveys three basic powers of government: its right to regulate land use, its right to take private property for public use, and its right to tax property. The power of federal, state, and local governments to regulate land use through planning, zoning, building codes, and other means is vested in their police power. Communities use these tools to limit the negative effects of market failures such as monopolies, externalities, and incomplete structure information, thus attempting to increase market efficiency and equity.

Planning is the process of developing guidelines for controlling growth and development. Zoning assigns specific permitted uses to individual parcels of land to carry out the comprehensive plan. States and local jurisdictions experiencing rapid growth have adopted a wide variety of measures to manage such growth. Some states pass laws requiring cities and counties to develop comprehensive plans, require economic and environmental impact statements in large development proposals, prohibit new development unless concurrency provisions are met, and require an allocation of affordable housing in new residential developments. Additionally, some states give local communities the right to establish urban service areas, or to plan and control urban development outside their boundaries. Though lawsuits have challenged zoning and growth management from a variety of standpoints, courts generally have upheld its validity when it is reasonable, nonexclusionary, and comprehensive.

Environmental hazards have become an important consideration in land use regulation in recent years. Asbestos, fiberglass, LUSTs, lead paint, radon gas, and mold are some of the most common threats. Real estate investors face large risks from these hazards because owners can be required to clean them up. They must protect themselves by having environmental inspections and by requiring written statements of indemnification from developers and previous owners.

The power of government to acquire private property for public use in exchange for just compensation is referred to as eminent domain. Courts have interpreted the term *public use* broadly to include property taken for a public purpose. Just compensation is the market value of the property. Courts have generally ruled that regulations imposing limits on property rights do not need to be compensated; however, if regulation goes "too far" it will be recognized as a taking and subject to compensation.

Test Problems

Because solving problems is so critical to a student's learning, approximately 10 multiple-choice problems are provided per chapter to help students master important chapter concepts.

Test Problems

Answer the following multiple-choice problems:

1. The final price for each comparable property reached after all adjustments have been made is termed the:
   a. Final estimate of value.
   b. Final adjusted sale price.
   c. Market value.
   d. Weighted price.
2. Which of the following is not included in accrued depreciation when applying the cost approach to valuation?
   a. Physical obsolescence.
   b. Functional obsolescence.
   c. External obsolescence.
   d. Tax depreciation.
3. In the sales comparison approach, the value obtained after reconciliation of the final adjusted sale prices from the comparable sales is termed the:
   a. Adjusted price.
   b. Final adjusted sale price.
   c. Market value.
   d. Indicated opinion of value.
4. A new house in good condition that has a poor floor plan would suffer from which type of accrued depreciation?
   a. Short-lived curable physical deterioration.
   b. Long-lived incurable physical deterioration.
   c. Curable functional obsolescence.
   d. Incurable functional obsolescence.
   e. External obsolescence.
5. To reflect a change in market conditions between the date on which a comparable property sold and the date of appraisal of a subject property, an adjustment must be made for which of the following?
   a. Conditions of sale.
   b. Market conditions.
   c. Location.
   d. Financing terms.
   e. None of the above.

Study Questions

Each chapter contains 10–20 study questions that ask students to apply the concepts they have learned to real situations and problems to reinforce chapter concepts.

Study Questions

1. List five major economic base activities for your city of residence.
2. Find the historical population figures for your community for the 20th century. Create a chart with 10-year intervals. Determine the most rapid periods of growth, and try to discover what caused them. (One source of the necessary population numbers is the U.S. Census home page, www.census.gov. Look for *QuickFacts,* and select your state. At the top of the large table of current information that appears select your county or city. Then click on "Browse more datasets"—the magnifying glass symbol beside the heading—and look down the page for the heading "Historical Population Counts."
3. On the U.S. Census website, use the approach shown in Explore the Web (next page) to access the American Community Survey. For your county and for your state find the distribution of income for all households. Graph the distributions using percentage for each income interval. Which is higher, county or state?
4. Identify at least five locational attributes that you believe are important in the location of a fast-food restaurant. Compare notes with someone in the industry such as a local restaurant manager or owner.
5. Perfect Population Projections Inc. (PPP) has entered into a contract with the city of Popular, Pennsylvania, to project the future population of the city. In recent years, Popular has become a desirable place to live and work, as indicated by the table on the next page.

   The contract states that PPP must project Popular's population for the year 2018 using both a simple linear method and an economic base analysis. The ratio of population to total employment is 2.0833.

   Your help is needed!

End-of-Chapter Features

Explore the Web

These boxes contain Internet activities that weave the Web, real data, and practical applications with concepts found in the chapters.

EXPLORE THE WEB

Choose two states of interest to you. Using your favorite search engine enter "*your state* statutes." The statutes of virtually all states are online and searchable, although all have different search formats. For the two states you have chosen, compare and contrast the statutes on issues such as:

1. Timeshare laws.
2. Laws pertaining to property obtained during marriage.
3. Laws regarding tenant–landlord relationships.
4. When mechanics' liens become effective (at contract signing? start of construction?).

Solutions to Concept Checks

Located at the end of each chapter, answers to each Concept Check question are provided to help the student understand the concepts and the reasoning behind them.

Solutions to Concept Checks

1. Three features of real property that introduce special challenges for the orderly transfer of ownership are:
   a. Real property interests can be very complex.
   b. Ownership has a very long history.
   c. All real property is bounded by other properties, so description errors always matter.
2. In a normal contract all parties must be legally competent, whereas in a deed only the grantor must be legally competent.
3. The three covenants that distinguish the "quality" of deeds are:
   a. Seizin, which promises that the grantor actually holds title.
   b. No encumbrances, which promises that there are no undisclosed encumbrances.
   c. Quiet enjoyment, which promises that no superior claim to title will appear.
4. Any property interest not being conveyed to the grantee is stated in the exceptions and reservations clause.
5. The highest-quality deed is the general warranty deed. A deed that businesses often use to convey real estate is the bargain and sale deed. A deed used to relinquish ambiguous or conflicting claims is the quitclaim deed.
6. When property is conveyed to heirs in accordance with a will, it is said to be conveyed testate or by devise, whereas when property is conveyed to heirs without a will it is said to be conveyed intestate or by descent.
7. Four events that can cause an owner to convey real property involuntarily through some type of deed are condemnation, bankruptcy, foreclosure, and divorce.
8. Two types of easements that are created without a deed, but with the knowledge of the grantor, are an implied easement and an easement by estoppel.
9. Real property can convey to a new owner without a deed, and without the consent or knowledge of the original owner. A fee simple interest being conveyed in this manner is said to convey by adverse possession, while an easement is said to convey by prescription.
10. All persons are presumed to be informed of legal documents placed in public records according to the doctrine of constructive notice.
11. Two types of legal notice that can provide evidence of a real property interest are constructive notice and actual notice.
12. The objective of a title search is to construct a chain of title.
13. The two main forms of evidence of title are abstract with attorney's opinion and a title insurance commitment.
14. A metes and bounds land description can be summarized or described as a point of beginning and a series of directed distances.
15. The oldest form of the three main land descriptions is metes and bounds. The most common form of urban land description is subdivision plat lot and block number. The most common rural land description in most states is the government rectangular.

Additional Readings & Websites

Each chapter is followed by a list of books and articles to which interested students can refer for additional information and research.

Additional Readings

The following books contain expanded examples and discussions of real estate valuation and appraisal:

Appraisal Institute. *The Appraisal of Real Estate,* 14th ed. Chicago: American Institute of Real Estate Appraisers, 2013.

Appraisal Institute. *2014–2015 Uniform Standards of Professional Practice*, Chicago: Appraisal Institute, 2014.

Betts, R. M. *Basic Real Estate Appraisal,* 6th ed. Florence, Ky: Cengage Learning, Inc., 2013.

Carr, D. H., J. A. Lawson, and J. C. Schultz, Jr. *Mastering Real Estate Appraisal,* Chicago: Dearborn Financial Publishing, Inc., 2003.

Fanning, S. F. *Market Analysis for Real Estate.* Chicago: Appraisal Institute, 2014.

Kane, M. S., M. R. Linne, and J. A. Johnson. *Practical Applications in Appraisal Valuation Modeling: Statistical Methods for Real Estate Practitioners.* Chicago: Appraisal Institute, 2004.

Lusht, Kenneth L. *Real Estate Valuation: Principles and Applications.* New York: McGraw-Hill, 1997.

Smith, H. C., L. C. Root, and J. D. Belloit. *Real Estate Appraisal,* 3rd ed. Upper Saddle River, NJ: Prentice Hall, 1995.

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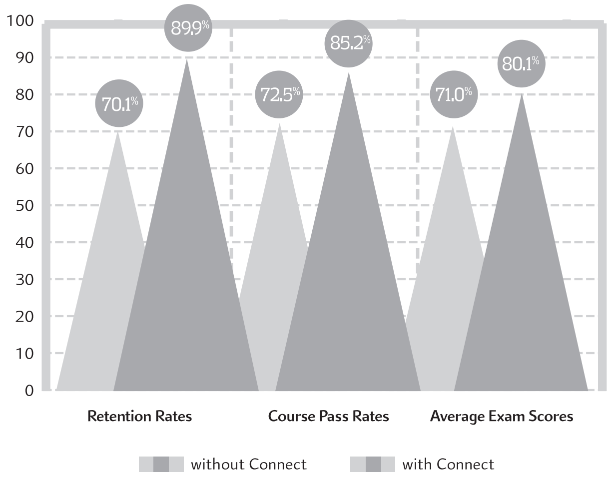

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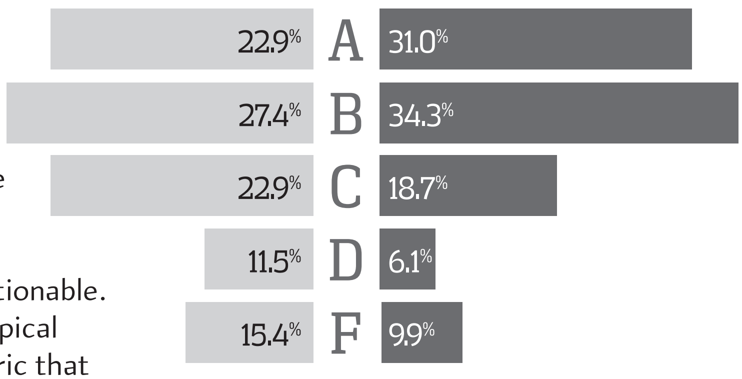

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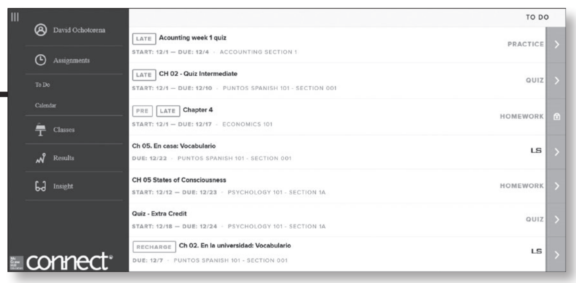

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Supplements

Instructor supplement files for this edition are available in *Connect.*

Instructor's Manual, *prepared by Benjamin Scheick, Villanova University*
Developed to clearly outline the chapter material as well as provide extra teaching support, the instructor's manual contains a number of valuable resources. Sections include: a chapter overview, a listing of chapter concepts, presentation strategies, and presentation outlines that reference the accompanying PowerPoint slides for easy classroom integration.

Solutions Manual, *prepared by Wayne R. Archer and David C. Ling, University of Florida*
This manual provides detailed answers to the end-of-chapter problems.

Test Bank, *prepared by Benjamin Scheick, Villanova University*
With hundreds of multiple-choice questions in Microsoft Word format, this Test Bank provides a variety of questions to meet any instructor's testing needs.

PowerPoint Presentation, *prepared by Wayne R. Archer and David C. Ling, University of Florida*
Prepared by the authors, more than 500 full-color slides of images and tables from the text, lecture outlines, and additional examples are available with this product.

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David C. Ling

Wayne R. Archer

Contents

Chapter 1

PART ONE

The Nature of Real Estate *and* Real Estate Markets

Wealth is not without its advantages and the case to the contrary, although it has often been made, has never proved widely persuasive.

—Galbraith, John Kenneth, "The Affluent Society" Houghton Mifflin

LEARNING OBJECTIVES

After reading this chapter you will be able to:

1. Provide three alternative definitions for the term *real estate.*
2. Discuss the distribution of U.S. land among the various uses to which it is put (e.g., developed land, federal land, forest land).
3. Discuss the value and importance of U.S. real estate compared with the values of other asset classes such as stocks and bonds.
4. Describe the role real estate plays in the portfolios of U.S. households.
5. Discuss the primary ways that real estate markets are different from the markets for assets that trade in well-developed public markets.

OUTLINE

Introduction

Real estate is the single largest component of wealth in our society. Because of its magnitude, it plays a key role in shaping the economic condition of individuals, families, and firms. It can substantially influence a family's ability to finance its education, health care, and other important needs. Changes in the value of real estate can dramatically affect the wealth of businesses and their capacity to grow.

Similarly, real estate resources can greatly affect a community's ability to attract and support profitable business activities, as well as to provide secure, convenient, and affordable living environments for its citizens. The adequacy of the housing stock, as well as the public infrastructure, including roads, bridges, dams, airports, schools, and parks, all affect the quality of life in a region.

Real estate, excluding primary residences, has been estimated to represent approximately 25 percent of the world's total economic wealth.[1] In addition, it is often viewed as an important symbol of strength, stability, and independence. Consider, for example, the symbolic importance of structures such as Saint Peter's Basilica in Rome to the Roman Catholic Church, the buildings of the Forbidden City in Beijing to the Chinese people, or the Burj Khalifa Tower, the tallest building in the world, to the citizens of the United Arab Emirates (see also Industry Issues 1-1). It is not surprising that real estate has been at the center of many regional disputes. It has been, and continues to be, a vital resource.

The prominence of real estate means that decisions about it also are important. For the individual, the firm, and the region, better decisions about the creation and use of real estate assets will bring greater productivity, greater wealth, and a better set of choices for life.

This book is about making informed decisions concerning real estate. We will show that virtually all decisions about the acquisition, disposition, or improvement of real estate depend on some assessment of the real estate's value. These decisions, which we refer to as investment decisions, involve comparing the resulting value of an action with its immediate cost. If the value exceeds the cost, the action should be pursued. The breadth and importance of these investment decisions in real estate are hard to overstate.

As a beginning, we first look at the different uses of the term *real estate.* This is followed by a discussion of land use in the United States and real estate's contribution to U.S. and household wealth. The chapter finishes with a discussion of the real estate market, its participants, and the characteristics that make real estate assets unique.

Real Estate: Some Basic Definitions

It is important at the outset that we define the term *real estate,* as well as some closely related terms used throughout this book. When people think of real estate, they often think of the homes in their community or the business of buying and selling houses. This is probably because the personal investment that most households make in their home represents their primary involvement in the real estate market. Of course, real estate includes not only our homes, but also our places of work, commerce, worship, government, education, recreation, and entertainment—our physical environments, natural and built. In addition, it includes a wide range of business and institutional activities associated with the development, purchase, use, and sale of land and buildings.

Real estate is property. The term **property** refers to anything that can be owned or possessed. Property can be a tangible asset or an intangible asset. **Tangible assets** are *physical* things, such as automobiles, clothing, land, or buildings. **Intangible assets** are *nonphysical* and include contractual rights (e.g., mortgage and lease agreements), financial claims (e.g., stocks and bonds), interests, patents, or trademarks.

The term *real estate* is used in three fundamental ways. First, its most common use is to identify the tangible assets of land and buildings. Second, it is used to denote the "bundle" of rights associated with the ownership and use of the physical assets. Finally, the term real estate may be used when referring to the industry or business activities related to the acquisition, operation, and disposition of the physical assets.

Real Estate: A Tangible Asset

When viewed purely as a tangible asset, **real estate** can be defined as the land and its permanent improvements. **Improvements *on* the land** include any fixed structures such as buildings, fences, walls, and decks. **Improvements *to* the land** include the components necessary to make the land suitable for building construction or other uses. These

1. *World Wealth Report 2014,* Capgemini Consulting, p. 19 (www.worldwealthrerport.com).

Skyscrapers: A Shift in Development Trends

More than a dozen super-tall buildings have been completed in the last decade (see listing below). They are in cities such as Hong Kong and Shanghai in China and Dubai on the Arabian Peninsula. Currently, the world's tallest building—Burj Khalifa at 2,717 feet—is in Dubai, UAE. Tall structures are as old as civilization, from the Pyramids in Egypt to the cathedrals of medieval Europe. Historians attribute this phenomenon in part to religious and spiritual motives—the desire to build to the sky. In modern times, however, the motive has been largely economic. The skyscraper era began in the United States in the late 19th century when the technology of steel-framed construction and safe elevators made it possible. It started in Chicago, although New York evolved into the leading skyscraper city during the 20th century. However, only six of the world's 40 tallest buildings are now located in the United States.

World's Tallest Buildings: 2014

2015 Rank	Building	City, Country	Height (feet)	Year Completed
1	Burj Khalifa	Dubai, UAE	2,717	2010
2	Shanghai Tower	Shanghai, China	2,074	2014
3	Makkah Clock Royal Tower	Makkah, Saudi Arabia	1,972	2012
4	One World Trade Center	New York City, US	1,776	2014
5	CTF Finance Centre	Guangzhou, China	1,739	2016
6	Taipei 101	Taipei, Taiwan	1,671	2004
7	Shanghai World Financial Center	Shanghai, China	1,614	2008
8	International Commerce Centre	Hong Kong, China	1,588	2010
9	Petronas Tower I	Kuala Lumpur, Malaysia	1,483	1998
10	Petronas Tower II	Kuala Lumpur, Malaysia	1,483	1998
11	Zifeng Tower	Nanjing, China	1,476	2009
12	Willis Tower	Chicago, US	1,450	1974
13	KK100	Shenzhen, China	1,449	2011
14	Guangzhou International Finance Center	Guangzhou, China	1,435	2010
15	Panyu Commercial Exhibition Center	Guangzhou, China	1,430	2001
16	432 Park Avenue	New York City, US	1,398	2015
17	Trump International Hotel and Tower	Chicago, US	1,388	2009
18	Jin Mao Tower	Shanghai, China	1,380	1998
19	Princess Tower	Dubai, UAE	1,356	2012
20	Two Int'l Fin. Ctr.	Hong Kong, China	1,352	2003
28	Empire State Bldg.	New York City, US	1,250	1931

Note: The Twin Towers of the World Trade Center in New York were 1,368 feet high when they were destroyed in 2001.

The rising value of land in densely settled cities has been the economic incentive to build up rather than out. The shift of skyscraper development to the Far East, however, has been a reflection of other trends, especially that region's emergence onto the global economic scene. The region's spectacular buildings are symbols of pride among nations that see themselves with new roles in the 21st century. A return on investment is less of an impediment in nations not wedded to market economics, such as China.

Source data: Emporis.com

improvements are often referred to as infrastructure and consist of the streets, walkways, storm water drainage systems, and other systems such as water, sewer, electric, and telephone utilities that may be required for land use. Subject to legal and practical limits, it should be noted that real estate includes not only the surface of the earth but also the area above and below the surface.

In practice the term **land** may include more than simply the earth; it may also include the improvements *to* the land. For example, the term *land* is often used to refer to a building site, or lot, and includes the infrastructure but not any structures. In contrast, land is also commonly used to refer to a larger area that does not include *any* improvements. These areas are sometimes identified as **raw land.** These distinctions become especially important when the value of land is considered.

Tangible assets include both real property and personal property. In professional practice and throughout this book, the terms **real property** and real estate are treated as interchangeable. **Personal property** refers to things that are movable and not permanently affixed to the land or structure. For example, a motor home is personal property, while a custom "site-built" house is real property. A mobile home may be real or personal property, depending on how it is secured to the land and legally recognized by the jurisdiction (e.g., city, county, or state) in which it is located.

✓ Concept Check

1.1 What distinguishes real property from personal property?

Real Estate: A Bundle of Rights

Although real estate is a tangible asset, it can also be viewed as a "bundle" of intangible rights associated with the ownership and use of the site and improvements. These rights are to the *services,* or benefits, that real estate provides its users. For example, real property provides owners with the rights to shelter, security, and privacy, as well as a location that facilitates business or residential activities. This concept of real property as a bundle of rights is extremely important to understanding real estate, and it is the subject of Chapter 2.

The bundle of property rights may be limited in numerous ways. It typically is reduced by state and local land use restrictions (see Chapter 4). Also, the rights can be divided and distributed among multiple owners and nonowners. For example, an apartment owner divides his or her full interest in the property when he or she leases an apartment unit and grants to a tenant the right to occupy and control access to the unit. Similarly, the tenant may be able to divide his or her interests by subleasing the apartment to another. As another example, an owner may purchase a property that has a utility access granted through a portion of the property. Thus, real estate can also be viewed as a bundle of rights inherent in the ownership of real property.

The value of a bundle of rights is a function of the property's physical, locational, and legal characteristics. The physical characteristics include the age, size, design, and construction quality of the structure, as well as the size, shape, and other natural features of the land. For residential property, the locational characteristics include convenience and access to places of employment, schools, shopping, health care facilities, and other places important to households. The location characteristics of commercial properties may involve visibility, access to customers, suppliers, and employees, or the availability of reliable data and communications infrastructure. The physical and location characteristics required to provide valuable real estate services vary significantly by property type.

✓ Concept Check

1.2 What is the difference between tangible and intangible assets? Does the ownership of "real estate" involve tangible assets, intangible assets, or both?

Career Opportunities in Real Estate

One of the exciting things about pursuing a career in real estate is that many options are available. Career paths can accommodate white-collar executives working for corporations, banks, advisory firms, or in the mortgage industry; analytical personality types working in real estate appraisal or consulting jobs; salespeople working in brokerage, leasing, or property management; or entrepreneurs interested in developing new properties or renovating historical buildings. Career opportunities also exist in the public sector with employers like the Department of Housing and Urban Development (HUD), the General Service Administration (GSA), the Bureau of Reclamation, and numerous county property tax assessors, to name just a few.

As you familiarize yourself with the material presented in this book, the type of work associated with the job opportunities listed above will become increasingly clear. However, it is important that you begin to read some of the real estate articles that appear in newspapers, magazines, and journals. You should also begin searching for and bookmarking interesting real estate websites. To get started, we suggest you examine the career information available on the website of the University of Cincinnati's Real Estate Program (www.business.uc.edu/realestate/careerpaths). The National Association of Realtors also maintains an informative site on real estate careers (www.realtor.org/realtor.org.nsf/pages/careers). You should also visit www.real-jobs.com, where you can post your resume, search for real estate jobs, and read descriptions of available job opportunities—all free of charge.

Real Estate: An Industry and Profession

www.realtor.org

Website of the National Association of Realtors; provides information about brokerage as well as other real estate professions.

The term *real estate* frequently is also used to refer to the industry activities associated with evaluating, producing, acquiring, managing, and selling real property assets. Real estate professions vary widely and include (1) real estate brokerage, leasing, and property management services; (2) appraisal and consulting services; (3) site selection, acquisition, and property development; (4) construction; (5) mortgage finance and securitization; (6) corporate and institutional real estate investment; and (7) government activities such as planning, land use regulation, environmental protection, and property taxation.

Real estate business opportunities in areas such as brokerage, leasing, appraisal, construction, and consulting often offer entrepreneurial-minded individuals the ability to observe and understand local real estate markets in addition to receiving above average compensation. These types of positions allow individuals the opportunity to have their fingers on the "pulse" of the market, often enabling them to directly participate in real estate investment activities.

Real estate professionals involved in a wide range of activities can be found in consulting firms, insurance companies, financial institutions, real estate investment firms, pension fund advisory firms, and non-real estate firms that use real estate in their business. Companies such as restaurant groups and retailers seeking to expand often require the services of "in-house" site acquisition analysts, construction managers, and facility managers.

Finally, the activities of state and federal government units, such as departments of transportation, commerce, planning, housing, and environmental protection, and local government agencies such as planning and property tax offices necessitate the employment of real estate research analysts and professionals.

Real Estate and the Economy

www.census.gov

Numerous construction statistics.

www.nahb.org

Website of the National Association of Home Builders; contains extensive information on the housing industry.

Real estate typically generates over 25 percent of U.S. gross domestic product (GDP), creates jobs for nearly 9 million Americans, and is the source of nearly 70 percent of local government revenues.[2] The total contribution of the housing sector alone averages 17 to 18 percent of GDP.[3] Because of the significant influence of real estate on the nation's

2. Statistics about the real estate industry, Real Estate Roundtable, www.rer.org.

3. Robert Dietz, "Housing's Share of GDP: 15.5% for the Second Quarter," *Eye on Housing*, National Association of Homebuilders, September 26, 2014.

economy, investors on Wall Street closely monitor real estate construction, construction permit activity, and real estate sales figures. Housing starts and sales are widely viewed as leading economic indicators.

Land Use in the United States

The United States represents about 6 percent of the Earth's land area, or approximately 2.3 billion acres (3.5 million square miles). To give a sense of scale to an acre, a football field, not including the end zone areas, is slightly more than one acre (1.1 acres). More precisely, an **acre** is defined as 43,560 square feet; there are 640 acres in one square mile. The size of a single-family residential lot is typically between one-fifth and four-fifths of an acre.

It is estimated that the contiguous 48 states comprise 1.9 billion acres and that 71 percent of this acreage is in nonfederal, rural land uses. According to the 2010 National Resources Inventory Report, developed land represents approximately 6 percent of the land in the continental United States (see Exhibit 1-1). Developed land consists of residential, industrial, commercial, and institutional land uses, including roads, railways, rights-of-ways, construction sites, utility sites, sanitary landfills, and other land uses of similar purpose. Much of the undeveloped land in the United States is divided in approximately equal shares among water areas and federal lands (23 percent), crop land and Conservation Reserve Program (CRP) land (20 percent), range land (21 percent), and forest land (21 percent).[4] Pastureland and other rural land comprise 6 percent and 3 percent, respectively, of the 1.9 billion acres.

www.nrcs.usda.gov

U.S. Department of Agriculture resources include comprehensive information on trends for land use and development.

Overall, land use changes from 1982 to 2010 have been relatively minor. Most notable, however, is the increase of developed land from 73 million acres in 1982 to 113 million acres in 2010. Although only a small portion of the total land area in the United States, the amount of developed land has increased 55 percent since 1982.

Real Estate and U.S. Wealth

It is hard to overstate the size and variety of capital commitments to real estate. We estimate that the total market value of real estate was approximately $30.8 trillion in the fourth quarter of 2015. This estimate includes owner-occupied housing, investible commercial real estate, and land, but excludes real estate held by non-real estate corporations

Exhibit 1-1 Land Use and Land Use Changes in the United States

Land Use	1982 Land use (mil. of acres)	% of Total	2010 Land use (mil. of acres)	% of Total
Developed land	73	4	113	6
Water areas and federal land	448	23	453	23
Crop land	420	22	361	19
CRP land			27	1
Pasture land	131	7	120	6
Range land	416	21	409	21
Forest land	403	21	409	21
Other rural land	48	2	51	3
Totals	1,938	100	1,943	100

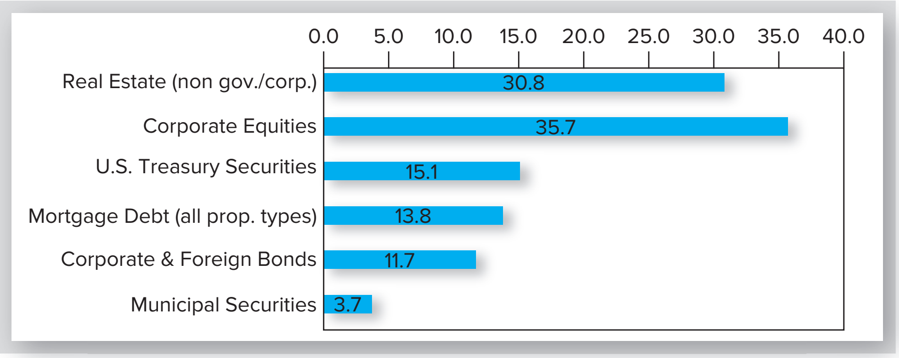
Source of data: 2010 U.S. Department of Agriculture

4. CRP land is a federal program established under the Food Security Act of 1985 to assist private landowners in converting highly erodible crop land to vegetative cover.

www.bea.gov

U.S. Department of Commerce site contains vast amounts of national and international economic data.

Exhibit 1-2 Aggregate Market Values of Selected Asset Categories (in $Trillions)—2015Q4



Note: Real estate (nongovernment) includes developed land. It does not include farmland, water areas, and other rural lands. It also does not include real estate owned by non-real estate corporations.

Source of data: 2016 U.S. Federal Reserve and 2011 CBRE. Flow of Funds Accounts of the United States, Federal Reserve (March 10, September 2016 various tables). The value of nongovernment and noncorporate real estate is equal to the value of owner-occupied housing from the Fed Flow of Funds Accounts, plus the value of investible commercial real estate from CBRE Global.

(such as McDonald's and Ford) and real estate owned by various governmental agencies. Real estate constitutes the second largest asset class in the United States, as shown in Exhibit 1-2. In comparison, the total value of publicly traded (listed) corporate equities (i.e., stocks) in late 2015 was approximately $35.7 trillion; the value of outstanding real estate mortgage debt was approximately $13.8 trillion. This is larger than the value of corporate and foreign bonds and just slightly less than the outstanding value of U.S. Treasury securities.

As reported by the U.S. Federal Reserve Board, housing represents the single largest asset category in the net worth portfolios of households (see Exhibit 1-3). On average, it represents approximately 22 percent of U.S. household wealth. This is similar to household holdings of corporate stock and mutual fund shares. Housing's 22 percent share in the typical household's portfolio dominates deposits and money market funds (11 percent) and equity invested in noncorporate businesses (11 percent). Moreover, the 22 percent housing share understates the importance of real estate for some households, because direct investments in private commercial real estate assets (e.g., apartments, office buildings) are not included as household assets in Exhibit 1-3. Finally, note that 65 percent of household liabilities are home mortgages.

By the fourth quarter of 2015, U.S. households had approximately $12.5 trillion in housing equity (market value minus mortgage debt). This represents, on average, about 57 percent of the value of their real estate and about 14 percent of their net worth. As a percentage of total household wealth, housing increased slightly during the early 2000s as corporate stock values declined. Although the stock market performed better during the 2003 to 2005 period, the housing sector continued to outperform stocks and bonds. This trend can be seen in Exhibit 1-4. However, in 2006 U.S. housing prices began a precipitous decline, which reduced the value of housing assets as a percentage of total household assets. Since 2010 housing has represented about 21 percent of total household assets.

Real Estate Markets and Participants

www.federalreserve.gov

U.S. Federal Reserve System site contains extensive information on the U.S. banking system and economy.

In the United States and many other countries, market competition serves to distribute most resources (i.e., goods, services, and capital) among the various users. The market's forces of demand and supply interact within the economy to determine the price at which goods, capital, and services are exchanged and to whom they are allocated. Real estate resources are allocated among its various users—individuals, households, businesses, and institutions—in the real

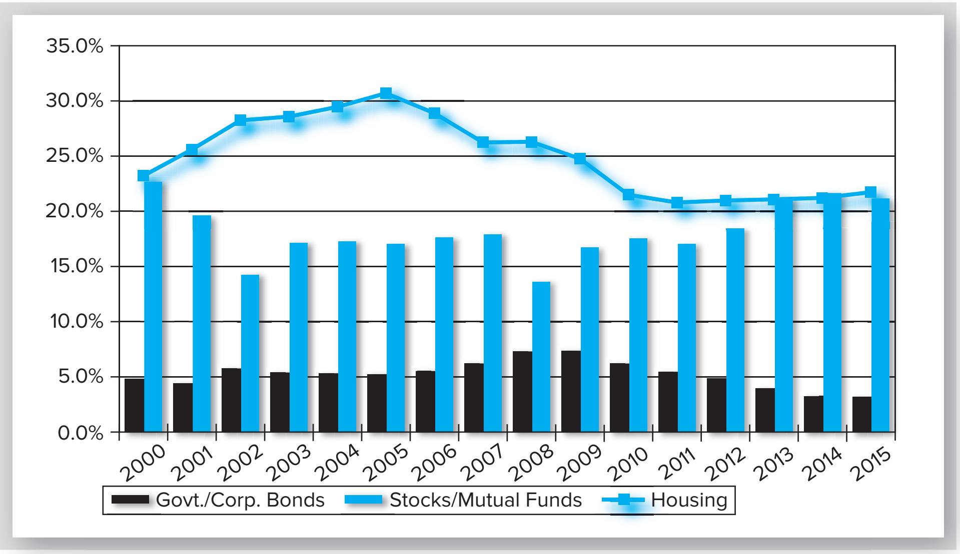
Exhibit 1-3 U.S. Household Wealth*

Asset/Liability category	2015Q4 ($ in billions)	% of Total
Tangible assets		
Housing	$22,029	22
Consumer durables	5,240	5
Nonprofit tangible assets	3,709	4
Financial assets		
Deposits & money market funds	10,693	11
Government & corporate bonds	3,231	3
Stocks & mutual fund shares	21,430	21
Pension assets (excluding stocks)	20,972	21
Other securities	3,262	3
Noncorporate business equity	10,739	11
Total assets	101,306	
Home mortgages (including lines of credit)	9,491	65
Other debt	5,019	35
Total liabilities	14,510	100
Net worth	$86,796	
Owner's equity in real estate	$12,539	
Owner's equity as a percent of housing and net worth	57%	14%

*This sector consists of individual households and nonprofit organizations. Nonprofits account for about 6 percent of the sector's financial assets.

Source of data: 2016 U.S. Federal Reserve. Flow of Funds Accounts of the United States, Federal Reserve (March 10, 2016, Table B.100 and L.100) www.federalreserve.gov.

Exhibit 1-4 Selected Household Assets as a Percentage of Total Assets



Source of data: U.S. Federal Reserve

Concept Check

1.3 According to Exhibit 1-3, U.S. households own $16.1 trillion in housing assets. Assume this amount does not include rental real estate. On average, what percent of the value of the U.S. housing stock is financed with home mortgage debt?

estate market. Real estate values derive from the interaction of three different sectors, or markets, in the economy: local user markets (the "real world"), capital markets (the "financial world"), and property markets. A brief discussion of each of these sectors is presented below.

User, Capital, and Property Markets

Real estate **user markets** are characterized by competition among users for physical locations and space. As we will explain in Chapter 5, this competition determines who gains the use of each parcel of land and how much they must bid for its use. The primary participants in user markets are the potential occupants, both owner occupants and tenants, or renters. Ultimately, the demand for real estate derives from the need that these individuals, firms, and institutions have for convenient access to other locations, as well as for shelter to accommodate their activities. Based on the financial positions of households and firms and their wants and needs, they decide either to own and occupy property or to lease property from others. About two-thirds of U.S. households own their home, and many businesses own their real estate, while most commercial real estate located in the central business districts of U.S. cities is leased.

www.bloomberg.com

Private firm that provides data on interest rates and bond yields.

The **capital markets** serve to allocate financial resources among households and firms requiring funds. Participants in the capital markets invest in stocks, bonds, mutual funds, private business enterprises, mortgage contracts, real estate, and other opportunities with the expectation of receiving a financial return on their investment. Funds flow from investors to the investment opportunities yielding the highest expected return (i.e., the greatest benefit), considering risk. Thus, real estate competes for scarce investment capital with a diverse menu of other investment opportunities available in the capital market.

The capital markets can be divided into two broad categories: equity interests and debt interests. We commonly view the equity participants as the "owners of the real estate." Equity investors in real estate expect to receive a return on their investment through the collection of rent and through price appreciation.[5] The debt participants, the "lenders," hold claims to the interest on borrowed funds that are secured by individuals, businesses, and property. The equity and debt interests can each be divided further into private and public market components. The primary participants in each of the four capital market categories—private equity, public equity, private debt, and public debt—are outlined in Exhibit 1-5. (The capital sources of real estate finance are discussed further in Chapters 11 and 17.)

Finally, **property markets** determine the required property-specific investment returns, property values, capitalization rates, and construction feasibility. The **capitalization rate**, or the ratio of a property's annual net income from rental operations to its value, is a fundamental pricing metric in commercial real estate markets.

Concept Check

1.4 Investible assets based on real estate are traded in each of the four capital market quadrants. List the four quadrants and at least one real estate asset that trades in each.

5. Investors who occupy their own properties "receive" the rent they would have paid to others had the property been leased from another investor. This is termed "implicit" rent.