Making Automobile and Housing Decisions

Chapter 5

How Will This Affect Me?

- A home is typically the largest single investment you'll ever make, and a car is usually the second largest. As a result, the decisions to buy and finance these assets are important, personal, and complicated. This chapter presents frameworks for deciding when to buy a first home, how to finance a home, and when to rent rather than to purchase a home. It also discusses the best way to go about buying a new or a used car and how to decide between leasing and purchasing a car. Given the large costs of such assets, the frameworks provided in this chapter can significantly improve your short- and long-term financial well-being. After reading this chapter you should be able to make more informed decisions in purchasing and financing your home and car.

Learning Goals

- **LG1** Design a plan to research and select a new or used automobile.
- **LG2** Decide whether to buy or lease a car.
- **LG3** Identify housing alternatives, assess the rental option, and perform a rent-or-buy analysis.
- **LG4** Evaluate the benefits and costs of homeownership and estimate how much you can afford to pay for a home.
- **LG5** Describe the home-buying process.
- **LG6** Choose mortgage financing that meets your needs.

Financial Facts or Fantasies?

- *For most people, an automobile will be their second largest purchase.*
- *The most popular form of single-family housing is the condominium*
- *The closing costs on a home are rather insignificant and seldom amount to more than a few hundred dollars.*
- *The amount of money you earn has a lot to do with the amount of money you can borrow.*
- *Mortgage insurance guarantees the lender that the loan will be paid off in the event of the borrower's death.*
- *In an adjustable-rate mortgage, payment will change periodically, along with prevailing interest rates.*

Basic Guidelines to Wise Purchasing Decisions

- Research your purchase
- Select the best item for your needs and preferences
- Buy the item after negotiating the best price and arranging financing on favorable terms.
- Maintain your purchase and make necessary repairs promptly

- See Exhibit 5.1

Buying a Car -- Research

- Visit sites such as
- Kiplinger's Personal Finance also has an online Find the Right Car Tool at http://www.kiplinger.com (go to the "Spending section," then "Car Buying Guide").
- *Consumer Reports* New & Used Car Price Service (for more information, see http://www.consumerreports.org), which provides the list price and dealer cost on a new car, and its available options.
- Also various company sites have information. For example
  - Ford Motor Company is online at http://www.ford.com
  - Toyota is at http://www.toyota.com

Buying a Car – Select Car

- Affordability, consider Down Payment [not from emergency fund] and Monthly Payment—Payment should not be more than 20% of monthly net income
- Operating costs, increase with age of car. May want to consider Hybrid, combination of gas and electric
- New, Used or "Nearly New"
  - Buying Used may allow luxury car
  - Consider buying a car two years old and replacing in two years – Buying and selling every two years is not for all
- Size and Body Style. Babies do not fit in a two seat sport car

Purchasing the Car

- Drive the car and complete your evaluation of the car before you talk price
- Sticker Price is the suggested retail price
- Know the dealer's cost by searching Edmunds and Kelley Blue Book
- Decide your price – Mark-up 3-4 percent for car less than $20,000; 6-7 percent for higher price cars
- Buying Services are available. They could do the following:
  - Have arrangement to sell cars at a predetermined price,
  - provide you with bids from several local dealers, or
  - place an order with the factory

Leasing a Car

- In 2013, 30 percent of registered cars were leased. More so today.
- Most leases are closed-end leases. At end of lease, simply return the car and if not abused or over the mileage allowance, no additional cost.
- Lease payment based on four variables:
  - Capitalized cost, i.e. the price of the car
  - Forecast residual value of car at end of lease
  - Money factor, similar to interest rate on car loan
  - Lease Term

Leasing a Car

- Lease terms are typically two to four years
- Lessee is responsible for insuring and maintaining the car
- Mileage allowance about 12,000 miles with significant rate for miles used over the allowance
- At end of lease may have a purchase option
- Whether to exercise the purchase option or not depends upon the residual value of the car in lease. If lower than market value, purchase; otherwise, do not purchase.

Worksheet 5.1

- **LEASE**
- Name
- 1 Initial payment:
- a. Down payment (capital cost reduction):
- b. Security deposit:
- 2 Term of lease and loan (years)*
- 3 Term of lease and loan (months) (Item 2 * 12)
- 4 Monthly lease payment
- 5 Total payments over term of lease (Item 3 * Item 4)
- 6 Interest rate earned on savings (in decimal form)
- 7 Opportunity cost of initial payment (Item 1* Item 2 * Item 6)
- 8 Payment/refund for market value adjustment at end of lease
- ($0 for closed-end leases) and/or estimated end-of-term charges
- **9 Total cost of leasing (Item 1a + Item 5 + Item 7 + Item 8)**

Worksheet 5.1

- **PURCHASE**
- the *purchase alternative is preferred.*
- 10 Purchase price
- 11 Down payment
- 12 Sales tax rate (in decimal form)
- 13 Sales tax (Item 10 * Item 12)
- 14 Monthly loan payment (Terms: ___________, ____ months, __%)
- 15 Total payments over term of loan (Item 3 * Item 14)
- 16 Opportunity cost of down payment (Item 2 * Item 6 * Item 11)
- 17 Estimated value of car at end of loan
- **18 Total cost of purchasing (Item 11 + Item 13 + Item 15+ Item 16 - Item 17)**
- **Decision: Item 9 less than item 19, lease; otherwise purchase.**

Housing: Rent or Buy?

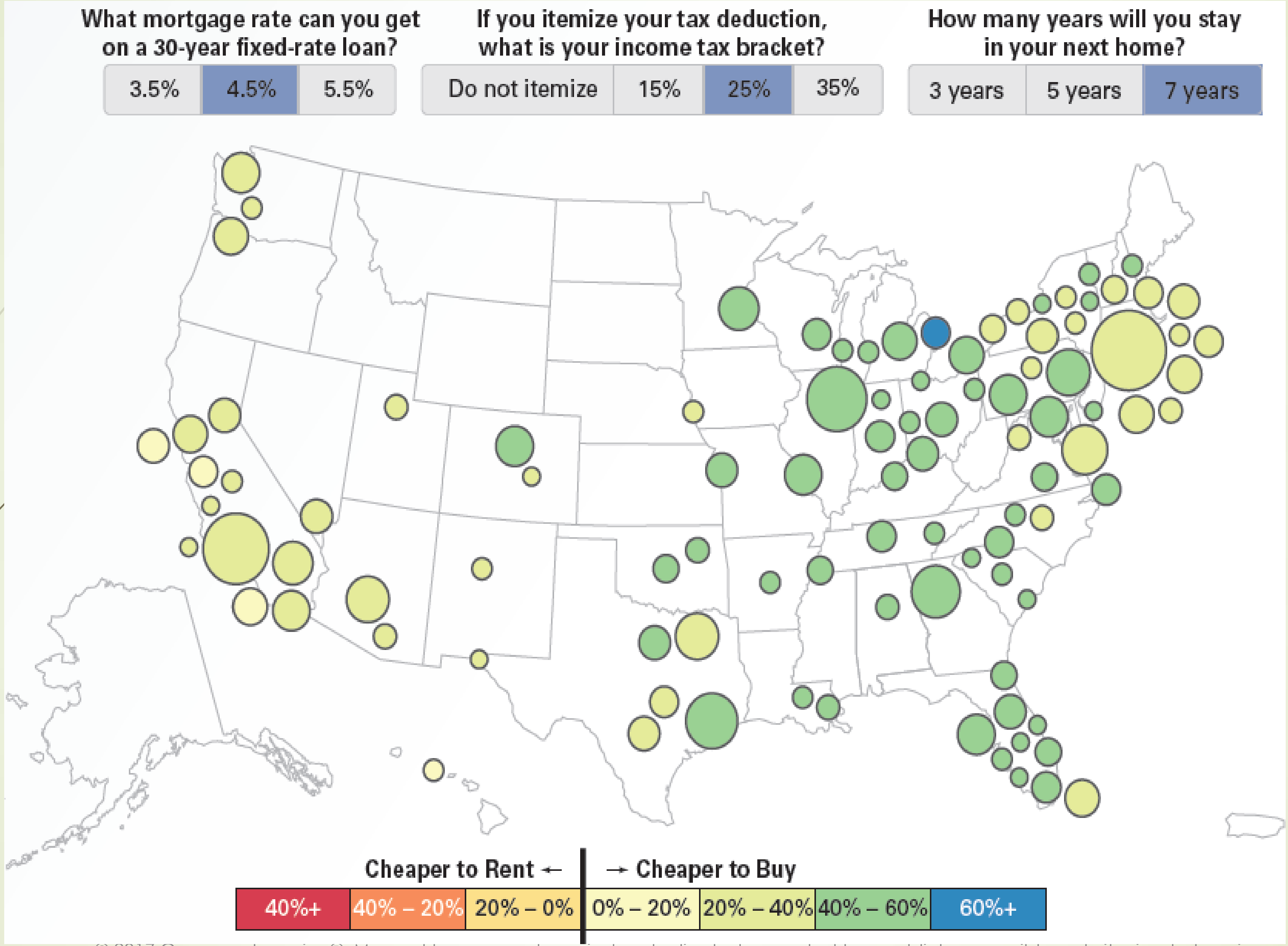
- Types of Housing:
- Single Family
- Condominiums
- Cooperative apartments
- Rental Units

Rental Option

- Why rent?
- Do not have funds for a down payment
- Unsettled in their jobs and family status
- Do not want the responsibility of maintenance of home
- Current prices and mortgage rates unattractive
- Can invest down payment and earn better return than owning a house

Rent Ratio

- The ratio of the average house price to the average annual rent, which provides insight into the relative attractiveness of buying a house versus renting in a given area of potential interest.
- Exhibit 5.6 reports Relative Attractiveness of Renting versus Buying a House from Trulia.com. Exhibit follows.


What mortgage rate can you get on a 30-year fixed-rate loan?
3.5%
4.5%
5.5%
If you itemize your tax deduction, what is your income tax bracket?
Do not itemize
15%
25%
35%
How many years will you stay in your next home?
3 years
5 years
7 years
Cheaper to Rent
Cheaper to Buy
40%+
40% – 20%
20% – 0%
0% – 20%
20% – 40%
40% – 60%
60%+

Worksheet 5.2 Rent or Buy Cost Comparison

A. COST OF RENTING

- 1. Annual rental costs
- (12 * monthly rental rate of **$** _______)
- 2. Renter's insurance
- 3. Opportunity cost of security deposit: **$** _____ after-tax savings rate ______
- Total cost of renting (line A.1 + line A.2 + line A.3)

B. Cost of Buying

- 1. Annual mortgage payments (Terms. (12 * monthly mortgage payment of $ _____)
- 2. Property taxes (___% of price of home)
- 3. Homeowner's insurance (___% of price of home)
- 4. Maintenance (___% of price of home)
- 5. After-tax cost of interest on down payment and closing costs ($_________ _____% after-tax rate of return)
- 6. Total costs (sum of lines B.1 through B.5)
- Less:
- 7. Principal reduction in loan balance (see note below)
- 8. Tax savings due to interest deductions (Interest portion of mortgage payments $_________ tax rate of ____%)
- 9. Tax savings due to property tax deductions* (line B.2 * tax rate of ____%)
- 10. Total deductions (sum of lines B.7 through B.9)
- 11. Annual after-tax cost of homeownership (line B.6 - line B.10)
- 12. Estimated annual appreciation in value of home (___% of price of home)
- Total cost of buying (line B.11 - line B.12)

Benefits of Owning a Home

- Tax savings from deducting property taxes and mortgage interest, assuming you itemize deductions
- Inflation hedge: Build wealth as home appreciates in value
- Provides a stable place to live, less likely to move if own home

Cost of Homeownership

- Down Payment
- Loan-to-value ratio, if 80% then down payment 20%
- May use fund from IRA for part of down payment on first home
- If down payment less than 20% may be required to obtain private mortgage insurance (PMI) which protects the lender if borrower defaults on the loan. PMI ends when mortgage is paid down to 78 percent of the home's original value.
- Mortgage Points are fees charged by lenders at the time that they grant a mortgage loan. Can reduce interest.
- Closing costs, see Exhibit 5.7

Computing Mortgage Payment

- Excel: Use the PMT function =PMT(rate, term, principal)
- Using financial calculator:

Inputs	Functions
Amount 180000	PV
Term in months 360	N
Rate 6	divide
12	=
	I
	CPT
	PMT gives solution

Affordability

- How large a monthly mortgage payment can you afford given your budget?
- Customary ratios for conventional mortgage stipulate that payment cannot exceed 30 percent of borrower's gross income.

- Additional costs include property taxes and insurance
- Also have to factor in maintenance and operating costs, including utility costs.

Worksheet 5.3 Home Affordability Analysis

- Worksheet computes
- Line 13 Maximum loan based on monthly income
- Maximum purchase price based on available monthly income
- Line 15 Maximum purchase price based on down payment
- **Maximum home purchase price, lower of Line 13 or Line 15**

Home-Buying Process

- Research the market, may use agent to gather information
- Conventional wisdom, using an agent does not add to the cost of purchasing a home. The seller bears that cost.
- Agents using a Multiple Listing Service have access to the entire market
- Buyer could contract with an agent to represent their interest
- Prequalifying for a mortgage speeds the process
- All real estate transactions must have a written contract. Any negotiated agreement must be in the contract or it is not enforceable.
- Title check will disclose any liens or deed covenants
- Exhibit 5.11 gives Effective Home-Buying Strategies

Mortgages

- Mortgage bankers initially funds loan with bank's money, later sells loan
- Mortgage brokers gather all pertinent information and then finds lenders willing to grant the mortgage with the best terms. Brokers receive a commission for bringing the loan to the lender.
- Information about rates and availability of loans found on the various internet sites

Types of Mortgages

- Fixed-Rate Mortgages, most common is 30-years, but 15-year loan becoming more popular. Normally there is no penalty for early payment of loan, thus you can pay off a 30-year mortgage in 15 years if you wish.
- Adjustable-Rate Mortgages, rate is fixed for a period (say six months or five years) after which the rate may be changed for another term.
- Rate will be adjusted based upon an index rate
- Rates have a maximum stated as a margin between initial rate and maximum rate
- Payment may also have a cap that limits how much the payment may be increased

Negative Amortization

- When the principal balance on a mortgage loan increases because the monthly loan payment is lower than the amount of monthly interest being charged; some ARMs are subject to this undesirable condition.

Mortgages

- Conventional mortgage: A mortgage offered by a lender who assumes all the risk of loss; typically requires a down payment of at least 20 percent of the value of the mortgaged property.
- FHA mortgage insurance A program under which the Federal Housing Administration (FHA)offers lenders mortgage insurance on loans having a high loan-to-value ratio; Its intent is to encourage loans to home buyers who have very little money available for a down payment and closing costs.
- VA loan guarantee A guarantee offered by the U.S. Veterans Administration to lenders who make qualified mortgage loans to eligible veterans of the U.S. Armed Forces and their unmarried surviving spouses.

Refinancing Mortgages

- If rates drop by about 2 percent, you should compare the rate savings with the refinancing costs. The savings are greater than the costs, refinance.
- See Worksheet 5.4 for a systematic analysis of refinancing.