Chapter 7

Single-Family Housing: Pricing, Investment, and Tax Considerations

In previous chapters, we covered the nature of real estate assets, property rights, a broad range of fixed and adjustable rate mortgage loans, and the loan underwriting process. In this chapter, we focus on single-family residential housing as an investment. In doing so, we provide an analysis of homeownership as an alternative to renting, the characteristics of supply and demand for housing, pricing, federal income tax treatment for homeowners, and investing in "distressed" properties. All of the topics in this chapter are essential for prospective investors in housing.

Overview

Homeownership has long been considered to be an important goal for many individuals in the United States. In addition to providing shelter, homeownership, in the view of many, is an important investment vehicle for personal wealth accumulation. Some have come to think of housing as both a consumption good (shelter) and an investment. As our economy has developed, many institutions have evolved to support the growth in the housing industry. These include financial institutions, developers and builders, mortgage lenders, real estate brokers, the property insurance industry, and many other service providers. Indeed, it has been estimated that housing and related services account for as much as 15 percent of total U.S. output. In addition, federal income tax policy has long favored homeownership by providing for the deductibility of mortgage interest and, under certain conditions, excluding capital gains from taxation when properties are sold. These tax incentives stem from the belief by members of Congress that homeownership encourages stronger social networks, better educational achievement rates, and lower crime rates. Consequently, they have continued to provide special tax incentives to encourage homeownership. What follows is a more detailed examination of factors that influence housing as an investment.

House Prices

One element related to housing as an investment is the rate of price appreciation (or depreciation) and what drives it. To begin our discussion, it is useful to review a list of important influences on price appreciation, as shown in Exhibit 7–1. Data for all of these concepts are

EXHIBIT 7–1
Economic Influences on Housing Demand

Increases in	Direction of Impact on Demand
(1) Population growth	+
(2) Household formations	+
(3) Employment	+
(4) Household income	+
(5) Interest rates	−
(6) Federal income tax benefits	+
(7) Cost of renting housing	+

available at the metropolitan statistical area (MSA) level for each metro area (see website references for the U.S. Census Bureau, U.S. Bureau of Labor Statistics and U.S. Department of Commerce/Bureau of Economic Analysis at the end of this chapter). The right-hand column in Exhibit 7–1 shows the direction of influence, holding all else constant, that each variable should have on housing demand. These influences should be interpreted based on *increases* in each variable. For example, increases in population, households, income, and employment, when considered individually, should affect the demand for housing positively. However, increases in interest rates would have a negative effect. Increases in federal income tax rates would have a negative effect. And if the cost of rental housing increases relative to house prices, demand should increase. Obviously, if the change for any of the variables in the above list were in the opposite direction, the impact on housing would be the reverse of what we have discussed (e.g., a decline in interest rates would have a positive effect on housing).

Finally, when attempting to forecast a trend in the above variables, we see two questions of fundamental importance: (1) What drives each variable? (2) Why do changes in the variables *vary by city?* In recent years, population growth has been greatly affected by immigration. It has been estimated that immigration accounted for as much as one-third of recent increases in population. It is also important to note that the growth rate in households tend to parallel population increases. As already indicated, households tend to form as younger individuals leave home, get married, and so on.

Social trends have also tended to increase the number of households. These include delays in the average age at which marriages are occurring, the increasing number of divorces, and the number of people never marrying. These factors result in greater demand for separate, or individual, housing units. Increases in the average life expectancy have also resulted in households occupying housing units for longer periods of time. This, in turn, has reduced "housing turnover," or the inventory of existing housing units that would otherwise be available to younger household groups.

Other important industry data indicate that: (1) first-time home purchasers tend to be 28–32 years of age, (2) households tend to sell their first home and purchase a different home (upgrade) by age 40, and (3) potential purchases of vacation or second homes usually occur by age 48–52. Retirement homes are usually considered when households reach 60 years of age or older.

Income and Employment

While growth in population and households is a necessary condition for housing demand, employment is also an important driver of housing affordability. Recent data indicate that U.S. employment growth has averaged about 1 percent annually during the past 10 years. Sunbelt cities have enjoyed the greatest growth in employment. The share of the population employed also has increased as more women have joined the labor force. Many of these women represent single-parent households, which reinforces the demand for more housing units. Although we will discuss the economic base of cities later in the chapter, we should point out that there are differences in the nature of employment opportunities

and the types of businesses that locate in various regions of the United States. The relative desirability of regions that attract businesses (1) affects the ability of households to earn income that they use to acquire housing and (2) also affects house prices. An important item to remember is that the quality and nature of employment and the salaries earned by the labor force also vary by metro area. So, while employment growth is important, the quality of jobs and the wages and salaries earned in these occupations are also important. There is a very strong association between house price appreciation and income/employment growth. Therefore, when viewing housing as an investment, we must remember that, for cities under consideration, basic research concerning these trends is very important.

Interest Rates

Many factors determine interest rates. The more important factors include the supply and demand for loanable funds as the economy expands and contracts and Federal Reserve policy in the course of its management of the monetary system. The Federal Reserve generally has a significant effect on interest rates, which in turn affects housing demand. Because real estate has a "high debt capacity" and many loans are made as a large percentage of property value, monthly payments may rise or fall substantially, depending on changes in interest rates. The effects of interest rate changes also tend to spill over into many areas of the housing industry. These areas include construction, land development, financing, brokerage, inspections, appraisals, and other housing-related service businesses. Because of these far-reaching influences, housing is a very important sector of the economy.

As indicated in Exhibit 7–1, *holding all else constant, increases* in interest rates tend to have a *negative* influence on home ownership. This relationship is somewhat intuitive because as interest rates increase, this is analogous to raising the cost on borrowed funds, thereby raising the cost of financing home ownership. Conversely, as interest rates *fall*, the effects on home ownership tend to be *positive*.

While the effects of interest rates on demand are relatively clear, the *magnitude* of the impact has become more complex to understand in recent years because of a greater variety of mortgage loan options. As discussed in Chapters 4 and 5, these options are no longer limited to fixed interest rate mortgages (FRMs). Adjustable rate mortgage (ARM) loans and many other types of loans now provide for different rates, loan amortization periods, and other features. In addition, some of the other terms of lending, such as financing fees, prepayment options, and the rigor with which lenders apply underwriting standards, tend to reinforce the direction of mortgage interest rates. For example, during periods of appreciating house prices and/or low interest rates, lenders may tend to be more flexible on such things as credit scores when underwriting. The impact of changes in lender underwriting standards is difficult to predict. However, more restrictive underwriting usually occurs when interest rates are rising and these standards usually become more lenient when interest rates are declining. So changes in underwriting standards usually tend to reinforce effects that the direction of interest rates have on homeownership.

Renting versus Owning

Another important consideration when analyzing the demand for home ownership investment is the cost of renting. If individuals find that renting is more cost-effective than owning, home ownership may not always be a better investment. What follows is a comparative analysis of the relative costs of owning versus renting the *same residence*. The goal of this exercise is to compile all cash flows associated with each form of occupancy, and then calculate the rate of return that will be earned on the funds used to make an equity investment (down payment) if the property is purchased. Alternatively, it is this rate of return that an investor would have to earn on the "down payment" saved if renting is chosen, to make renting the financial equivalent of owning.

EXHIBIT 7–2 Rent versus Own Analysis of a Personal Residence

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1 Property Information		Loan Information	
Purchase price	$150,000	Loan-to-value ratio	80.00%
Initial rent	$12,000	Loan amount	$120,000
Rental growth rate	2.00%	Interest rate	7.00%
Property growth rate	2.00%	Loan term	30 years
Insurance	$500.00	Payments	12 per year
Maintenance	$500.00	Annual debt service (payment)	$9,580
Expense growth	2.00%	Annual loan constant	7.98%
Marginal tax rate	28.00%	Equity investment/down payment	$30,000
Property tax as % of value	1.50%	Selling expenses	7.00%

2. Annual Loan Schedule

End of year	0	1	2	3	4	5
Mo. Payments. 12		$ 9,580	$ 9,580	$ 9,580	$ 9,580	$ 9,580
Balance		118,781	117,474	116,072	114,569	112,958
Interest (year)		8,361	8,273	8,179	8,077	7,969
Amortization (year)		1,219	1,307	1,402	1,503	1,612

3. Property Data

Property value	$150,000	$153,000	$156,060	$159,181	$166,365	$165,612
Rents		12,000	12,240	12,485	12,734	12,989

The framework for making a comparison between renting and owning is presented in the example summarized in Exhibit 7–2. In this example, we have a property that could be *rented* for $12,000 per year ($1,000 per month) or *purchased* for $150,000 with $30,000 down and financed with a fully amortizing mortgage loan of $120,000 at 7 percent interest for 30 years. Other costs associated with *owning* include maintenance, insurance, and property taxes. In our example, these expenses would not have to be paid if renting is chosen. All other expenses would have to be paid regardless of whether the property is owned or rented, such as utilities, and so on. Because they offset, they do not have to be included in our analysis. Other *assumptions* include (1) a federal income tax rate of 28 percent, (2) escalation in expenses, rents, and property value at 2 percent per year, and (3) a five-year period of analysis, at the end of which, the property would be sold (if owned). Selling expenses of 7 percent would have to be paid at that time.

Cash flows associated with our analysis are summarized annually for convenience and presented in Exhibit 7–3. Note that for the ownership alternative, cash flows must be developed both before and after taxes because, as indicated, owners of residential property are provided with special federal income tax treatment (see summary of tax provisions in Exhibit 7–4). This treatment is not available to renters; therefore, cash outflows for renters are the same on a before- and after-tax basis (see part C). Looking to Exhibit 7–3, note that in panel A, we have summarized *before-tax* cash outflows associated with owning. These total $12,830 during year 1. Included in these cash outflows are constant monthly mortgage payments of $798.33 · (12), or $9,580, each year. The tax treatment shown in part B includes allowable deductions for property taxes and mortgage interest. These deductions *reduce* the owner's federal income tax[1] payments and therefore reduce net outflows associated with home ownership. These deductions reduce taxes at a rate of 28 percent, or by a total of $2,971 in year 1.

[1] This assumes that the homeowner itemizes for tax purposes.

EXHIBIT 7–3 Cash Flow Analysis—Rent versus Own Analysis of a Personal Residence

	Year 1	Year 2	Year 3	Year 4	Year 5
A. Before-tax cash flows—owner:					
(1) Property taxes	$ 2,250	$ 2,295	$ 2,341	$ 2,388	$ 2,435
(2) Insurance	500	510	520	530	540
(3) Maintenance	500	510	520	530	540
(4) Mortgage payments (P&I)	9,580	9,580	9,580	9,580	9,580
(5) Cash outflows before taxes	$ 12,830	$ 12,895	$ 12,961	$ 13,028	$ 13,095
B. Tax deductions—owner:					
(1) Property taxes	$ 2,250	$ 2,295	$ 2,341	$ 2,388	$ 2,435
(2) Interest	8,361	8,273	8 179	8,077	7,969
(3) Total deductions	10,611	10,568	10,520	10,465	10,404
(4) Tax savings @ 28%	$ 2,971	$ 2,959	$ 2,945	$ 2,930	$ 2,913
C. Renter status:					
(1) Rents	$ 12,000	$ 12,240	$ 12,485	$ 12,734	$ 12,989
D. Net cash flows—owning:					
(1) Before-tax outlays (A.5)	$ (12,830)	$ (12,895)	$ (12,961)	$ (13,028)	$ (13,095)
(2) Tax savings (B.4)	2,971	2,959	2,945	2,930	2,913
(3) After-tax cash flows	(9,859)	(9,936)	(10,016)	(10 190)	(10 182)
(4) Rent saved (C.1)	$ 12,000	$ 12,240	$ 12,485	$ 12,734	$ 12,989
(5) After-tax cash flows—owning	$ 2,141	$ 2,304	$ 2,469	$ 2,635	$ 2,807
E. Before-tax cash flow—for sales occurring in years 1–5:					
(1) Property value	$153,000	$156,060	$159,181	$162,365	$165,612
(2) Less: Selling expenses	10,710	10,920	11,143	11,366	11,593
(3) Less Mortgage payoff	118,781	117,474	116,072	114,569	112,958
(4) Before-tax cash flow sale	$ 23,509	$ 27,666	$ 31,966	$ 36,430	$ 41,061
F. After-tax cash flow—for sales occurring in years 1–5:					
(1) Property value	$153,000	$156,060	$159,181	$162 365	$165,612
(2) Less: Selling expenses	10,710	10,920	11,143	11,366	11,593
(3) Less Basis	150,000	150,000	150,000	150,000	150,000
(4) Gain on sale	(7,710)	(4,860)	(1,962)	999	4,019
(5) Less: Exclusion	—	—	—	999	4,019
(6) Tax	0	0	0	0	0
(7) After-tax cash flow (E.4 – F.6)	$ 23,509	$ 27,666	$ 31,966	$ 36,430	$ 41,061
G. After-tax IRR on equity ($30,000) if sold:					
(1) ATIRR (D.5 + F.7)	–14.50%	3.57%	9.63%	12.34%	13.71%

Interest deductions decline to $7,969 in year 5 because interest on the loan declines over time. The net annual after-tax cash outflows if owning is chosen are summarized in part D and are $12,830 (from part A) *less* $2,971 in *tax savings* (from part B), resulting in a net outflow of $9,859. If the property is owned, this also means that rent of $12,000 *does not have to be paid.* To complete the annual outflow in our analysis, we must consider rent savings if owning is chosen. This amounts to $12,000 the first year and when included in the analysis produces a net after-tax savings from home ownership of $2,141, as shown in part D. Note that savings in

EXHIBIT 7–4 Summary of Tax Provisions Important to Residential Housing

I. Tax Treatment of Personal and Qualified Residences*

A. *Interest Deductions and Qualified Residences.* Interest is deductible on "qualified residences." A taxpayer's qualified residences are a personal residence and *one* other residence. The second residence does not have to be used by the taxpayer during the taxable year to be a qualified residence as long as it is not rented during the year. If it is rented for part of a year, a specified amount of personal use is required (see II.A, below). Interest on three or more homes is not deductible, unless the home is a business or investment property not used personally by the taxpayer. Under certain conditions, mobile homes, boats, trailers, time-shares, and stock in a cooperative housing corporation may be a qualified residence.

B. *Maximum Interest Deductions.* Interest on two types of home mortgage debt is deductible.

(1) Interest is deductible on "acquisition debt," which is *secured debt* used to purchase, build, or substantially improve a qualified residence. Interest on acquisition debt is deductible as long as the debt does not exceed the cost of the residence and its improvements. The maximum amount of indebtedness upon which interest is calculated may not exceed $1,000,000 for couples filing jointly.

(2) Interest is also deductible on "home equity debt." For couples filing jointly, the amount of indebtedness upon which interest is based can be up to the lesser of $100,000 or the amount of equity in the residence. Home equity debt must be secured by a qualified residence.

C. *Points on Mortgage Loans.* The term *points* is used to describe certain charges paid, or treated as paid, by a borrower to obtain a home mortgage. Points may also be called loan origination fees, loan charges, loan discounts, or discount points. Points can be deducted in the year paid if *all* of the following tests are met.

(1) The loan is secured by a qualified residence.

(2) The funds the borrower provided at or before closing, plus any points paid by the seller, were at least as much as the points charged.

(3) If the loan was used to buy or build a home (qualified residence).

(4) The points were computed as a percentage of the principal amount of the mortgage.

(5) The amount is clearly shown on the settlement statement as points charged for the mortgage. The points may be shown as paid from either the borrower's funds or the seller's funds.

If the above tests are *not* met, points must be deducted over the life of the loan.

D. *Real Estate Taxes.* Property taxes must be a direct tax on interests in real property. The tax is deductible in the year paid only by the owner of the property upon which the tax was imposed and paid. Generally, prepaid real estate tax can be deducted in the year of the prepayment.

E. *Capital Gain Exclusions.* For sales of a personal residence after 5/6/97, a homeowner may exclude from income $250,000 of gain, and a married couple may exclude up to $500,000 of gain realized on the sale.

(1) Individual must have owned and used the home as a principal residence for at least two of the five years prior to the sale (the two years do not have to be consecutive).

(2) Exclusion applies to only *one* sale *every two* years.

II. Tax Treatment of Second Residences

A. *Interest Deductions.* All rules relating to personal residence interest deductions apply.

B. *Points.* Points paid on loans secured by a second home are amortized and deducted over the life of the loan.

C. *Sale of Second Residence.* Capital Gains Exclusion. Generally only one home (either the primary or secondary) that is used for a majority of the time during the year will be considered the principal residence and will qualify for the exclusion. Second homes do not qualify for the exclusion.

III. Tax Treatment of Second or Vacation Homes

A. If the property is not rented and is owned for personal use only, then deductions are determined as though it is a non-primary, qualified residence (see: I.A above).

B. If the property is owned for personal use and rented for 14 days or less per year, no rents or expenses must be reported.

C. If the property is owned for *both* personal use and rented, all rental income must be reported and all expenses *can* be deducted. Personal use cannot exceed 14 days or 10 percent of the number of days for which it was rented (whichever is greater).

D. If the property is owned for both personal use and rented, and the number of days of personal use exceeds 14 days or 10 percent of the number of days for which it was rented, then all rental income must be reported and deductions are limited to the amount of rental income. Any expenses in excess of rental income may be carried forward to offset income earned in future years.

* Generally based on Internal Revenue Code ¶ 163(h)(4) and ¶ 163-10T. The reader should not rely on this general discussion when making investment and/or tax elections. This discussion may not be complete, and the Internal Revenue Code is modified frequently.

year 2 are $2,304 and so on. This analysis must be carried out for each year to assess (1) the net effects of increasing nondeductible expenses such as maintenance and insurance, (2) increasing rents, (3) increasing deductible expenses such as property taxes, and (4) declining deductible expenses such as the interest portion of payments on the mortgage loan.

Finally, we must consider the proceeds from sale of the property. We calculate this for each year in sections E and F of Exhibit 7–3. The before-tax cash flow in section E is simply the sale price, less selling expenses and the mortgage loan balance. After-tax cash flows must include any taxable gains on sale. The latter is based on the selling price, less selling expenses, less the tax basis for the residence which in this case is the original purchase price.[2] Should a sale occur, the tax consequences are shown to be zero in each of the first three years because the property appreciation rate is not sufficient to offset the selling expenses. Therefore, if the property is sold, the borrower would not recover the initial acquisition price and no taxable gain or deductible loss would result. It should be noted that, beginning in year 4, a $999 gain from sale results, as does a $4,019 gain in year 5. However, because of the capital gains exclusions that apply to residential real estate (see Exhibit 7–4), these capital gains are not taxable. The annual after-tax cash flows up to the year of sale and the cash flows produced from sale are combined, and internal rates of return are calculated and presented in section G of Exhibit 7–3.

Note that if the property was sold at the end of year 1, the after-tax *IRR* on the $30,000 investment would be negative. This means that if the property is expected to be sold after only one year, renting may be the wiser choice. However, returns from ownership improve in years 2 through 5, as the annual after-tax cash flows and the property value increase.[3] The *IRR*s during those years indicate that in order to justify renting, an investor would have to earn from 3.5 percent to 13.7 percent on an after-tax basis on *other investments* equal in risk with the $30,000 equity saved to make renting equivalent to owning.

Other Considerations

After we summarize the cash flows associated with owning and renting, a number of additional questions arise. For instance, our example assumes a sale at the end of year 5. Inasmuch as people must have shelter, what should be done with the proceeds from sale after year 5? Will the investor choose to own or rent from the end of year 5 into the future? What if the owner chooses not to sell after year 5, but continues to own for the indefinite future—how should this possibility be analyzed? One guide that may help to answer these questions would be to first consider the likelihood that a sale may occur in a relatively short period of time. Generally, if frequent sales are likely to occur because of employment changes/relocation, renting should tend to become more desirable *unless* house appreciation rates and rents are increasing at significant rates in the area where the residence is located. In the latter case, when a sale occurs, a borrower would be more likely to recover selling expenses and save increasing rents that would otherwise have to be paid. On the other hand, if house prices are expected to remain flat or decline, a short period of occupancy would tend to make renting more favorable. Alternatively, other combinations that could make renting more favorable than owning would include (1) expected rents would have to decline, or (2) non-tax-deductible housing expenses (maintenance, insurance, etc.) would have to be expected to increase dramatically, or (3) the initial interest rate available on mortgage loans would have to be much higher than the 7 percent shown in our example.

[2] If any improvements or remodeling expenses have been incurred, these should be added to the original purchase price to establish the tax basis for the residence in the year of sale. "Fixing up" expenses immediately prior to sale may also be included.

[3] To calculate the after-tax *IRR* in year 2, one must find the interest rate (discount rate) that makes the present value of $2,141 in year 1 and $2,304 plus $27,666 at the end of year 2 equal to the equity outlay of $30,000.

As to periods beyond five years, it is apparent from Exhibit 7–3 that net benefits from homeownership continue to increase over time. While this pattern cannot be expected to continue with certainty, an examination of the importance of appreciation in house prices and equity investment may be helpful.

If one examines the cash flow analysis again in Exhibit 7–3, it becomes clear that advantages to homeownership are substantial because of house appreciation rates (E.1 and F.1) and the capital gains exclusion.

The Rent versus Own Decision—Other Issues

What has been presented above is a purely financial analysis of owning or renting the same place of residence. In the example, it was apparent that ownership was generally the favored choice, particularly if the property was to be owned and occupied for three years or more. One interesting question that may occur to the reader is: "Is there a level of *rent* at which benefits from homeowning are eliminated?" That is, at what level of rent would you be indifferent between renting and owning? This would be a level of rent that results in an after-tax *IRR* from owning that is just sufficient to compensate for capital invested as a down payment. We will assume that this is 5 percent. This is about the same as the after-tax cost of the loan [$7\% \times (1 - .28) = 5\%$ rounded].

We *recalculate* the net cash flows in Exhibit 7–3 by changing rent saved (part C) to $9,155 for the first year, which changes results in part D(4) and produces the following after-tax *IRR*s on the $30,000 equity investment:

Revised annual cash flows and after-tax *IRR* recalculation:

Year	1	2	3	4	5
After-tax *IRR*	−23.98%	−6.19%	1%	3.27%	5.00%

From this analysis, it is apparent that if the same residence could be rented for $9,155 per year, then based on financial considerations only, the investor would be *indifferent* as to whether the property is owned or rented for five years. It could also be said that almost no advantage exists between the purely financial elements of owning and renting. The rent of $9,155 could be found by trial and error or using "Goal Seek" in Excel.

Historical Trends

Based on historical trends in the United States, approximately 67 percent of all residential housing is owned and 33 percent is rented. This suggests that homeownership is both strongly preferred and may be a good investment. However, there are other issues to consider. Renting could be favored in spite of financial returns on equity in residential ownership for a number of reasons. These include

1. Need for flexibility because of frequent relocation of employment, family, or other reasons.
2. Lack of funds for a down payment.
3. Credit quality of the resident.
4. No desire to bear the risk of ownership and volatility in house prices.
5. A desire to shift maintenance, security, and management to others.
6. A desire to avoid volatility, or risk of loss because of "bubbles," in house prices. This may occur when house prices rise relative to rents to such an extent that the prospect of further appreciation in prices becomes problematic. In some housing markets affected by sharp increases in employment tied to higher cyclical industries, should contraction in employment occur in those industries, volatility in house prices may be affected.

To the extent that any or all of the above considerations are important to residents, they may be willing to forgo returns available from homeowning and pay an implicit premium or opportunity cost to maintain renter status. For this and other reasons, there are many investors and developers who develop, own, and manage *rental housing units*. We will deal with that type of real estate investment in a later chapter.

Analyzing Expected House Prices

There are many other facets of the housing market that are important when considering a purchase. When investing in housing, investors find it useful to measure the **expected rate of appreciation in house prices (EAHP).** This is calculated as

$$\frac{HP_1 - HP_0}{HP_0} = EAHP\%$$

where HP_0 is the house price in year zero and HP_1 is the expected price at the end of year one. To illustrate, if $HP_0 = \$100{,}000$ and $HP_1 = \$103{,}000$, then the expected appreciation in house prices for one year is 3 percent, shown as

$$\frac{\$103{,}000 - \$100{,}000}{\$100{,}000} = 3\%$$

To extend this analysis and provide more perspective for investors, a useful exercise is to consider the **expected appreciation rate on home equity (EAHE).** This concept can be calculated as follows:

$$\frac{HP_1 - HP_0}{HP_0(1 - LIV)} = EAHE\%$$

defining *LIV* as the **loan-to-value ratio.** Assuming a 3 percent house appreciation rate and an 80 percent loan-to-value ratio, the annual *equity* appreciation rate expected for a one-year period would be

$$\frac{\$103{,}000 - \$100{,}000}{\$100{,}000(.2)} = EAHE$$

$$\frac{\$3{,}000}{\$20{,}000} = 15.0\%$$

Alternatively, the expected average annual appreciation in home *equity* (EAHE) can be approximated from the average house price appreciation rate (EAHP) of 3 percent by multiplying it by the ratio of house price to equity (*HP/E*), which is 100% ÷ 20%, or 5.0. Using this formulation, we have

$$EAHP(HP/E) = EAHE$$
$$3\% \cdot 5 = 15.0\%$$

These calculations show that a 3 percent annual average rate of appreciation in house price results in a 15 percent appreciation rate on equity when 80 percent financing is used. This example can be thought of as a method of providing investors with an estimate of **unrealized equity gains,** which the owner has the option of realizing by: (1) selling the residence (although proceeds may be subject to federal income taxes—see Exhibit 7–4) or (2) refinancing, in which case there may be no federal income taxes to pay because refinancing is not a "taxable event." This example also clearly

illustrates why investing in housing financed with mortgage loans has provided an extremely powerful financial incentive for households, particularly those interested in long-term wealth accumulation. Research has also been done by economists on the so-called "**wealth effect.**" This is the effect that expected appreciation in assets, including home equity, may have on consumer spending on other goods and services in the economy. This comes about as consumers feel more financially secure about their future economic well-being, because their stocks, bonds, and houses are rising in value. Consequently they tend to spend more on other goods and services. When asset prices are declining however, consumer spending also may decline as a result of a "reverse wealth effect."

Unrealized Annual Rates of Appreciation on Equity

The above calculations provide a good approximation in situations where rate of house appreciation is expected to be a constant or when a rough estimate is adequate for the reader. In cases where the rate of house price appreciation is expected to be different each year, or should a more exact calculation be needed, the above calculation may be modified as shown in the following example for a $100,000 property financed with an 80 percent loan.

End of Year	House Price	Appreciation Rate	Equity	Calculation	Annual EAHE
0	$100,000	—	$20,000	—	—
1	103,000	3%	23,000	3,000 ÷ 20,000	15.0%
2	105,060	2%	25,060	2,060 ÷ 23,000	9.0%
3	109,262	4%	29,262	4,202 ÷ 25,060	16.8%

Solution:

$n = 3$
$PV = -20{,}000$
$FV = 29{,}262$
$PMT = 0$
Solve for $i = 13.55\%$

Function:
I(*n*;*PV*;*FV*;*PMT*)

As shown in the above example, average expected appreciation in home equity for the three-year time period is equivalent to an annual compounded rate of interest equal to 13.55 percent. See Concept Box 7.1, which contains very important data sources that are used frequently when forecasting house prices.

Regional Economic Influences on Property Values

An important concept in real estate analysis is the fact that the house prices are highly *dependent* on the regional or geographic area in which they are located. The demand for properties in local markets is highly influenced by the nature of the industries, businesses, and so on, that are attracted to a region. Business activity and its growth determine employment and income in a region, which influence the demand for all property types. In short, when a real estate analysis is undertaken, the *regional economic drivers* must be identified and a judgment must be made about whether these drivers will provide a source of growth or decline in a region. To determine the latter, trends must be established for the future global outlook for growth in those industries (e.g., computer technology, communication technology, medical-pharmaceutical, and tourism/recreation).

House Price and Related Data Sources

Concept Box 7.1

HOUSING STATISTICS

1 National Association of Realtors (NAR): www.realtor.org

A. Median House Prices

Essentially, prices on all *existing* housing units sold during each month (single-family, condominium, co-ops) are ranked from high to low. The midpoint, or median sale price, of all sales throughout the United States is selected and reported. A quarterly series also is reported by most metropolitan areas (MSA = metropolitan statistical area, as defined by OMB—2004).

Issues. When calculating appreciation rates based on median prices selected for specific time periods, some observers have questioned the *comparability* of housing units over different time periods. In addition to price changes, house size, lot size, and location of housing units also are believed to change over time. This makes the interpretation of price changes problematic, thereby limiting the usefulness of the appreciation data.

B. Pending Home Sales

This is an indicator of sales volume that is compiled *monthly* based on the number of signed contracts to purchase homes. Given that two to three months are required to obtain loan commitments and close the title, this "pre-final sale" series is used as a *leading indicator* for analysis of the housing industry. Data are available only for the United States and four major census regions.

C. Housing Affordability Index (HAI)

The HAI is a monthly series consisting of (1) *median family income* and (2) *median qualifying income* (income needed to make mortgage and housing expense payments on a median price house with a 20 percent down payment). The ratio of median family income to median qualifying income is then calculated and used as an indicator of the extent to which a housing purchase is affordable for median income families.

2. Federal Housing Finance Agency: www.fhfa.gov

A. Purchase-Only House Price Index (HPI)

The Federal Housing Finance Agency publishes the Purchase-Only HPI, which is a quarterly average series based on prices obtained from repeat, "purchase-only" transactions for the *same properties* over time for all MSAs in the United States. An average for the United States also is calculated by weighting these prices by a population weighted index as compiled by the U.S. Census Bureau. By focusing on repeat sales of the same houses over time, this index attempts to maintain comparability of housing characteristics based on size, age, and so on.

B. All Transactions House Price Index (HPI)

In addition to data used to compile the quarterly Purchase-Only HPI, appraisal data from refinancing are included in this "All Transactions" HPI.

Issues. Both data sources are obtained from FHLMC-FNMA loan files. These files are based on *conforming loans*, or loans that conform to underwriting standards for these agencies. Because maximum loan limits are set by these agencies, mortgages made for amounts above those maximum loan limits are not included in either database. Therefore, house prices used to compile both indexes are useful only when analyzing transactions in the "conforming" segment of the housing market.

3. S&P Case-Shiller® Index: www.homeprice.standardandpoors.com

The S&P Case-Shiller® Index is a monthly "repeat sale" house price index based on data obtained from repeat sales of the same housing units in 20 MSAs. A U.S. national home price index is also calculated. When computing price changes, a statistical technique is employed to use only paired sales of the same housing units sold over time. Houses are removed from the sample if any improvements, remodeling, or the like have been undertaken between sale dates. This methodology is used in an attempt to capture price changes on housing units with the same characteristics over time.
Issues: Data are a three-month moving average, published monthly and are available for up to 20 MSAs only.

Why do certain kinds of economic activity tend to "cluster" more in some regions and urban areas than others? We do not intend to provide an extensive discussion of the phenomena here as there have been volumes written on this subject by many regional economists. However, we do believe that an understanding of the underpinnings of this economic behavior is critical when thinking about the relative attractiveness of real estate investments. As we will stress in this chapter and in others, making an investment in a specific real estate asset cannot be separated completely from *making an investment in an economic region* because the real estate is permanently located in that region. Therefore, the need to know the forces that drive economic growth in an area is essential to the success of an investment.

Analogy with the Law of Comparative Advantage

This concept, stated very simply, says that some geographic regions have a comparative advantage over other regions in that certain goods/services can be produced more efficiently and profitably in that region than in other regions. This advantage may exist because of (1) natural advantages (e.g., seaport, minerals, low-cost energy, and beaches), (2) employee characteristics such as a highly trained, educated workforce (e.g., location of universities, workforce training in technical industries), and/or (3) proximity to many major consumer markets (e.g., transportation hub). Regional examples would include high-tech research and development (California, Seattle, Boston), oil and gas exploration (Houston), communication and computer assembly (Austin, San Diego), medical technology/clinics (Minnesota, Boston), and production of entertainment (Los Angeles). These industries tend to locate in certain geographic areas because land, labor, and capital can be combined cost-effectively or revenues can be enhanced by locating in those regions. This simple concept is very useful in real estate investing because when researching markets for real estate investment opportunities, those markets having industries with the highest likelihood of future growth will have a positive effect on house prices.

Identifying Regional Economic "Drivers" or Base Industries

One obvious way to identify the drivers of economic growth in an area is to identify **base**, or **driver, industries**, which are those businesses producing the greatest *profits*. Unfortunately, data pertaining to profits is difficult to collect on a regional basis because (1) much of it is private information and (2) for publicly owned firms, multiple operating divisions may make profits by region very difficult to break down. As a result, many

analysts rely on *employment data* that are collected by the U.S. Department of Labor and by various agencies in all 50 states. The underlying logic for using employment data for real estate investment research is that expanding businesses will have expanding needs for labor. Identifying the number of those industries with a comparative advantage in that region will help to estimate the number of employees in these industries and, in turn, the number of housing units needed. While employment data are generally thought to be the best tool available for analysis, this method is not ideal because labor may not always be added in direct proportion to increases in revenues or the output of goods and services produced by a company. Furthermore, the method may tend to underestimate the importance of less labor-intensive businesses in a region that may be very profitable and pay high wages to fewer employees.

Economic Base Analysis—Location Quotients

One widely accepted approach in economic analysis for identifying driver industries in a region—the **economic base**—is to calculate what are referred to as **location quotients.** This is done very simply by using the following relationship:

$$\frac{\left(\frac{RE_j}{RE_{TOT}}\right)}{\left(\frac{USE_j}{USE_{TOT}}\right)} > 1.0?$$

Terms in this relationship are as follows:

RE = Regional employment
USE = U.S. employment
j = Industry classification
TOT = Total

For example, if we let j represent the computer assembly industrial classification, then this ratio will tell us if the proportion of regional employment (RE) in the computer assembly business (j) as a percentage of total employment in that region (RE/TOT) is greater or less than the proportion of those employed in industry j throughout the United States as a percentage of the total employment throughout the country. If this ratio is *greater* than 1.0, then industry j would be identified as a *base* or *driver industry* for a region because it employs a greater-than-proportionate amount of workers in that industry than is the case for the United States as a whole. Obviously, if the ratio is *less* than 1.0, then that industry would not be a base industry. Industry classifications with ratios less than 1.0 are usually referred to as *supporting industries.* Examples of the latter could be accounting firms, advertising firms, and so on. These supporting businesses are also important for real estate investment, particularly for retail establishments, personnel services, and similar firms, all of which must also lease operating space in properties.

Data classifications for various industries (designated above as j) have been developed and published by the U.S. Office of Management and Budget and are used by the U.S. Department of Labor. This department collects and categorizes data on all employees in the United States. Depending on the level of detail desired, all employment data are broken into several industry classifications. These classifications are referred to as North American Industry Classification System, or NAICS. The data are collected for over 300 metropolitan areas.

Employment Multipliers

This aspect of economic base analysis is conducted to determine how *total employment* in a region is affected by changes in *base employment*. After a complete analysis is conducted for every employment classification (j) in a region and all base employment has been identified with location quotients and totaled, employment in the remaining categories is totaled. Then, the ratio of *total* to *basic* employment is calculated. If, for example, total employment in a metropolitan area equals 1,000,000 and base employment or employment in classifications with a location quotient >1.0 totals 400,000, supporting employment would be 600,000. In this case, the total-employment to basic-employment multiplier would be 1,000,000 ÷ 400,000, or 2.5. Therefore, if a forecast called for an increase of 40,000 jobs in *all basic* employment categories, it may be the case that total employment would increase by 40,000 × 2.5, or 100,000, of which 60,000 would be supporting employment. Obviously, a real estate investor would like to know how many of the 100,000 expected new jobs would likely result in the construction of new houses, apartments, and office and warehouse space to provide for these workers. An examination of population data would shed light on the expected age distribution and sizes of households. It should be stressed that there can be instances where employment in base industries in a metropolitan area is expected to *decline*. In these instances, total employment rates would be expected to decline by an amount greater than declines in base industry employment.

This method of analysis is not without its shortcomings. Furthermore, this analysis usually provides a snapshot of employment at a point in time. In order to better understand employment relationships, economic base analysis should be done at various points in time so as to identify shifts and trends in an area's employment base.

Housing Supply: An Overview

When trying to complete the analysis of housing as an investment, we must also consider the supply side of the market. In general, the supply of housing is determined by the relative cost of land, labor, and capital (materials). Two barometers of housing activity that are monitored by investors are housing starts and sales of existing homes. Two observations should be made concerning these data. One is that the supply of new single-family housing and sales volumes for existing units are price elastic and highly volatile. The other is that both of the latter relationships are highly influenced by interest rates. Although we include interest rates in our discussion of housing supply, it is also very important on the demand side of the market, as it affects the financing cost that a household must pay from incomes earned primarily from employment.

Other influences on supply costs on a *more local level* include the existence of restrictions such as zoning, building codes, environmental factors, and the physical differences in land terrain and how these vary between locations. These latter influences have a significant impact on costs that builders incur when producing housing. Many of these influences are thought to result in a restriction on supply (new construction), which results in higher house prices. Some MSAs (such as San Francisco, Boston, and others) restrict development density by requiring adherence to very rigid building codes, requiring open space, assessing impact fees, and so on, all of which affect housing availability. Over the long run, this may cause house price appreciation and construction costs to be greater than in other metro areas. Any investor in the housing market must assess these supply-side factors when making housing choices. See Concept Box 7.2, which describes very important data sources that may be used to assess the supply of new housing units as well as sales and inventory.

Single-Family Housing Supply: Data Sources

Concept Box 7.2

1. **National Association of Home Builders (NAHB): www.nahb.org**
   A. A subscription-based data source that provides data for:
      - Housing starts (single family and multifamily)
      - New home sales
      - New home sales price (average, median)
2. **U.S. Department of Commerce/U.S. Census Bureau: www.census.gov**
   A. Housing statistics published *monthly*, including:
      - Housing construction permits
      - Construction starts
      - Housing units under construction
      - Housing units completed
   B. Quarterly survey of housing vacancies
      - 75 Metro areas

Comment: Many analysts make estimates of current housing supply conditions in local housing markets from data on (1) construction permits *approved*, (2) the number of permits actually *started*, (3) units *under construction*, and (4) *completions*.

After the timing in all stages of production and new home sales has been taken into account, the inventory of houses available for sale can be estimated. From these data, judgments can be made as to whether or not an excess supply condition may exist, how long any excess supply may persist, and implications for future house prices.

Submarkets: Neighborhoods/Municipalities

While the above discussion is important when trying to differentiate among MSAs, a number of other issues are important when trying to select housing among submarkets /municipalities *within* MSAs. A list of important considerations that should be analyzed when making such a selection is contained in Exhibit 7–5. Many of these attributes include services and goods that *must also be acquired* when the *housing investment is made*. Many of these attributes are referred to as **public goods** that are acquired along with housing. These factors have been studied over the years and deemed to be important in driving house price appreciation in different submarkets.

Capitalization Effects: Price Premiums

Many of the attributes in Exhibit 7–5 have been deemed important in explaining differences in house prices among neighborhoods and jurisdictions. However, it is difficult to generalize the extent (dollar amount) to which each factor affects price. There is another concept in the urban economics literature, called the **capitalization effect**, that relates to the quality of the public services that individuals receive *relative to the taxes* (usually property tax and fees) that are paid for these services when they choose to purchase housing in a particular neighborhood or municipality. To the extent that residents perceive that services received have a value greater than the taxes and fees paid for them, *net benefits* may exist. These net benefits are reflected or capitalized in house prices (land prices) because households are willing to pay for these net benefits which can only be obtained by purchasing housing in the location where the benefits are present. For example, if

EXHIBIT 7–5 Public Goods and Other Attributes Affecting House Prices in Different Submarkets and Neighborhoods within Metropolitan Areas

Description	Measurements/Indicators
1. Quality of school districts	SAT scores, percentage of HS graduates that go to college, library facilities
2. Crime rates/police/fire	Data relative to various crime categories per 1000 residents, response times
3. Parks/recreation	Relative to size of population, quality of programs
4. Housing market indicators	Number of listings, time on market prior to sale, percentage of asking price achieved by submarket
5. Quality of utilities	Cost and source of water, electric, gas, sewer. Any assessments related to each
6. Size of submarket	Population, percentage of nearby land area available for future development and zoning related to such areas
7. Health care facilities	Number of physicians and beds per thousand residents
8. Building codes/zoning	Restrictions, regulation of construction quality, minimum lot sizes
9. Insurance rates	Premiums may vary based on response times by location
10. Noise levels	Proximity to, and decibel levels of (airports, freeways, etc.)
11. Environmental	Open spaces, pollution, water, air, and so on
12. Transportation/access	Distance and travel time to major employment centers, airports

Web App

The Federal Home Loan Mortgage Corporation (Freddie Mac) and the Federal Housing Finance Agency publish house price indexes. These are available at **www.freddiemac.com/finance/cmhpi** and **www.fhfa.gov/default.aspx?page=14**, respectively. These indexes provide a measure of typical price inflation for houses within the United States. Values are calculated nationally, for each state, and for major MSAs.

Using one of these price indexes, select one of the MSAs and analyze the growth rate in home prices for the MSA versus the rest of the state and for the nation over the past five years. Are homes in the MSA growing at a slower or faster rate than the rest of the state and nation? If you were doing a rent-versus-own analysis as discussed in this chapter, what growth rate would you assume for home prices in the selected MSA?

two otherwise identical houses are located in two different neighborhoods or municipalities and one sells for a higher price, the question is, "Which combination of the above influences caused the buyer to pay a higher price?" Was it the net benefits from educational quality or some other public good? When housing is viewed this way, it becomes clear that many public good consumption choices are being made *simultaneously* with the housing decision.

Finally, there has also been discussion regarding the **optimal size of cities** or of jurisdictions. This concept has to do with the relationship between the size (population and geographic area) of separate political jurisdictions (townships, cities, etc.) and how cost-effectively they provide services such as education, police protection, and the like. Some argue that there may be cost savings in providing public services as cities (politically defined) get larger and annex surrounding areas. However, there may be a *limit* on size (in terms of both area and/or population) such that when this size is exceeded, (1) costs begin to rise relative to the quality of services delivered or (2) the quality of services begins to deteriorate. Thus, communities in which there exists a balance between size, efficiency, and scale of operations may be producing public services very cost-effectively. This efficiency may be reflected in lower property taxes for the flow of services being produced, which may, in turn, be capitalized in the prices of properties in such jurisdictions.

Pricing Property in Specific Submarkets/Locations

At some point in the acquisition process, after the prospective homebuyers have evaluated the regional drivers affecting house price appreciation, they must estimate whether a specific property in a specific location that is being considered for purchase is *competitively priced*. Prospective buyers want to be sure that they are not "overpaying" for a property. Also, lenders want assurance concerning the price of the property because it will be serving as security for repayment for the mortgage debt and, over time, it must remain sufficiently high to repay the outstanding loan balance in the event of default. While prospective buyer-investors may estimate a value for a property, lenders will usually require that an estimate of value be made by an *independent fee appraiser*, which is someone who specializes in performing appraisals for a fee. An appraiser must be unrelated to the parties to the transaction and must have no vested or financial interest in the property being appraised.

The objective of the appraisal is to establish a **market value**, usually meaning the most probable price that would be paid for a property under competitive market conditions. The reader should understand that this notion of *value* may be different from the *price* that an individual buyer may be willing to pay for the property. For example, one person's *individual preference* for attributes of a property being acquired may be such that she may be willing to pay a significantly higher price for a property than the *majority* of potential buyers in the market. Because the lender is more concerned about what the market price would be in the event of default, the appraiser must make an independent estimate of the most probable price that a property would bring if it were sold under competitive market conditions, where individuals other than the prospective buyer would be bidding. In a sense, the appraiser's estimate of value will help the lender determine whether the price being offered by the borrower-applicant is an "outlier," or a price that is significantly different from what would be paid by most buyers in the market for similar properties. (Although there are some differences in appraisal requirements used in conventional, FHA, and VA mortgage underwriting, the general approaches to estimating value are similar.)

To produce an estimate of value, the appraiser generally begins with an assessment of national, regional, and local economic conditions, stressing income, population, employment, and interest rate trends, which, as discussed above, form the determinants of demand for the property in question. Supply is examined by assessing the relative cost of land and the factors of production (wages, capital). Current market equilibrium conditions in the housing market are then considered by examining the current availability (inventory) of housing units, absorption rates, rental vacancies, and trends in rents to gauge the likelihood of any short-run price movement that may affect the estimate of value. Finally, the appraiser must identify the area-relevant location, or **submarket**, in which the property being valued is viewed as being competitive or substitutable with other properties. This submarket also may be thought of as a neighborhood because of the proximity of retail, educational, religious, and other facilities which may appeal to households with similar income, tastes, and preferences. This is important because, as will be seen, price and other data will be obtained on properties that have sold recently in this area. Submarket selection is very important as the appraiser seeks to eliminate any differences that could be attributable to school districts, police and fire services, libraries, and so on in the analysis. These data will serve as a basis for estimating the price for which the property in question is likely to sell.

When estimating the value for the specific property (usually referred to as the "subject property"), the appraiser usually relies on three approaches: the market, cost, and income capitalization approaches. In *residential appraisals*, only two approaches, cost and market, are usually thought to be reliable. The market, or **sales comparison**, approach involves

selecting properties in the same submarket or in close proximity to the subject property. Comparables are chosen from those properties that have sold most recently and where adjustments for dissimilarities (such as size of dwelling, lot, amenities) can be kept at a *minimum*. This approach is based on the principle that at the time of the appraisal, buyers should be willing to pay the same price for otherwise identical properties. By adjusting the sale price of comparable properties for dissimilarities, the appraiser is trying to make properties that have recently sold very comparable to the subject property. The adjusted price of the comparables can then be used to price the subject.

The **cost approach** involves estimating the cost to reproduce the structure (less depreciation), and then adding the value of the land (site) to it in arriving at a value. The rationale for this approach is that no knowledgeable buyer would pay *more* for a property than the cost at which it can be reproduced. Finally, the **income approach** is a process, whereby comparable residences that are currently renting for income are used to estimate the value of the subject. This process usually involves establishing a ratio between the selling price and income of such recently sold comparables. The rent is then adjusted for dissimilarities with the subject. A comparable rent for the subject is then established and the ratio of price to rent for comparables is used to convert the adjusted rent into a value for the subject. This latter approach is not frequently used when pricing owner-occupied residential properties because it is generally the least reliable method. This is because there are usually few comparable residences that are rented.

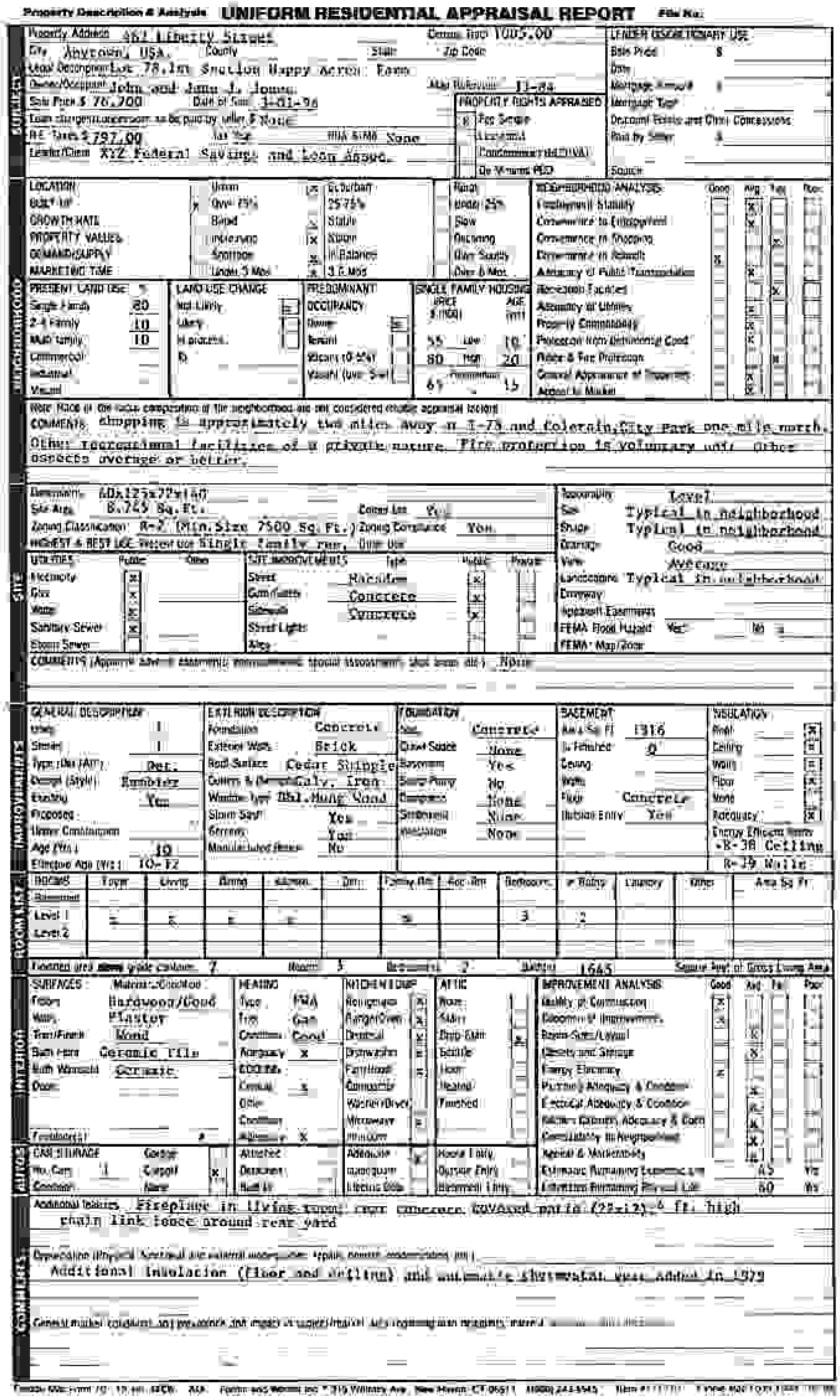
Based on these approaches, the appraiser makes a final estimate of value and reports it to the prospective homebuyer and the lender. The lender will review the report and, if in agreement with the approach used by the appraiser, will use the lower of appraised value or the market price in establishing the maximum loan amount. For a more detailed examination of each of these approaches, we now consider a problem example. In the example, we use the uniform appraisal form (see Exhibit 7–6, panels A and B) required by the Federal National Mortgage Association and Federal Home Loan Mortgage Corporation. Today most residential mortgages utilize this form because it is a part of the required documentation any lender would need if it wished to sell a loan to either of these entities after origination.[4]

The Sales Comparison Approach

As previously indicated, when using this method, the appraiser estimates the value of a property by comparing the selling prices of properties similar to, and near, the property being appraised. Because no two properties are exactly alike, the appraiser adjusts the values of similar properties (called **comparable properties**) for dissimilarities. These differences are isolated, and adjustments are made by the appraiser, who, using her judgment and knowledge of current market conditions, establishes what the market value is for each major attribute of a comparable that is different from the subject property. Because the value of the subject property is unknown, the price of the *comparables* will be adjusted until all differences have been taken into account. If this process is carried out correctly, the adjusted value of the comparable properties may then be used to approximate the price of the subject property. When selecting the comparables, the appraiser must be careful to establish that the sales of the comparable properties were *arm's-length transactions* between the buyer and seller. For instance, if a seller was under duress, as in a foreclosure situation, or if a sale was between relatives, such a sale would not be desirable for use as a

[4] For more detailed information see *Underwriting Guidelines, Home Mortgages*, Federal Home Loan Mortgage Corporation. The sale of mortgages to institutions in the secondary mortgage market will be covered in a later chapter. While all residential appraisals are made using the three approaches to value discussed above, additional specifications concerning condition and construction quality of the dwelling being appraised are sometimes included in FHA and VA appraisals. While such specifications are too numerous to be considered here, the following sources provide additional information: for an overview of FHA appraisal policies, see *HUD Handbook 4150.1*; for VA policies, see VA Bulletins and Benefits Circulars.

EXHIBIT 7–6
(Panel A) Property Description


Property Description & Analysis UNIFORM RESIDENTIAL APPRAISAL REPORT File No.

Property Address 467 Liberty Street
City Anytown, USA.
Legal Description Lot 78, 1st Section Happy Acres Farm
Owner/Occupant John and Jane J. Jones
Sale Price $ 76,700 Date of Sale 3-01-96
Loan charges/concessions to be paid by seller $ None
R.E. Taxes $ 797.00
Lender/Client XYZ Federal Savings and Loan Assoc.
Census Tract 1005.00
Map Reference 11-84
Property Rights Appraised: [x] Fee Simple

Present Land Use %: Single Family 80; 2-4 Family 10; Multi-family 10
Single Family Housing: Price $(000) 55 Low, 80 High, 65 Predominant; Age (yrs) 10, 20, 15

COMMENTS: Shopping is approximately two miles away at I-75 and Colerain; City Park one mile north. Other recreational facilities of a private nature. Fire protection is voluntary unit. Other aspects average or better.

Dimensions 60x125x72x140
Site Area 8,745 Sq. Ft. Corner Lot Yes
Zoning Classification R-2 (Min. Size 7500 Sq. Ft.) Zoning Compliance Yes
Highest & Best Use: Present Use Single family res.
Topography Level
Size Typical in neighborhood
Shape Typical in neighborhood
Drainage Good
View Average
Landscaping Typical in neighborhood
Street Macadam; Curb/Gutter Concrete; Sidewalk Concrete
COMMENTS: None

General Description: Units 1; Stories 1; Type (Det./Att.) Det.; Design (Style) Rambler; Existing Yes; Age (Yrs.) 10; Effective Age (Yrs.) 10-12
Exterior Description: Foundation Concrete; Exterior Walls Brick; Roof Surface Cedar Shingle; Gutters & Dwnspts. Galv. Iron; Window Type Dbl. Hung Wood; Storm Sash Yes; Screens Yes; Manufactured House No
Foundation: Slab Concrete; Crawl Space None; Basement Yes; Sump Pump No; Dampness None; Settlement None; Infestation None
Basement: Area Sq. Ft. 1316; % Finished 0; Floor Concrete; Outside Entry Yes
Insulation: R-38 Ceiling, R-19 Walls

Finished area above grade contains: 7 Rooms; 3 Bedroom(s); 2 Bath(s); 1645 Square Feet of Gross Living Area

Surfaces: Floors Hardwood/Good; Walls Plaster; Trim/Finish Wood; Bath Floor Ceramic Tile; Bath Wainscot Ceramic
Heating: Type FWA; Fuel Gas; Condition Good

Additional features: Fireplace in living room; rear concrete covered patio (22x12); 6 ft. high chain link fence around rear yard

Additional insulation (floor and ceiling) and automatic thermostat were added in 1979

comparable because the buyer may not have paid a fair market price for the property. Once the appraiser has determined that all comparable sales were arm's-length transactions, the appraiser's process of adjusting the comparable sales can begin.

To illustrate how the appraiser will adjust the comparable sales for any differences between the subject property and the comparable properties, Exhibit 7–6 contains a property description in panel A and an example of the three approaches to value used in the

EXHIBIT 7–6
(Panel B) Property Description

Valuation Section **UNIFORM RESIDENTIAL APPRAISAL REPORT** File No.

Purpose of Appraisal is to estimate Market Value as defined in the Certification & Statement of Limiting Conditions.

COST APPROACH

BUILDING SKETCH (SHOW GROSS LIVING AREA ABOVE GRADE)

Measurements		No. Stories	Sq. Ft.
42x37	=	1	1,554
26x3.5	=	1	91
Total gross living area			1,645 sq. ft.

ESTIMATED REPRODUCTION COST – NEW – OF IMPROVEMENTS:

Dwelling 1,645 Sq. Ft. @ $38.09	$62,658
1,316 Sq. Ft. @ $ 7.89	10,383
Extras unfi. ovr.ave.,d/w, disp., range/oven,f/h, fireplace	= 3,240
Special Energy Efficient Items R-30 Insultn	500
Porches, Patios, etc. and fence	= 1,800
Garage/Carport 200 Sq. Ft. @ $ 6.50	1,300
Total Estimated Cost New	= $79,881
Less Physical 13,500 / Functional / External 7,500 Depreciation	= $21,000
Depreciated Value of Improvements	= $58,881
Site Imp. "as is" (driveway, landscaping, etc.)	= $ 3,050
ESTIMATED SITE VALUE	= $15,500
(If leasehold, show only leasehold value)	
INDICATED VALUE BY COST APPROACH	= $77,431

(Not Required by Freddie Mac and Fannie Mae) Does property conform to applicable HUD/VA property standards? [X] Yes [ ] No. If No, explain:

Construction Warranty [ ] Yes [X] No. Name of Warranty Program. Warranty Coverage Expires.

SALES COMPARISON ANALYSIS

The undersigned has recited three recent sales of properties most similar and proximate to subject and has considered these in the market analysis. [illegible]

ITEM	SUBJECT	COMPARABLE NO. 1	+(–) $ Adjustment	COMPARABLE NO. 2	+(–) $ Adjustment	COMPARABLE NO. 3	+(–) $ Adjustment
Address	482 Liberty	478 Liberty St.		225 West 17th Street		110 East 16th Street	
Proximity to Subject		Adjacent		2 blocks West		3 blocks SE	
Sales Price	$76,700		$ 65,000		$ 73,500		$ 67,500
Price/Gross Liv. Area	$46.63	$ 46.43		$ 44.54		$ 57.19	
Data Source	Sales Contract	Present Owner		Appraiser's Files		Selling Broker	
VALUE ADJUSTMENTS	DESCRIPTION	DESCRIPTION		DESCRIPTION		DESCRIPTION	
Sales or Financing Concessions		None	–	None	–	None	–
Date of Sale/Time	3-1-96	1-29-96	–	2-16-96	–	12-12-95	–
Location	Avg. Suburb	Similar		Similar		Similar	–
Site/View	Corner Lot	Inside Lot	1,950	Inside Lot	1,950	Corner Lot	–
Design and Appeal	Rambler-Ave.	Similar		Similar		Similar	–
Quality of Construction	Good	Good		Good		Good	–
Age	20 years	19 years		20 years		13 years	(3,250)
Condition	Good	Good		Good		Int./Fair-Ext.	950
Above Grade Room Count (Total/Bdrms/Baths)	7 / 3 / 2	6 / 1 / 1½	7,500	7 / 3 / 2	–	7 / 3 / 1	
Gross Living Area	1,645 Sq. Ft.	1,400 Sq. Ft.		1,650 Sq. Ft.		1,600 Sq. Ft.	2,800
Basement & Finished Rooms Below Grade	80% Bsmt Area Unfinished	Full Bsmt Rec. Room	(1,950)	Full Bsmt, Rec Rm., ½ Bath	(2,800)	80% Bsmt Unfinished	3,200
Functional Utility	Good	Good	–	Good	–	Fair	2,800
Heating/Cooling	Central	Central	–	None	3,500	Central	–
Garage/Carport	1 Car att. C/P	Similar	–	2 Car att. Gar.	(4,000)	2 Car att. Gar.	(4,000)
Porches, Patio, Pools, etc.	Fence, Rear Patio	Fence, Rear Screen Porch	(1,700)	Fence, Rear Patio	–	No Fence, Rear Screen Porch	(500)
Special Energy Efficient Items	R-30 Ceiling Ins., Solar HW Heater	No solar HW Heater	3,900	No solar HW Heater	3,900	Inf. Insultn., No solar HW Heater	4,600
Fireplace(s)	Living Room	Similar	–	No Fireplace	1,800	No Fireplace	1,800
Other (e.g. kitchen equip., remodeling)	Range/Oven, Disp., Dish Washer	Similar	–	Similar	–	No Built-in Appliance	500
Net Adj. (total)		[X] + [ ] –	$10,200	[X] + [ ] –	$3,350	[X] + [ ] –	$ 8,900
Indicated Value of Subject			$ 75,200		$76,850		$ 76,400

Comments on Sales Comparison: Sale No. 1 is recent sale of smaller house next door to subject and indicated value reflects considerable net adjustments as does sale No. 3. Sale No. 2 is most comparable to subject and required only a few moderate size adjustments consequently most weight is assigned to its indicated value.

INDICATED VALUE BY SALES COMPARISON APPROACH $ 76,850

INDICATED VALUE BY INCOME APPROACH (If Applicable) Estimated Market Rent $ 650 /Mo. x Gross Rent Multiplier 116 = $ 75,400

This appraisal is made [X] "as is" [ ] subject to the repairs, alterations, inspections or conditions listed below [ ] completion per plans and specifications.

Comments and Conditions of Appraisal: Property is at the top of the neighborhood value, but at estimated value it is readily saleable.

RECONCILIATION

Final Reconciliation: Most weight is given to market approach as the comps are recent sales and are fairly similar and in close proximity to subject. Less weight is assigned to cost approach due to the difficulty in reliably establishing depreciation. Least weight given to income approach.

This appraisal is based upon the above requirements, the certification, contingent and limiting conditions, and Market Value definition that are stated in

[ ] FmHA, HUD &/or VA instructions.

[ ] Freddie Mac Form 439 (Rev. 7/86)/Fannie Mae Form 1004B (Rev. 7/86) filed with client December 19 95 [ ] attached.

I (WE) ESTIMATE THE MARKET VALUE, AS DEFINED, OF THE SUBJECT PROPERTY AS OF March 7, 19 96 to be $ 77,000

I (We) certify: that to the best of my (our) knowledge and belief the facts and data used herein are true and correct; that I (we) personally inspected the subject property, both inside and out, and have made an exterior inspection of all comparable sales cited in this report; and that I (we) have no undisclosed interest, present or prospective therein.

Appraiser(s) Signature ____ Name ____ Review Appraiser (if applicable) Signature ____ Name ____ [X] Did [ ] Did Not Inspect Property

Freddie Mac Form 70 10/86 [illegible] Forms and Worms Inc. [illegible] Fannie Mae Form 1004 10-86

appraisal process in panel B. Note that panel A contains the identification of the property and a general description of the property. Section II of panel B provides an example of the sales comparison approach to value. Some of the items that the appraiser will have to adjust the comparable properties for are: (1) time since the comparable has been sold, (2) location, (3) view, (4) design appeal, (5) quality of construction, (6) age of the property, (7) condition,

(8) size of rooms, (9) quality of interior finish, (10) functional utility, (11) type and condition of major systems such as central heat and air, and (12) sale or financing concessions.

When thinking about how comparable a property is to the subject property being valued, a general rule can be followed. This rule is: the more adjustments that have to be made to a potential comparable in order to make it more like the subject property, the less comparable it is likely to be. In other words, if many adjustments in value must be made to a property, it is less likely to be truly comparable to the subject and the likelihood of error in pricing increases. When selecting properties as comparables, the number of adjustments that must be made should be minimized.

When making these adjustments, the appraiser adds to, or subtracts from, the value of the *comparable properties* to reflect the differences in market value between the comparable and the subject property that are caused by different attributes. If the subject property is superior to the comparable property with regard to a particular attribute, then the appraiser will *add* to the value of the *comparable property*. If the subject property has attributes that are inferior to the comparable property, then the appraiser will *subtract* from the value of the *comparable property*. Recall that the value of the subject is unknown; hence, *adjustments must be made to the comparable properties*. After all adjustments have been made to the comparables, the adjusted values of the comparables should be approximately equal to the value of the subject.

The amount that the appraiser adds to, or subtracts from, the price of a comparable property is an estimate of the *market value* of attributes that are different when comparing the subject with comparable property. For example, in dealing with differences in the *site*, in panel B (middle) we see that comparables 1 and 2 are both "inferior" to the subject in the sense that the subject is a corner location and the comparables are not. Comparable 3 is also on a corner lot so no adjustment is made because this attribute is considered to be the same as the subject. The appraiser judges that such a difference is worth $1,950 in additional market value for the subject, and hence increases the prices of the *comparables* by $1,950. On the other hand, we note that comparable 2 has a two-car garage, whereas the subject has only a one-car garage. In this case, the price of the comparable 2 is adjusted *down* by the difference in the value of a two-car versus a one-car garage ($4,000). Again, the idea is to adjust the *comparables* until all positive and negative characteristics are priced and added to or subtracted from the comparables, leaving a residual value (after adjustments) that should be approximately equal in price to the bundle of characteristics contained in the subject property. The residual values of all comparables, after adjustments, should approach the value of the subject, which is unknown.

How does the appraiser estimate the value of these characteristics? Estimating is done on the basis of experience, judgment, and knowledge of how individual buyers and sellers tend to *price* these attributes in various neighborhoods, given the site and other property characteristics. In other words, the appraiser must be able to *identify* and *defend* the estimated increase or decrease in the total price of a property, given the addition or removal of one or more characteristics (garage, bedroom, bath, etc.). This may seem to be a difficult task; however, in many housing markets hundreds of properties are sold each week and the appraiser generally has access to these data. A process of comparison and continuous updating of information makes the estimation possible. It should be stressed that under the sales comparison approach to value, adjustments are *not* based on the *cost* of constructing improvements. All adjustments in value between the property being appraised and comparables must be made on the basis of how the appraiser believes the *market value* will be affected by the presence or absence of such attributes. This is because the *market* may not value attributes the same way that an individual may. For example, the cost of adding a swimming pool to a property in an area of small, older, lower-priced homes may not be recovered in the market price when the property is sold, even though the current owner may believe that the value of this addition is at least equal to its cost. In this case, the addition to *market value may not be equal to the cost of constructing the pool* because the appraiser may judge that buyers

composing the market for the property are not willing to pay as much for such an improvement as the current owner. Hence, the swimming pool may be referred to as an **overimprovement** to the property, and its full cost may not be reflected in the sale price.[5]

To obtain the final estimate of value under the sales comparison approach, the appraiser gives a *qualitative* weight to the residual price for each comparable. The weight assigned to each price depends on how many adjustments were made to each comparable. If many adjustments were made to a comparable, it would be given less weight, and vice versa. (Note that Comp. 1 had five adjustments, Comp. 2 had six adjustments and Comp. 3 had ten adjustments. However, Comp. 2 had the lowest dollar value adjustment.) The appraiser then assesses the final estimates for each comparable in relation to the qualitative weights (see the comments at the bottom of Panel B, Exhibit 7–6) given to each, and arrives at a final estimate of value. Note that it is not an average of the values for the three comparables. Summarizing from the above:

Summary	Comp. 1	Comp. 2	Comp. 3
Sales price	$65,000	$73,500	$67,500
Net adjustments	+10,200	+3,350	+8,900
Adjusted values of comps:	75,200	76,850	76,400

Based on the various adjustments to comparables and the appraiser's weighting of these estimates, a value of $76,850 ($77,000 rounded), is assigned to the property being appraised under the sales comparison approach.

An additional concern of appraisers when using the sales comparison approach to value is the possibility that a comparable sale price may contain financing benefits paid for by the seller of a property. The effects of **seller financing** may be present when the seller of a comparable is attempting to help the buyer qualify for a loan and has paid points or discount fees for the buyer, or has taken back a second mortgage at a below-market rate of interest, which usually reduces the borrower-buyer's monthly payments and cost of financing the property.[6] Sellers often recover such financing costs by charging a higher price for the property. If this property is used later by an appraiser as a comparable to estimate the value of another property, the use of its price may be inappropriate. This is a difficult situation for appraisers because unless they know the conditions of a property's sale, it will not always be clear whether the seller of a property has paid some of the buyer's financing costs. During times when interest rates are rising and buyers find it difficult to qualify, seller-paid financing is common. During these times, appraisers usually verify that a comparable transaction does not include seller financing by speaking directly with one of the parties to the transaction or the settlement agent before using the comparable in the appraisal process. If seller financing has been used in the transaction, the appraiser must reflect this in his estimate of value by estimating the cost of the seller financing and

[5] Overimprovements occur when individuals make improvements that they may prefer and/or believe will add value to the property. However, buyers in the market may not agree and will not pay for the full cost of the improvement. Similarly, a homeowner can also make an underimprovement, for example, if too small a house is built on a large site. In this case, individuals may not be willing to pay as much for the property as they would have if the relationship between the site and the improvement had been in conformity with other properties in the market area. Many textbooks are available on appraising if you want to pursue the topic (see the Appraisal Institute for sources).

[6] "Seller financing" occurs periodically in residential transactions. This problem is more prevalent in periods of high interest rates, when buyers have a difficult time qualifying for a loan. In these situations, sellers may finance all or part of the purchase at below-market rates of interest or contribute in some way to the buyer's cost of financing. Appraisers must be aware of such a possibility and make adjustments in their estimate of value.

subtracting this amount from the comparable value.[7] In the example shown in Exhibit 7–6, panel B, we see that no seller financing was present in any of the comparable sales.

The sales comparison approach gives the most reliable indication of value when there are a number of current sales of highly comparable properties and information about the circumstances surrounding the transaction is easy to obtain. When these conditions are in effect, appraisers prefer the sales comparison approach.

The Cost Approach

When using the cost approach, the appraiser establishes a *value for the land* on which the improvement is located, and then determines the *cost of reproducing the improvement* and adds the two. After adding the cost of the improvement and land value, the appraiser deducts an amount for any depreciation (if appropriate) that improvements have suffered since they were constructed. If the improvement has just been completed, the latter adjustment is usually unnecessary. This procedure is illustrated at the top of Exhibit 7–6, panel B.

In arriving at the estimate of land value, a procedure similar to that followed in the sales comparison approach is used. Comparable sites that have been recently sold are selected, and adjustments are made for differences in location, size, shape, and topography. In estimating the improvement cost, the appraiser will usually consult cost manuals for material, labor, and profit (overhead) as well as verify with local construction companies the costs associated with constructing improvements with specific physical and qualitative dimensions. Based on these sources, estimates of construction costs per square foot are made for living space, basements, garages, and second floors. Individual estimates are then made for fixtures (kitchen, bath, etc.), landscaping, and additional improvements (pool, porches, etc.).

In the event the improvement is not newly constructed, there are three types of *depreciation* that the appraiser may choose to deduct from the cost estimate just described. The first is depreciation in the property's value resulting from normal wear and is referred to as *physical depreciation*. Examples of physical depreciation include curable items, such as worn carpeting or walls needing paint. Incurable items, which include items such as foundation settling, may detract from a property's appearance but do not necessarily affect the usefulness of the structure. The second is depreciation resulting from internal property characteristics that make the property less livable or marketable than it was when first constructed. This is referred to as *functional obsolescence*. Examples of incurable functional obsolescence may include excessive amounts of hallway space. Curable obsolescence may include replacement of lighting fixtures. The third type of depreciation the appraiser will consider is called *external obsolescence*. It is caused by characteristics external to the property, such as changing land uses in a neighborhood that cause a structure to become obsolete before the actual building wears out. Examples of external factors that cause economic depreciation to occur include pollution, shifting land uses, or changing legal restrictions on land use.

The older a property becomes, the more difficult it is for the appraiser to estimate the amount of depreciation that should be used in the appraisal process. In the example shown in Exhibit 7–6, panel B, we see that the appraiser has estimated that for the subject property (which is 10 years old), physical depreciation amounts to $13,500, economic depreciation is $7,500, and no functional obsolescence was apparent. Based on the cost approach to value, we see that the appraiser assigns a value of $77,431 to the subject property.

The cost approach to value usually provides the most reliable estimate of value when comparable properties are newly constructed and require very few adjustments for depreciation. Appraisers also consider the cost approach when determining value if only a few transactions involving comparable properties exist and the sales comparison approach to value is difficult to use.

[7] This will be analyzed in detail in the next chapter.

The Income Approach

The income approach, a third appraisal method, establishes the market value of property by determining how much an investor is willing to pay for the income stream that a property produces. Using this method, the appraiser attempts to establish the relationship between a property's sale price and the monthly income stream it would produce if rented. The appraiser typically uses rents and prices from recent sales of rental properties that are similar to the subject property and determines the ratio of sale price to monthly rental income. This ratio is referred to as the gross rent multiplier. The value of the subject property would then be estimated by judging what the subject property should rent for (again by looking at comparable rental units and adjusting for dissimilarities), and then multiplying this estimate by the ratio established from comparable sales.

In our example we see in the lower portion of panel B in Exhibit 7–6 that the appraiser has estimated that, if rented, the subject would bring $650 per month. Given that comparable properties have recently sold for 116 times their monthly rents, it is reasonable that the same relationship would also hold for the subject. Hence, a value of $75,400, or $650 × 116, is arrived at by using the income approach.

Typically the income approach is difficult to use because sales of very comparable single-family rental properties are rare in an area. Consequently, appraisers tend to rely on the sales comparison and cost approaches when establishing value. However, it should be stressed that for some properties, such as condominiums, where many units are frequently rented, the income approach may provide a reliable estimate of value.

Final Estimate of Value

The appraiser must reconcile the different estimates of value provided by the sales comparison, income, and cost approaches when making a final estimate of value. This is accomplished by using a qualitative weighting method, in much the same way as in the sales comparison approach. The appraiser assigns subjective weights to each of the three values based on the reliability of the data and the number of adjustments that had to be made in each technique. More weight would be given to the method requiring fewer adjustments where data are verifiable, current, and complete. In our example, we see that the final estimate of value is $77,000, which, as the appraiser points out, is closest to the sales comparison and cost approaches.

Property Appraisal and Actual Sale Price

In our example, the sale price of a property agreed on between a buyer and seller does not exactly correspond to the appraised value. For example, a buyer and a seller agreed on a price of $76,700 for the property (see panel A) and the appraised value was $77,000. When considering the value of a property when making loans, lenders will generally use $76,700, or the lower of sale price or appraised value, as the value on which the loan will be based, unless there is convincing evidence to change it.

Property Values over Time

A cardinal rule followed by lenders is that loan security, which is dependent on the value of a mortgaged property, should never fall below the outstanding loan balance at any time during the life of the mortgage. In other words, the lender wants to be assured that the market value of the property will always be higher than the loan balance in the event of default by the borrower.

An additional consideration for the lender when considering the relationship of the mortgage balance and property value over time will be the potential effect of any *increases* in the mortgage balance relative to property value. This may present problems in the case of mortgage programs in which the loan balance may, or will, increase after the time of loan origination. (Recall the discussion in Chapters 4 and 5 dealing with the possible effects of negative amortization.)

Investing in "Distressed Properties"

The term *distressed* is used to describe various events or circumstances that usually result in the sale of properties that otherwise might not occur. Distressed properties may present opportunities for investors to acquire properties at below current market prices. *However, these discounts usually exist for a reason; otherwise, owners would simply sell their properties at current market prices as the properties become distressed.* As we will discuss, there are many reasons why properties become distressed and why owners may be willing to sell them for a discount. In such instances, investors usually acquire properties and provide an infusion of cash and hope to eliminate problems that may range from structural damage to legal issues affecting the title to properties. By remedying these problems, investors expect that the property value will increase enough to provide them with a satisfactory investment return.

Some of the personal financial and/or legal situations affecting the owner that may explain why properties become distressed are listed below. One or more of these factors may be occurring simultaneously.

Borrower inability to make mortgage payments.

Market value of the property below the mortgage balance.

Delinquent property taxes/property tax liens.

Internal Revenue Service tax liens.

Civil judgments/bankruptcy/divorce.

Mechanics and/or construction loan liens.

Personal debts.

Estate settlements

One very common reason why a distressed property becomes available is the borrower's inability to make mortgage payments. In this case, the borrower-owner of the property may not yet be formally in default, as the lender may be providing the borrower with a grace period on the loan, hoping that foreclosure proceedings can be averted.[8] However, if the borrower cannot "cure" the problem, it is possible that the lender may acquire title to the property directly from the owner (usually referred to as "deed in lieu of foreclosure"). By using this process, both parties may save time and foreclosure costs and avert an auction. However, if the lender and the borrower cannot agree on a deed transfer, the lender may have to foreclose. In these cases, the property may have to be sold at auction.

Another reason for default occurs in cases where property values fall below the outstanding loan balance. When this happens, properties are said to be "underwater" or "upside down." Situations like this can come about because owners may have overpaid for a property or overimproved a property relative to other comparable properties. Should property owners have difficulty making monthly loan payments on such an "underpriced" property, they may default.

Deterioration in local economic conditions, such as unemployment because of layoffs, plant closings, and the like, may lead to an increase in the number of distressed properties available for sale. Increases in unemployment may reduce household incomes and negatively affect the demand for housing. Such a market downturn may cause an extraordinary number of properties to become distressed and available for purchase.

There are also a number of events, usually unanticipated by homeowners, that may result in a distressed property situation. These events may not necessarily be related to the

[8] If the borrower's situation is believed to be temporary, a lender may also be willing to consider restructuring the terms of the loan. Such a loan restructuring is referred to as a *workout*.

condition of the property and could include liens because of unpaid income taxes or property taxes, judgments because of civil actions stemming from lawsuits or business failures, bankruptcy, divorce, default on personal loans and/or business loans, or the need to settle an estate. Property owners may be seeking a financial solution to these unrelated financial or legal problems and may be considering the sale of properties to raise funds.

In addition to the causes listed above, it should be stressed that real estate is not like financial assets such as stocks and bonds, many of which have very active and liquid markets where they can be traded. Real estate requires a considerably longer period of time to buy and sell. Trading residential properties with the attendant requirements to finance and close may require at least 60 to 90 days under normal circumstances. In cases involving distressed properties, it may take even longer. Furthermore, in cases where the current owner may have overpaid for a property, because of aggressive lending practices or poor estimates of price appreciation, buyers of distressed properties may have to carry properties until "repricing" occurs in a market environment that is changing. In these cases, investors are providing financing and taking "repricing" risk until the market stabilizes.

Financial Framework for Analyzing Distressed Properties

When analyzing an investment in distressed properties, investors usually consider a financial framework as shown in Exhibit 7–7. Note that items listed in Exhibit 7–7 are classified into three phases: (A) acquisition, (B) holding period, and (C) disposition. For the investment to be profitable (D), net cash inflow from the sale phase (C) must exceed costs expended in phases (A) and (B). When the exhibit is reviewed, a number of factors must be analyzed. Perhaps, the most important considerations have to do with thinking about the following general questions: (1) Why does the so-called distressed property situation exist? (2) Why cannot the current property owners remedy the things causing the problem and sell or rent the property themselves? (3) What services and investment will an investor have to make to restore the property value and justify its acquisition?

Acquisition Phase

Sources of Information for Identifying Distressed Properties

Banks and lenders maintain REO (real estate owned) lists that are usually made available upon request. These lists contain information on properties that lenders have acquired by deed in lieu of foreclosure or through foreclosure and auction. Because lenders are not in the business of investing and managing real estate, they are generally interested in

EXHIBIT 7–7
Summary of Financial Considerations When Investing in "Distressed Properties"

A. Acquisition Phase	B. Holding Period Phase
Acquisition costs:	Interim costs
Purchase price	Renovation costs
Market and legal research costs	Insurance, property taxes, and so on
Inspection costs	Interest on investor financing
Elimination of liens	Other
Other	Total costs during holding period
Total acquisition cost	
C. Provision Phase	D. Profitability
Expected sale price	C – (A + B)
Less: Selling expenses	
Net cash from sale	

selling such properties as soon as possible. REO lists also are maintained by the FHA, VA, and HUD. Properties are usually acquired by these agencies when a foreclosure occurs in conjunction with one of the FHA insurance, VA guarantee, and/or HUD affordable housing programs. These properties are usually advertised for sale or they may be auctioned to the public.

Many *individual* property owners advertise their desire to sell properties because of financial difficulty. One reason why this is done is so that they may try and avoid default and preserve their credit standing. The latter may be important to these individuals at some future time, if they re-enter the market to buy a property. At that time, they may have to apply for mortgage financing and will have to supply lenders with a credit history. Other sources of information include public announcements, by county property tax authorities, regarding properties that are being sold for delinquent taxes. Other auctions are announced by the Internal Revenue Service, which obtains court orders to auction properties that have been seized to satisfy tax liens.

Legal Research

A search of a property's title history is perhaps one of the most important activities that will require an expenditure by the investor. It often must occur prior to the acquisition of a property. This is very important because if the investor plans to eventually sell a distressed property, the next owner may require a general warranty deed to obtain title insurance and financing. Therefore, any legal issues must be known by investors *prior* to acquisition in order to estimate the cost of extinguishing liens and other factors affecting title. It should be pointed out that in some situations, when purchasing distressed properties, investors do not always receive a general warranty deed. For example, if an investor is purchasing a foreclosed property from a lender, the lender may be willing to provide the investor with only a "bargain and sale deed." This means that the lender will provide the investor with a title "as is." It is then up to the investor to decide if the title record is satisfactory. If the title record is not satisfactory, the investor may have to expend time and money to clear the title. In some other cases, lenders may be willing to give a "special warranty deed." This means that the lender will warrant the title against liens and encumbrances that occurred only during the period when the lender held title. No warranty is made by the lender regarding any liens or title imperfections *prior* to that time. In summary, unless the lender provides the investor with a general warranty deed, the investor may have to expend funds and negotiate with all lienholders and obtain releases, thereby clearing the title in order to sell the property at a later date.

The Auction Process

The auction process is important to understand (1) because of possible delays between the time that foreclosure and sale occur and (2) because other bidders are likely to be present at auction. Because of possible delays, investors must make a judgment as to if, or when, the property will actually be sold before expending funds on extensive legal or market research. It is important to note that each state has its own auction process that investors should understand. Generally, the auction process in the United States can be described under three categories. For example, in states following the *lien theory* of mortgages, foreclosures generally require a civil action (lawsuit) against the borrower-owner who is in default. A court hearing is held and a judicial declaration must be made terminating the property owner's equitable rights. This is followed by an order directing the sheriff to conduct an auction. In some cases, as a part of the civil action, delays may be requested by the borrower for many reasons. This may prolong the time from foreclosure to actual sale.

In states favoring the so-called *title theory* of mortgages, title is usually vested in the lender when the mortgage loan is made and reconveyed to the borrower when the loan

is repaid. In addition to having title, the lender is empowered to take certain steps in the event that the borrower defaults. These steps generally include providing the borrower notice of default and acceleration on the note, and that the sale of the property will occur to satisfy the debt. However, during this process, the borrower may bring an action to enjoin the lender from proceeding to sell the property. Actions taken by the borrower to prohibit and/or delay sale obviously affect the likelihood of a timely acquisition by investors. In some states, the so-called *modified lien theory* of mortgages is followed. Under this system, when a loan is made, title is invested in an independent third party (trustee). The trustee receives a deed of trust containing instructions to be followed if the lender provides notice to the trustee that a mortgagor is in default. In this event, the trustee usually notifies the borrower that the deficiency must be cured by a certain date or the trustee will proceed to auction the property. This process is different from the procedures described above in that it does not require a civil action or a court hearing. In order to delay this process, borrowers may take legal action and request that the court instruct the trustee to delay the property sale.

In summary, under all three systems, there may be opportunities for borrowers to bring legal action to delay the foreclosure-and-sale process. These range from claims that the lender and/or trustee did not give the borrower proper notice of default, challenges regarding contractual provisions in the note and/or the mortgage agreement, delays because of other actions pending against the borrower, bankruptcies, and so forth. In short, if the sale of the property at auction is delayed, the investor (1) may expend time and money on title research, (2) may have to wait even longer until the auction actually occurs, and (3) may not be a successful bidder when the auction occurs. These examples represent some of the costs and risks associated with the business of investing in distressed properties.

Lenders at Auctions

When properties are sold at auction, lenders holding notes and mortgages will bid for properties. Lenders are usually allowed to bid an amount at least equal to the mortgage balance owed them without providing additional cash. If the amount owed to the lender is close to the current market value of a property, the lender may be the successful bidder and will add the property to its REO list. But if the market value of the property is greater than the loan balance, an investor may outbid the lender. In the latter event, the lender must be repaid in order for the lien to be extinguished.

In cases where the current property value is less than the amount owed, the lender may bid an amount equal to the property value and sue the borrower for the deficiency. In this case, the property becomes a part of the lender's REO list and the lender will try to sell the property for as much as possible. In summary, as a part of the acquisition phase, investors must do a considerable amount of legal and market research. They must also decide whether or not there will be delays before an auction actually occurs and whether or not they will be successful bidders. Finally, they also must determine the amount of time, effort, and cost that will need to be expended to "clear the title" to the property they are acquiring. Otherwise, they may expend a considerable amount of time and money and not make a successful acquisition of the property.

Other Issues—Equitable Rights

Prior to bidding for properties at auction, investors must also identify the extent to which previous owners may have any equitable rights *after* an auction is completed. For example, in some states, statutory provisions are made for "equitable rights of redemption." This generally means that even after auction occurs and a new investor acquires title to a property, it may be possible for the previous owner to *reacquire title*. Generally, this may be

done if a previous owner pays all deficiencies plus any interest and penalties to the previous lender and the investor who obtained a property at auction.

In some other cases, courts of equity may award borrowers in default such redemption rights. Usually, such awards will be made based on the court's analysis of the extent to which a borrower has accumulated equity in a property prior to default (e.g., borrower defaults in the 29th year and 11th month of a 30-year mortgage). Obviously, investors interested in distressed properties in these situations must consider the likelihood that borrowers will be able to cure past deficiencies and reacquire title to such properties

Buying at Auctions Conducted by Public Entities

When buying properties at auctions conducted by public agencies, investors should determine the nature of the title that they may receive if they make a successful bid. In some states, for example, if investors obtain title at an auction resulting from delinquent property taxes, the investor may receive from the county what is referred to as a "tax deed." These deeds may provide that if the previous property owner in arrears can cure the past-due taxes within a prescribed time period and pay the holder of the tax deed an additional amount of interest and/or penalties, they may reacquire title to the property. Even if the previous owner fails to cure the deficiency, the county tax authority may not provide the new investor with a general warranty deed. It may be the responsibility of the holder of the tax deed to institute appropriate legal action in the state where the property is located to assure possession of legal and marketable title.

To reiterate, the quality of title is usually *critical* to the success of investing in a distressed property. Typically, in order to successfully sell the property at a later time, the investor generally must eventually have a *marketable title*. That is, the investor must be able to convey a deed of sufficient quality so the next purchaser of the property is able to obtain mortgage financing from conventional financing sources. Since lenders usually insist that the borrower acquire title insurance and that the title record be free of liens, investors must *decide* if this requirement can be met during the acquisition phase, or *prior* to bidding at auction.

Market Research/Costs

Expenditures on market research must also be made by investors prior to making an acquisition. The goal of the research is to determine the value of comparable properties that are likely to compete with the distressed property when it is ready for sale. This must also be done to establish the extent to which the distressed property must be improved or renovated in order to compete against other properties for sale and to set a sale price upon disposition. In cases where the value of a property has fallen below its original purchase price, investors must estimate whether prices are likely to fall further, or if and when prices are likely to recover. This research is also important because it will help to establish the offer that an investor must make at auction or when purchasing properties from individuals or lenders.

Inspection Costs

In addition to legal and market research, property inspections should be made at the beginning of the acquisition phase when developing a bid for a property. Items that are usually inspected include

- Land/building.
- Foundation.
- Drainage.

- Building quality and building code compliance.
- Environmental issues: lead paint, asbestos, and the like.

If problems are discovered, investors must estimate any outlays that must be made to remedy problems. These costs must be factored in during the acquisition phase and will affect the investment analysis made by the investor.

Holding Period Phase

Depending on what is required to achieve their investment objective, investors generally make outlays for various items during the period of ownership, including

- Renovation costs.
- Interest or other financial carrying costs.
- Property taxes and insurance.

In many cases, investors will choose to finance their investment. Typical financing sources include

- Assumption of outstanding mortgage debt.
- Personal loan or credit lines.
- Personal equity/other equity sources.
- First or second mortgages on other real estate owned.
- Home equity credit line on other real estate owned.

In some cases, the existing lender who has acquired a distressed property at auction or through a deed in lieu of foreclosure may be willing to finance the sale of a property to an investor. This may occur if the lender wants to dispose of a property and/or if the lender believes that it may avert a loss by allowing an investor to renovate and market a property.

As noted above, investors also may borrow by using their personal credit or by using other real estate that they may own as security for a loan. Such loans may be obtained by refinancing properties that they may own or by obtaining loans secured by second liens. In some cases, if investors plan on continuously bidding for a number of properties, lenders may be willing to provide credit lines to investors to acquire properties and to finance necessary improvements. See Exhibit 7–8 for an example of an investment analysis of a foreclosed property.

EXHIBIT 7–8
Example: Investment Analysis of a Foreclosed Property

ABC Bank has title to a 3,000-square-foot, three-bedroom, two-bath home situated on one-quarter acre of land. The bank acquired the property at auction for the loan balance owed by a previous owner and has added this property to its REO list. It has indicated that the asking price for the property is $200,000 and that it can convey a general warranty deed to the purchaser. GMI Sharpe Investors is considering the purchase of this property. An estimate of costs associated with the acquisition and expenses of owning the property for a period of one year is as follows:

Phase A: Acquisition fees:	
Legal counsel/research	$ 2,000
Inspection fee/report	500
Payoff of existing property tax lien	8,000
Total	$10,500

EXHIBIT 7–8 (Concluded)

Phase B Renovation costs:	
Carpet	$ 6,000
Dry wall repair/paint	1,000
Countertops/cabinets	3,000
Utilities during renovation	200
Roof repair	8,000
Plumbing/electric	3,000
Property taxes (1 year) and insurance	4,000
Interest ($200,000 personal loan @ 7%)	14,000
Total	$39,200
Phase C Sale phase	
Broker commission (6)	$ 6,000
Total	$ 6,000

Question

Assuming that GMI Sharpe acquires the property for $200,000, how much must the *property sell for* in order for Sharpe to achieve a 20 percent return (annual rate, compounded monthly) on its investment during this one-year period?

Cash Flow Analysis

Phase A: Acquisition		Phase B: Average Monthly Outflows	Phase C. EOY Sale
Purchase Price	$ 200,000	$3,267	Sale Price: TBD
Plus Acquisition fees	10,500		
Less: Loan	200,000		Less Selling expenses = $6,000
Equity	$ 10,500	$3,267	Repayment of loan = $200,000

Present value analysis:

$PV = -10,500$
$PMT = -3,267$
$n = 12$ months
$i = 20\% \div 12$

Solve for $FV = ?$ (net cash needed in year of sale)

Solution/Interpretation

A sale price at the end of year 1 must be great enough to repay the $200,000 loan plus $6,000 in selling fees and have enough cash flow remaining to make the investment worthwhile. Solving for *FV* produces $55,808, which is the *net* cash flow after the loan repayment and selling fees ($206,000) that must be realized at the *EOY1* in order to achieve a 20 percent return.

This means that GMI Sharpe must be able to sell the property for at least $261,808 ($206,000 + $55,808) in order to repay the loan, pay all costs of acquisition, holding, renovation, and sale, and earn a 20 percent *IRR* (annual rate compounded monthly). The investor must conduct careful market research to determine whether any comparable properties have sold in this price range or when, if ever, properties are likely to sell in this price range.

Pre-foreclosure Investments

In some situations, unanticipated events that affect the property owner but that are not directly related to the property or market conditions may result in properties becoming distressed. As indicated earlier, there are many events that may require a homeowner to obtain funds to repay business creditors.* In turn, this may cause a homeowner to sell a property to raise funds to satisfy debts. In some cases, it may be possible for an investor to contract to purchase a property whereby the seller delivers title on a future date and the

EXHIBIT 7–8 (Concluded)

investor immediately conveys title to a new buyer. In the meantime, the seller retains title and keeps existing loans alive. In the interim, the investor implements a necessary strategy to sell the property and acts as a middleman, taking title only briefly immediately before the property is sold. For example, the owner of a distressed property and an *investor* may agree on a specific selling price (or "strike price") and enter into an *option contract* to provide the investor title on or before a future date. This option may be exercised at the *investor's* option anytime between the date of the contract and the expiration date. The seller agrees not to abandon the property and also agrees not to enter into any other contracts that would encumber title to the property. The investor hopes to find a buyer before the expiration date of the option *and* simultaneously take title and sell the property and give title to a new buyer immediately. The funds received by the investor from the new buyer at closing are used to purchase the property from the seller who agrees to repay the outstanding debt. Title is then transferred from the previous owner to the new owner, with the investor obtaining title only briefly at the closing when transferring title to the new owner.

[1] In some states, the debtor's homestead may be protected from bankruptcy judgments caused by business failures or personal debts. However, such homesteads are not usually protected if the borrower defaults on a mortgage loan secured by the homestead.

Other Approaches to Investing in Distressed Properties — Concept Box 7.3

A. OPTION CONTRACT WITH SIMULTANEOUS TITLE CLOSING

Typical terms and conditions:

1. Investor contracts with seller for seller to deliver a deed at the option of investor at any time up to one year from the contract date.
2. Investor does research on real estate values and must be convinced that the distressed property can be resold at a favorable price. Investor determines the extent of liens. Investor may have to provide funds to clear title such as paying past-due property taxes prior to sale.
3. Investor may or may not agree to make monthly mortgage payments for seller during the option period. Investor usually obtains interim financing with a personal line of credit or home equity loan.
4. Seller agrees not to abandon the property, execute any contracts further encumbering the property, or make any physical modifications to the property in any way during the contract period.
5. When a new purchaser is identified by investor, investor exercises the option to buy the property. Seller then sells the property and delivers title to investor at the contract (strike price). Seller pays off mortgage debt with funds received from investor. Investor simultaneously sells property and transfers title to third party.

Summary—The investor does not take title until a new buyer is found. This usually saves the investor closing costs and financing fees. The risk is that no buyer will be found during the option contract period. Unless the option contract is extended, the investor loses all cash flows expended on research, monthly payments, and so on. The seller benefits in that foreclosure is avoided, thereby preserving credit. Assuming that the market price that the investor receives from the new owner exceeds the option price, the investor would keep any difference between the final sale price and option price as a return on investment. In the event that

the market value does not exceed the option price, the investor may elect not to exercise the option. However, as long as the market value exceeds the strike price on the expiration date, the investor may elect to exercise the option in order to minimize losses. Another reason for this option approach, as opposed to an outright purchase of the property by the investor, is to avoid transactions costs that may have to be paid twice during a short ownership period. Recall that the investor plans to have the property sold within six months. Therefore, taking title and incurring various closing costs during a short ownership period may significantly reduce the investor's returns and make the required sale price higher and could make the transaction not feasible. The risk to the investor is the potential loss of all cash outlays during the acquisition and holding period should the property value upon sale not increase enough to recover these costs and achieve the desired return. A related question is this: Why does the homeowner need the investor? In many cases, homeowners may not have sufficient cash to make monthly payments, pay property taxes in arrears, clear up title problems, and so on. Furthermore, this homeowner remains in the property for six months and does not have to make payments on the mortgage, property taxes, or insurance. Finally, this homeowner may not want to default on the mortgage loan, thereby avoiding future bad credit issues. Additionally, other issues relating to employment, marital status, possible business failure, and so on, may have higher priority and preclude the homeowner from investing the time and effort needed to dispose of the real estate. There is another risk that must be considered by the investor in the event that the market value of the property exceeds the option price. In this case, it is imperative that the investor execute a very well-written option contract in order to avert any motivation by the seller to default on the option contract with the investor and attempt to sell the property independently.

B. CONTRACT FOR FUTURE DEED

In some cases an investor may purchase a property; however, in order to sell the property, the investor and a *buyer* may have to enter into a contract for a future deed. This situation develops when a buyer would like to purchase the property, but cannot do so because of insufficient credit and has difficulty in obtaining financing. The investor may be willing to provide financing, but does not want to convey title as yet in order to avoid legal and other costs should the buyer default on the loan. Both parties agree on a specific selling price ("strike price") and enter into an *option contract*, whereby the investor agrees to deliver title to the new owner at a future date. This option may be exercised at the buyer's option anytime between the date of the contract and the expiration date. The buyer agrees not to abandon the property and also agrees not to enter into any other contracts involving the property. The buyer also must make monthly rent payments, some, or none, of which may be credited toward the selling price.

Typical term/conditions:

1. Investor purchases property and takes title.
2. Investor enters into a contract with a potential buyer to purchase the property at a specified price by a specific date. Investor agrees to deliver and close title if terms and conditions of contract are met.
3. Investor obtains financing and may pay property taxes and hazard insurance to avoid liens and to protect title to property during the contract period.
4. Potential buyer makes monthly payments (rent) to investor. Buyer attempts to accumulate additional equity and or repair any credit problems.
5. As a buyer eventually qualifies for financing and executes the purchase option, investor delivers title and receives strike price from buyer.*

*The effect of federal income taxes is not included in this analysis.

Disposition Phase—Exit Strategies

The obvious strategy that can be used to complete an investment in distressed properties would be to sell the property upon completion of the holding period phase. However, if a sale cannot be achieved because of a change in market conditions or for other reasons, an investor could consider converting a distressed property into a rental property to earn income or, perhaps, using the property as a personal residence.

Conclusion

Readers should now have a general understanding of the determinants of house prices and appraisal procedures used for residential mortgage lending. We have provided techniques for determining the appreciation rates in house prices and on equity, as well as federal income tax treatment for homeowners and comparisons with the cost of renting. We have also reviewed the three approaches used by appraisers to estimate the market value of residential properties. Various issues involving housing bubbles and investing in distressed properties have been discussed. Lenders and investors should be familiar with these concepts and with the assumptions made by each and their effects on value.

Key Terms

base industries, *196*
capitalization effect, *199*
capital gains exclusion, *192*
comparable properties, *202*
cost approach, *202*
distressed properties, *209*
driver industries, *196*
economic base, *197*
expected appreciation rate on home equity (EAHE), *193*
expected rate of appreciation in house prices (EAHP), *193*
gross rent multiplier, *208*
income approach, *202*
loan-to-value ratio, *193*
location quotient, *197*
market value, *201*
optimal size of cities, *200*
overimprovement, *206*
public goods, *199*
REO (real estate owned) list, *210*
sales comparison, *201*
seller financing, *206*
submarket, *201*
unrealized equity gain, *193*
wealth effect, *194*

Useful Websites

www.nahb.org—National Association of Home Builders

www.realtor.com—National Association of Realtors.

www.freddiemac.com/finance/cmhpi—Freddie Mac's Conventional Mortgage Home Price Index (FMHPI).

www.bestplaces.net—Statistics, including crime rates, on places to live.

https://data.ers.usda.gov—U.S. Department of Agriculture. This link includes median household income and unemployment data on every county in the United States

www.statetaxcentral.com/—Provides tax information for every state.

www.fairmark.com—This website is a good resource for finding tax-related policies. It can help in doing real estate analysis from a tax-saving perspective.

www.fhfa.gov—Federal Housing Finance Agency.

www.census.gov—U.S. Census Bureau. Publishes housing statistics monthly

www.bls.gov—U.S. Bureau of Labor Statistics. Publishes employment data for the entire United States and by metropolitan areas

www.bea.gov—Bureau of Economic Analysis in U.S. Department of Commerce. Provides data on income, RGDP, and other economic aggregates

www.homeprice.standardandpoors.com—S&P/Case-Shiller® Home Price Index.

Questions

1. Why is the income approach to value often difficult to use on a single-family residential appraisal?
2. What are the differences between the cost and sales comparison approaches to appraising property?
3. What are the capital gains rules as applied to residential property owners?
4. List four important drivers of housing demand and price appreciation.
5. What are public goods? How may they be reflected in house prices?
6. When considering an investment in "distressed" properties, what are the two most important areas of research that should be undertaken?

Problems

1. You are considering an option to purchase or rent a single residential property. You can rent it for $2,000 per month and the owner would be responsible for maintenance, property insurance, and property taxes. Alternatively, you can purchase this property for $200,000 and finance it with an 80 percent mortgage loan at 6 percent interest that will fully amortize over a 30-year period. The loan can be prepaid at any time with no penalty.

   You have done research in the market area and found that (1) properties have historically appreciated at an annual rate of 3 percent per year, and rents on similar properties have also increased at 3 percent annually; (2) maintenance and insurance are currently $1,500.00 each per year and they have been increasing at a rate of 3 percent per year; (3) you are in a 26 percent marginal tax rate and plan to occupy the property as your principal residence for at least four years; (4) the capital gains exclusion would apply when you sell the property; (5) selling costs would be 7 percent in the year of sale; and (6) property taxes have generally been about 2 percent of property value each year.

   Based on this information you must decide:

   a. In order to earn a 10 percent *IRR* after taxes on your equity, should you buy the property or rent it for a four-year period of ownership?

   b. What if your expected period of ownership was to change to five years? Would owning or renting be better if you wanted to earn a10 percent percent *IRR* after taxes?

   c. Approximately what level of rents would make you *indifferent* between owning and renting for a four-year period? Assume that a 4.5 percent after-tax *IRR* would be the minimum you would need to earn on capital invested in the home.

2. You are considering the purchase of a property today for $300,000. You plan to finance it with an 80 percent loan. The appreciation rate on the property value is expected to be 4 percent annually for the next three years.

   a. Approximate the expected annual average rate of appreciation on *home equity* for the *next three years*.

   b. What if you now think that a $300,000 purchase price may be somewhat high and that if you pay this price, the expected appreciation rates in your house price will be as follows: year 1=0%, year 2=3%, and year 3=3%. How will your answer to part (*a*) change?

3. You are trying to estimate the value of a property that you are interested in buying. The subject property is located at 322 Rock Creek Road in a new suburb of a large metropolitan area. The property is like many others in the area, with three bedrooms, two baths, a living room, a den, a large kitchen, and a two-car garage. The residence has about 1,800 square feet of air-conditioned space and is of traditional design. The property is located on an interior lot with no potential flooding problems. The quality of construction appears to be about average for the market area. The property being purchased was built within the past two years. Three properties have been chosen as comparables and they also were constructed within the past two years.

Comparable properties in the area have the following characteristics:

	Comparable I	Comparable II	Comparable III
Address	123 Clay St.	301 Cherry Lane	119 Avenue X
Sale price	$85,000	$79,000	$75,000
Time of sale	6 months ago	7 months ago	13 months ago
Design	Modern	Traditional	Traditional
Parking	2-car garage	2-car carport	1-car garage
Location	Corner lot	Interior lot	Interior lot
Drainage	Good	Below average	Good
Bedrooms	Four	Three	Two
Baths	Two	Two	Two
Construction	Average	Average	Below average

You have come to some conclusions concerning what you believe the different attributes of the comparable properties are likely to be worth in the market area. Appreciation in house values in the area has been very low over the past eight months, and you think that any properties that have sold within that period would probably not require any adjustments for the time of sale. However, one of the comparable properties sold over a year ago, and you think it will require a $1,500 upward adjustment. You also believe that properties in the area that are located near the creek sell for about $1,200 less than other properties in the area because of a slower rate of runoff after heavy rains. Properties on corner lots generally sell for a premium of about $1,000. Houses with the fashionable modern design usually bring about $1,000 more than those that have traditional design characteristics. Because three-bedroom homes are considered desirable by buyers in the area, an additional fourth bedroom will generally only add about $1,200 in value to a property. However, properties that contain only two bedrooms are rather difficult to sell, and often bring $2,000 less than their three-bedroom counterparts when they are sold. Most homes in the area have a two-car garage, but when properties have a one-car garage, they usually sell for about $800 less. A two-car open carport generally reduces the value of the property by a similar amount, or $800. The inferior construction quality exhibited by comparable III should reduce its value by about $1,500.

a You plan to complete the sales comparison approach to value and assign an estimate of value to the subject property. Give specific reasons for your choice of value.

b A second approach using the cost method of valuation will also be used to estimate value. Comparing vacant lot sales in the market area indicates that the value of the lot the subject property is constructed on is $13,000. Air-conditioned space in the dwelling would cost about $36.00 per square foot to reproduce, and the garage would cost approximately $3,700 to reproduce. Complete the *cost* approach to value, assuming that, because the property being valued is relatively new, no depreciation of the structure is required.

4. An investor is considering the acquisition of a "distressed property" which is on Northlake Bank's REO list. The property is available for $200,000 and the investor estimates that he can borrow $160,000 at 8 percent interest and that the property will require the following total expenditures during the next year:

Inspection	$ 500
Title search	1,000
Renovation	13,000
Landscaping	800
Loan interest	12,800
Insurance	1,800
Property taxes	6,000
Selling expenses	8,000

a. The investor is wondering what such a property must sell for after one year in order to earn a 20 percent return (*IRR*) on equity. What other issues must he consider?

b. The lender now is concerned that if the property does not sell, he may have to carry the property for one additional year. He believes that he could rent it and realize net cash flow before debt service of $1,200 per month. However, he would have to make an additional $12,800 in interest payments on his loan during that time, and then sell. What would the price have to be at the end of year 2 in order to earn a 20 percent *IRR* on equity?

5 You have an opportunity to acquire a property from First Capital Bank. The bank recently obtained the property from a borrower who defaulted on his loan. First Capital is offering the property for $200,000. If you buy the property, you believe that you will have to spend (1) $10,500 on various acquisition-related expenses and (2) an average of $2,000 per month during the next 12 months for repair costs, and so on, in order to prepare it for sale. Because First Capital Bank would like to sell the property as soon as possible, it is willing to provide $180,000 in financing at 8 percent interest for 12 months payable monthly (interest only). Your market research indicates that after you repair the property, it may sell for about $225,000 at the end of one year. Furthermore, you will probably have to pay about $3,000 in fees and selling expenses in order to sell the property at that time.

If you wanted to earn a 20 percent return compounded monthly, do you believe that this would be a good investment? If not, what counteroffer would you have to make First Capital in order to achieve the 20 percent return?

6. **Spreadsheet Problem.** Use the Ch7_Rent_vs_Own worksheet in the Excel workbook provided on the website. Determine the after-tax *IRR* for owning versus renting in each of the five years with the following changes in the original assumptions in the spreadsheet:

a. The homeowner has a 15 percent marginal tax rate instead of 28 percent.

b. Rents and property values will not increase over the five years.

c. The loan amount is $105,000 instead of $120,000.

d. The initial rent for year 1 is $15,000 instead of $12,000.

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