The Complete Guide to REAL ESTATE FINANCE for INVESTMENT PROPERTIES

How to Analyze Any Single-Family, Multifamily, or Commercial Property

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It has been said that there are angels here among us. This book is dedicated to my sister, Melanie, who is one of them. Angels are special messengers of God who have come to minister to the needs of His children here upon the earth. I have observed my sister's unwavering devotion to her family, friends, and faith throughout her entire life. Not once have I ever heard her complain of the heavy burdens she bears. She has instead chosen to take the high road by walking in faith and humility. She always has a smile on her face and uplifting words of encouragement for my family. I know that the light and joy that radiate from her countenance are truly that of an angel. My heart cries out in gratitude to her. My lips praise her name. My spirit is uplifted because of her. Thank you, Melanie, for your example of love and charity for all of us who are privileged to be a part of your life. Thank you for being an angel here among us.

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The Complete Guide to REAL ESTATE FINANCE for INVESTMENT PROPERTIES

Part 1

Real Estate Finance

Chapter 1

Introduction to Real Estate Finance

As investors continue to migrate from the stock market to the real estate market, the need for sound financial analysis of income-producing properties is greater than ever. Just as buying high-flying stocks with no regard to intrinsic values resulted in hundreds of thousands of investors losing their life savings, so will buying real estate with reckless disregard to property values result in a similar outcome. While an abundance of books have been written on how to buy and sell houses, the market is virtually devoid of any works that specifically address the topic of the principles of valuation as they apply to real estate. Notable exceptions include more expensive titles such as *Real Estate Finance and Investments* by Brueggeman and Fisher, with a list price of $125, and *Commercial Real Estate Analysis and Investments* by Geltner, boasting a list price of $114.

The Complete Guide to Real Estate Finance for Investment Properties: How to Analyze Any Single Family, Multifamily, or Commercial Property focuses on the concepts of financial analysis as they pertain to real estate and is intended to help fill the void that currently exists regarding this subject. This represents a marked contrast from the works previously referred to in three primary ways. First of all, the other works are much more expensive. Second, they have been written to appeal to a different audience in that they are written in a textbook format with both the student and the professional in mind. Finally, the other works deal with advanced theoretical principles of

finance, which are of little value to the investor who most likely has no background in finance.

The Complete Guide to Real Estate Finance for Investment Properties, on the other hand, is designed to appeal to those individuals who are actively investing in income-producing properties, as well as to those who desire to invest in them. Furthermore, those same individuals who are now investors will at some point have a need to divest themselves of their holdings. Whether an investor is buying or selling, the basis for all decisions must be founded on the fundamental principles of finance as they apply to real estate valuations. The failure to understand these key principles will almost certainly result in the failure of the individual investor. At a minimum, it will place him or her at a competitive disadvantage among those who do understand them. Recall the myriad of investors who bought stocks for no other reason than that they received a so-called hot tip from a friend or coworker—and who later collectively lost billions of dollars. A similar outcome is almost certain for those individuals investing in real estate who fail to exercise sound valuation principles and act on nothing more than the advice of someone who has no business giving advice, such as a broker with a supposedly hot tip.

The Complete Guide to Real Estate Finance for Investment Properties is further intended to take the theories of real estate finance discussed in other books and demonstrate how they can be used in real-world situations. In other words, it is the practical application of these theories that really matters to investors. An in-depth examination of several case studies will provide the learning platform necessary for investors to make the transition from the theory of real estate finance to its practical application. Investor comprehension will be further augmented through the use of several proprietary financial models developed by me for the sole purpose of making sound investment decisions.

Now that I have established what this book *is* about, I'll take a brief moment to establish what it *is not* about. The term *finance* as used throughout this book is generally intended to refer to principles of financial analysis and not to debt instruments such as loans or mortgages that are used for *financing* real estate. This is not a book about

creative methods of borrowing money or structuring nothing-down deals. Hundreds of those types of books are already available, including a few of my own. My purpose in specifically defining what this book is *not* about stems from the misleading titles of some currently very popular real estate books that contain the word *finance* in their titles. Perhaps the phrase "real estate finance" means creative borrowing techniques to the authors who wrote them, but to professionals schooled in the principles of finance, the phrase encompasses a completely different body of knowledge. This is not to say, however, that financing mechanisms are not discussed in this book, for they certainly are. Debt and equity instruments are discussed out of necessity, as their respective costs must be properly understood for the purpose of measuring returns and values, as well as evaluating the implications of using different types of financial instruments for different types of transactions.

This book is organized into three parts, beginning with Part 1, which examines the principles of real estate finance. Chapter 1 introduces the world of financial analysis as it applies to real estate investments. Chapter 2 focuses on primary investment elements and their effect on financing. Chapter 3 then centers on secondary investment elements, and Chapter 4 focuses on still other investment elements and their impact on financing. Chapter 5 shifts to an examination of the various types of debt and equity instruments available and their impact on returns. Chapter 6 includes a discussion on various investment performance measurements and ratios, including return on investment, capitalization ratio, and debt service coverage ratio. Chapter 7 is devoted to a more advanced analysis of real estate investments and includes topics such as understanding present value and future value concepts, internal rate of return (IRR), calculations, and modern real estate portfolio theory. Chapter 8 explores the realm of the three most commonly used valuation methods for the different classes of real estate. Chapter 9 provides a discussion on financial statements, including how to more fully understand them and how you can use them to make prudent buy-and-sell decisions.

Part 2 takes most of the information discussed in Part 1 and uses it in a case study format. Chapter 10 examines real estate finance as

it applies to the valuation of single-family houses. Chapter 11 provides an in-depth look at converting property from one use to another. Chapter 12 is a case study that examines a multifamily apartment complex and walks the reader through a comprehensive analysis. Finally, Chapter 13 demonstrates how understanding finance and the different valuation methods can provide significant opportunities to create value for the astute investor by converting a single-family property into a commercial office building.

Part 3 consists of an epilogue containing words of inspiration and several motivating ideas, appendixes, and an extensive glossary.

FINANCE AS A DISCIPLINE

If you are a business student, the first two years of college for both accounting and finance majors are nearly identical. Each requires the basic English, history, math, and general business studies. By the third year of college, however, the two disciplines begin to chart separate courses. While both subjects deal with numbers and money, they are quite different in the way they do so.

The accounting discipline, for example, centers on principles used primarily for bookkeeping purposes and is based on a body of rules referred to as the *generally accepted accounting principles* (GAAP). Although there is some disagreement by scholars of many of the more advanced rulings, the principles established in GAAP are nevertheless to be firmly applied and adhered to when recording entries. As a general rule, the accounting principles are rigid rules that must be applied for bookkeeping and tax purposes.

The discipline of finance, on the other hand, centers more on the valuation and use of money than on record keeping. Finance is an exploration into the world of micro- and macroeconomic conditions that impact the value of a business's assets, liabilities, and investments. While there are certainly rules and laws that govern the principles of finance, it is a subject that remains fluid and dynamic. The expansion and contraction of businesses live and die by those who understand these laws and their effect on value.

Professors Lawrence Schall and Charles Haley, authors of *Introduction to Financial Management* (New York: McGraw-Hill, 1988, p. 10), further expound on the discipline of finance by asserting that "Finance is a body of facts, principles, and theories dealing with the raising (for example, by borrowing) and using of money by individuals, businesses, and governments." In part, finance deals with the raising of funds to be used for investment purposes to help these various types of entities generate a return on their capital. In addition, the authors state (ibid., pp. 10–11):

> The individual's financial problem is to maximize his or her well-being by appropriately using the resources available. Finance deals with how individuals divide their income between consumption (food, clothes, etc.) and investment (stocks, bonds, real estate, etc.), how they choose from among available investment opportunities, and how they raise money to provide for increased consumption or investment.
>
> Firms also have the problem of allocating resources and raising money. Management must determine which investments to make and how to finance those investments. Just as the individual seeks to maximize his or her happiness, the firm seeks to maximize the wealth of its owners (stockholders).
>
> Finance also encompasses the study of financial markets and institutions, and the activities of governments, with stress on those aspects relating to the financial decisions of individuals and companies. A familiarity with the limitations and opportunities provided by the institutional environment is crucial to the decision-making process of individuals and firms. In addition, financial institutions and governments have financial problems comparable to those of individuals and firms. The study of these problems is an important part of the field of finance.

There you have it. Professors Schall and Haley have outlined some of the fundamental issues that financial managers in both private and

public sectors deal with on an ongoing basis. Raising capital, whether debt or equity, is essential to the successful operation of a firm. What is even more essential is the proper management of that capital.

I recall very distinctly during my sophomore year of college being faced with the decision of choosing the accounting or finance discipline. At the time, I didn't know any accountants and I didn't know any financial analysts, so I wasn't quite sure whom to turn to. What I did know, however, was that most of my colleagues were choosing the accounting route and encouraged me to do so as well. After all, that's where all the jobs were, according to them. I didn't really care if that's where all the jobs were. All I cared about was becoming fully engrossed in a field in which I would be the happiest.

My assessment of accounting was that it was rather dry and boring. Accounting represented mundane and repetitive tasks governed by a rigid set of principles. It was the recording of a company's income and assets that reflected its value at that specific moment in time. This is typically referred to in accounting circles as a "snapshot in time." Quite frankly, snapshots bored me. I was more interested in making movies than in taking pictures. Finance opens up an entire world of possibilities that accounting can't even dream of. It takes the snapshot made by accountants and brings it to life by exploring the vast universe not of what a company is, but rather, that of what it can become. Finance scrutinizes every strength and weakness of the photograph to measure its true potential. It exhausts every possibility to breathe the breath of life into it. Finance is an exciting field that allows individuals to use all of the creative faculties inherent within them to grow in ways limited only by one's imagination.

I can only wonder whether my colleagues who chose the accounting field are happy in their profession. As for me, I chose the road less traveled and haven't looked back since. Some 20 years or so later, I can say with all the sincerity of my heart that for me it was the right choice. I should add that it is not my intent to offend those of you who may be accountants or to demean your role as a professional in any way, as reports generated by accountants provide valuable information for both internal and external users of financial

statements. My assessment of the accounting profession represents exactly that—my assessment.

THE RELEVANCE OF FINANCE AS IT APPLIES TO VALUE

In Chapter 4 of *The Complete Guide to Investing in Rental Properties* (New York: McGraw-Hill, 2004), I described my zeal for finance, along with a portion of my background, as follows:

> Let me begin this chapter by emphatically stating that I thoroughly enjoy the subject of finance, and in particular as it applies to real estate. Finance and real estate are the two greatest passions of my professional life. For as long as I can remember, I have always been fascinated with money. This fascination eventually helped shape my course in life as I later majored in finance in both my undergraduate and graduate studies.
>
> After graduating, I had the opportunity to work as a financial analyst at one of the largest banks in Texas. As part of the mergers and acquisitions group, my work there centered around analyzing potential acquisition targets for the bank. One way companies grow is by acquiring smaller companies that do the same thing they do. This is especially true of banks. Big banks merge with other big banks, and they buy, or acquire, other banks that are usually, but not always, smaller than they are. I believe our bank was at the time about $11 billion strong in total assets. It was my job to analyze banks which typically ranged in size from about $25 million up to as much as about $2 billion. I used a fairly complex and sophisticated model to properly assess the value of the banks. This experience provided me with a comprehensive understanding of cash flow analysis which I later applied to real estate.

Like many of you, in my earlier years, I owned and managed rental properties and read just about every new real estate book that

came out. They all seemed to be saying the same thing, with only slight variations in theme, some delving into nothing-down techniques while others focused on slowly accumulating a portfolio of properties, gradually building a level of cash flow sufficient to provide a living, otherwise known as the *buy-and-hold approach.*

The more I read, the more I discovered that none of these books focused on what matters most in real estate, that being the accumulation of properties that are properly valued, as well as their subsequent disposition, with the difference being sufficient enough to allow investors the opportunity to profit. Proponents of the buy-and-hold strategy would argue that because the holding period extends over many years, price doesn't matter as long as an investor can purchase real estate with favorable enough terms. Nothing could be further from the truth. It is precisely this kind of misinformation that led thousands, if not millions, of investors over the cliff in the collapse of the stock market in the three-year period that began in the year 2000.

Price didn't matter as long as it was going up and the terms were good. Since value is a function of the price paid, and price didn't matter, value didn't matter, either. Investors overextended themselves buying on margin and otherwise using borrowed funds with absolutely no regard for an asset's value. Most of these investors probably had no conceptual basis for their purchase decisions to begin with. In the end, many of those same investors watched in horror as their life savings evaporated right before their very eyes.

Although I had bought and sold real estate for a number of years prior to my experience at the bank, it wasn't until I gained a more complete understanding of the principles of finance learned during my graduate studies and my tenure at the bank that I was able to significantly accelerate my investment goals. I developed my own proprietary financial models, which enabled me to more fully analyze an asset's value based on its cash flows and price relationship to similar assets. The combination of these financial analysis tools and a sound understanding of valuation principles has allowed me to increase my personal real estate investment activities from a meager $25,000 a year in volume to a projected $8 to $10 million this year alone. Through duplication and expansion, which are part of a well-defined plan, I fully expect to increase these projections to buy and

sell over $100 million in real estate annually within the next three to five years. This may be a bit aggressive for most investors, but I can see this level of activity in my mind's eye just as clearly and vividly as the sun shining in all its glory on a midsummer's day. The pieces are already being put into place to help me achieve this not-too-distant objective.

Achieving goals of this magnitude exemplifies the difference between the finance and accounting disciplines. The world of finance can unlock the doors of commerce in a way that most accounting professionals can only dream of. A working knowledge of the principles of cash flow analysis coupled with a comprehension of valuation analysis will allow investors to chart their own course in the real estate industry—or any other industry for that matter.

Chapter 2

Primary Investment Elements and Their Effect on Financing Strategies

To achieve the magnitude of investment activity referred to in my own personal example in Chapter 1, an investor must have clearly defined goals. The goals you establish will directly impact your financing strategies. Three primary financing elements around which all real estate investment activity centers are time, volume, and the type of property (see Exhibit 2.1). Once you have determined your time horizon, the rate at which you intend to buy and sell, along with the type of real estate you will invest in, the proper financial instruments may then be put in place.

TIME HORIZON

Most real estate professionals incorporate the element of *time* into their investment strategy. The element of time refers to the duration of the holding period. In other words, it is the length of time a particular piece of investment property is intended to be held. While some investors, for example, prefer to adopt a short-term approach by "flipping" or "rehabbing" houses, other investors prefer to adopt an intermediate-term approach, which includes buying, managing,

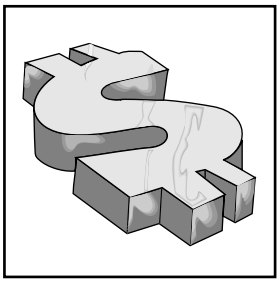

Exhibit 2.1
Primary financing elements.

1. Time horizon
2. Volume of investment activity
3. Type of investment property

and holding rental property for three to five years. Still others prefer to purchase office or industrial buildings and hold them for periods as long as 10, 20, or even 30 years. Establishing your investment horizon before obtaining financing is crucial to developing a sound strategy. You must know beforehand if you are going to hold the property for just a short time, for many years, or for somewhere in between, since the variable of time is used to calculate interest rates. Time will also have an impact on whether you obtain a floating rate or a fixed-rate loan, as well as any prepayment penalties that may be associated with the loan.

In *The Complete Guide to Flipping Properties* (New Jersey: John Wiley & Sons, 2004), I elaborated on the element of time as follows:

> Time can have a significant impact on the growth rate of your real estate portfolio. Time affects such things as the tax rate applied to your gain or loss. The long term capital gains tax rate has historically been more favorable than the short term tax rate. Time is also the variable in the rate of inventory turnover. Large retailers are willing to accept lower profit margins on items they merchandise in exchange for a higher inventory turnover rate. Would you rather earn twenty percent on each item, or house, you sell

and have a turnover rate of one, or would you rather earn eight percent on each item you sell and have a turnover rate of three? Let's do the math.

$$\text{Turnover ratio} = \frac{\text{turnover}}{\text{years}} = \frac{1}{1} \times 20\% = 20\% = \text{total return}$$

or

$$\text{Turnover ratio} = \frac{\text{turnover}}{\text{years}} = \frac{3}{1} \times 8\% = 24\% = \text{total return}$$

This simple example clearly illustrates that an investor can accept a lower rate of return on each property bought and sold and earn a higher overall rate of return, provided that the frequency, or turnover rate, is increased. I should mention that this example does not, of course, take into consideration transaction costs. These costs may or may not be significant depending on your specific situation, but they must be factored in when analyzing a potential purchase.

Investment time horizons typically fall into one of three categories: *short term, intermediate term,* and *long term.* Short-term investors are defined as those individuals who buy and sell real estate with a shorter duration. They typically hold their investments less than one to two years. This class of investor most often seeks gains by adding value through making improvements to the property, or by taking advantage of market price inefficiencies, which may be caused by any number of factors, including distress sales from the loss of a job, a family crisis such as divorce, or perhaps a death in the family. The shorter holding period does not allow enough time for gains through natural price appreciation caused by supply and demand issues or inflationary pressures.

The short-term investor may furthermore seek to profit by using the higher-inventory-turnover strategy and, as a result, may be willing to accept smaller returns, but with greater frequency, thus realizing an overall rate of return considerably higher than the long-term

approach, as demonstrated previously. Since current tax codes penalize short-term investors by imposing higher tax rates on short-term capital gains, they must factor this into their analysis before ever purchasing a property.

The proper financing mechanism is also a key part of an investor's analysis. In a short-term strategy, an investor can often take advantage of a loan with a more favorable floating or adjustable rate as opposed to a longer-term fixed-rate loan. In addition, depending on the type of financial instrument procured, principal payments may not be required. This provision allows an investor to minimize his or her outgoing cash flow by making interest-only payments. Cash flow is the name of the game in real estate. Learn to use it to your benefit. Finally, you should be aware of any prepayment penalties that may be imposed on short-term financing. Banks are especially notorious for assessing this additional type of fee income on a loan. Their decision to do so is based on the premise that since the loan is short term in nature, they must charge additional fees to offset their other costs associated with making the loan, such as administrative costs. That argument, however, is the same one lenders use to justify charging a loan-origination fee, which is typically one point, or 1 percent. If you have a good track record and are an established investment professional, prepayment penalties can usually be negotiated down to a minimum, and oftentimes will be waived all together.

Intermediate-term investors most often hold their properties for at least two years but no more than five years. This class of investor typically seeks gains through a combination of increases in property values, resulting from price appreciation due to supply and demand constraints in the local market, and by making modest improvements to the property. Reducing debt to increase cash flow is not as high a priority for intermediate-term investors as it is for their long-term counterparts. This class of investor also tends to be more highly leveraged than do long-term investors. Finally, since intermediate-term investors hold their investment properties for a minimum of two years, they are able to take advantage of the lower and more favorable long-term capital gains tax rate. As the tax laws are currently written, income derived from the sale of assets with a holding

period shorter than 18 months will be treated as ordinary income and therefore subject to a higher tax rate.

Once again, the proper financing mechanism is a key part of an investor's analysis. In an intermediate-term strategy, an individual can, like the short-term investor, take advantage of a more favorable floating-rate loan. If the time horizon is firmly established as one that will not exceed five years, I recommend using floating-rate instruments in most cases, since they almost always carry lower interest rates than do fixed-rate loans. The exception to this recommendation is, however, that if rates are forecast to rise in the near future, it may be better to lock in a fixed rate now than to run the risk of rapidly increasing rates. Similarly to short-term financial instruments, you may be able to obtain a loan in which principal payments are not required.

Depending on the needs of the seller, you may even be able to negotiate a deal in which no periodic payments whatsoever are required. This includes both principal and interest. I've used this technique myself; as a matter of fact, I very recently closed on a land deal valued at $3.3 million that will not require any periodic principal or interest payments. The seller agreed to carry the note and allow the interest to accrue. The interest will become payable at the time individual lots from the land are released, which occurs when my company, Symphony Homes, builds a house on it (see Appendix B). At that time, a construction loan is obtained to pay both the accrued interest and the principal balance to the seller. Interest-only payments are then made to the bank over the next four months or so until the house is completed and sold.

Long-term investors may purchase real estate properties and keep them in the family for generations. They will typically hold them for a minimum of five years, but oftentimes much longer. Long-term investors seek gains through capital appreciation by simply holding and maintaining their investments while making improvements on an as-needed basis. They sometimes seek to minimize the associated debt and maximize the cash flow generated by the property through an acceleration of both interest and principal payments. Although in the short term, investors adopting this strategy will decrease the property's cash flow by making larger monthly payments, they will

eventually increase its cash flow by eliminating the debt altogether. As a result, long-term investors are usually not fully leveraged. They generally prefer the positive cash flow to being excessively leveraged. Long-term investors are able to take advantage of the more favorable long-term capital gains tax rates when they do eventually decide to sell. In addition, long-term investors may elect to take advantage of deferring the tax liability indefinitely through a provision outlined in the Internal Revenue Code referred to as a 1031 exchange.

Investors adopting a long-term strategy will most likely desire to insulate themselves from variations that occur in a sometimes volatile interest rate environment by locking in fixed-rate loans at the time of purchase. However, like short-term investors, they can take advantage of more favorable floating-rate loans. Depending on the type of financing instrument used, long-term investors may or may not be subject to prepayment penalties. Some debt instruments, such as conduit loans, carry heavy prepayment penalties in the early years. Conduit loans are reserved for larger income-producing properties and usually have a minimum loan amount of $1 million, although smaller loans are available. A complex prepayment penalty is almost always imposed on these types of loans, since the loans are securitized and then sold to investors. The prepayment penalties are used to ensure that investors who buy the loans are guaranteed a minimum yield on their related investment.

VOLUME OF INVESTMENT ACTIVITY

The element of *volume* is the second significant factor that affects an investor's strategy and the type of financing to be used. For example, increasing the volume of units bought and sold, or *flipped,* increases the investor's opportunity to generate profits. By the same token, increasing the volume of units bought, managed, and held in a portfolio increases the investor's opportunity to generate income.

Increasing the volume, however, can significantly increase your transaction costs, especially if you're a short-term investor. If, for example, the lender charges you one or two points every time you obtain a loan for a house you're going to flip, the costs for financing

can add up quickly and will significantly increase the annualized rate of interest. Let's look at an example. Assume you are purchasing a house for $100,000 to rehab and then flip. Let's also assume that you're pretty good at doing this and that the average time it takes you to buy, rehab, and sell a property is three months.

Purchase price = $100,000
Interest rate = 6.0%
Loan-origination fee = 1.0%
Turnaround time = 3 months
Interest paid = $100,000 × 6.0% ÷ 12 × 3 = $1,500
Loan-origination fee = $100,000 × 1.0% = $1,000
Total interest and fees = $1,500 + $1,000 = $2,500
Effective interest rate = ($2,500 ÷ $100,000) ÷ 3 × 12 = 10.0%

As illustrated in this example, although the stated interest rate of 6.0 percent would be considered a very competitive rate for most investors, the effective rate of 10.0 percent is not nearly as competitive. In fact, in a 6.0 percent interest rate environment, many investors would not walk, but would instead *run* out of the bank if the lender told them the interest rate would be 10.0 percent.

Okay, so maybe $1,000 isn't a deal killer for this particular investment, but now let's factor in volume. Instead of buying just one house per year, assume you have assembled a team of individuals to work with you and have increased your volume to 100 houses per year. The $1,000 in additional fees has now become $100,000. Who wants to leave $100,000 on the table for the lender? Nobody, that's who (besides the lender).

The best way to eliminate fees of this type is by negotiating with your lender for a line of credit. A line of credit will provide you with a predetermined amount of money to draw against to finance not only the purchase of the houses, but also the repair work that will be needed as well. A line of credit is just like a credit card, but with a much higher limit. An investor can borrow as much as needed up to the predetermined credit limit. Since funds are borrowed only as they are needed, this helps to reduce the overall carrying costs the investor otherwise might incur.

I should add that, as a general rule, lenders will not extend a line of credit to anyone who does not have a solid financial statement, which includes strong cash reserves. Lines of credit are most often unsecured, which means the lender has no collateral. The terms *lender* and *no collateral* mix together about as well as water mixes with oil. One could arguably draw the conclusion that lenders must be insecure, since they always want some type of security. I suppose that might be stretching it a bit, though. In reality, lenders just want to protect their interests. When they loan money, they like to get something of value in return to hold as collateral just in case the borrower defaults. With an unsecured line of credit, the lender has no such protection, and that is exactly why it is difficult to get unsecured loans.

Although you may not be able to get an unsecured line of credit, you may be able to start with a secured line of credit by offering the lender some type of collateral. Forms of collateral you may be able to offer include equity in any type of asset you own, such as the following:

- Your personal residence
- Investment property you may own and have equity in
- Business property such as an office building or equipment
- Notes payable to you that are secured by an asset (for instance, from owner-financed sales)
- Financial instruments such as stocks, bonds, certificates of deposit, and annuities
- Retirement accounts (only if the lender can secure an interest in them, though)
- Precious metals such as gold, silver, and platinum
- Personal assets such as boats, automobiles, jewelry, and furnishings

Once investors have proven to a lender that they are capable of repaying loans on a timely basis, the lender may gradually become more comfortable with extending larger lines of credit. This will depend in large part on an investor's own personal financial strength.

If lenders determine that particular investors are tapped out and have depleted their cash reserves, those lenders may not be willing to lend them anything. It's all about building relationships and trust over an extended period of time. It doesn't happen overnight, but it will happen as long as an investor is able to prove that he or she is responsible and trustworthy.

TYPE OF PROPERTY

The *type of property* an investor purchases is the third primary element that affects an investor's strategy and the type of financing to be used. Property types that produce income are most commonly classified as single-family, multifamily, or commercial. The type of loan obtained for any real estate property will largely be determined by the type of property being purchased. Financial institutions provide an array of products that are suited for particular investment types.

The term *single-family property* is a bit misleading, as it actually encompasses all real estate with at least one living unit and not more than four living units. In other words, a house, as well as a duplex, triplex, and fourplex, are all classified as single-family properties as far as lenders are concerned. Because single-family properties are by far the most common of the three types, mortgages are readily available for them from most financial institutions.

Loan provisions for single-family properties will of course vary from lender to lender. By either shopping around yourself or using the services of a mortgage broker, you can easily compare the alternatives available among conventional lenders and select the one that best meets your needs. In *The Complete Guide to Investing in Rental Properties* (New York: McGraw-Hill, 2004), I elaborated in considerable detail on the intricacies of financing for single-family properties. Following is an excerpt taken from Chapter 5.

> Conventional bank financing is often available through small local banks. These types of banks may operate with just one or two branches and have a small deposit base of only $15 to $20 million, or they may be somewhat larger

with as many as five to ten branches and $200 million in deposits. One primary advantage to using a local bank is that they can often provide borrowers with more flexibility than more conventional sources such as a mortgage company. Local banks may, for example, loan money to purchase a rental property as well as to make improvements to it.

Small local banks are also much more likely to be familiar with the local area and would therefore have a greater degree of confidence in the specific market than a larger regional or national lender would. A personal relationship with a local banker is much easier to establish also than with other types of lenders such as conventional mortgage companies. In a local bank where decisions are made in part based upon these relationships, an investor can go into a bank, introduce himself, and speak directly with the lender. This affords investors with an opportunity to sell themselves as well as their project. Once a relationship has been established and the banker gets to know you and is comfortable with you, future loan requests will be much easier and will likely require less documentation, possibly as little as updating your personal financial statement.

Local banks are one of many sources available to finance single-family properties. Additional alternatives you may wish to consider include obtaining a mortgage, using an existing line of credit, or having the seller carry all or part of the note. You may also want to consider using an option agreement, which is more fully explained in Chapter 5.

Financing for multifamily properties typically involves using a network of institutional lenders or investors different from those mortgage companies that provide financing for single-family properties. Remember, the primary criterion that separates the two property types is the number of units. Single-family housing is considered to be anything from one to four units, whereas multifamily properties are those with five or more units. In *The Complete Guide to Buying and Selling Apartments* (New Jersey: John Wiley & Sons, 2004), I

described several of the lending programs available to multifamily investors. Following is an excerpt from Chapter 7.

> Specialty apartment lending programs are designed specifically with the small multifamily investor in mind. They are the product of listening to feedback from investors such as yourself and have been streamlined and tailored especially for borrowers in the apartment business. In addition, since many lenders focus on the larger-sized loans, these programs were devised to serve a once overlooked segment of the apartment lending business. Interest rates for this type of loan are usually very competitive and typically below prime. Loan amounts vary according to the underwriting guidelines established by each lender, but generally range from approximately $100,000 to $2,000,000.
>
> A variety of terms are offered, including one, three, five, seven, and ten years. Amortization periods are commonly 20 or 25 years, with some lenders offering 30-year periods. Other advantages of this type of loan include lender fees, which are kept to a minimum, and third-party report requirements, which are often not as stringent. A primary disadvantage of the specialty apartment lending programs is that the maximum loan amount is usually around $2 million. Since this type of loan was designed with the smaller investor in mind, the maximum loan amounts are capped at lower levels.

This excerpt was written when the prime lending rate hovered around 7½ percent, which, believe it or not, was not that long ago. Since the current prime lending rate is a historically low 4 percent, specialty apartment programs are no longer priced below prime. They do, however, remain at very competitive rates and provide attractive terms and conditions designed specifically to meet the needs of the small multifamily investor.

For larger real estate investments such as office buildings, retail strip centers, or large-scale apartment complexes, the financial instruments used become more sophisticated and complex. One

commonly used financing mechanism is referred to as a *conduit loan.* Conduit loans are typically originated by large institutional firms, such as insurance companies, which usually have hundreds of millions, or even billions, of dollars in investment capital. Once again, referring to *The Complete Guide to Buying and Selling Apartments,* I described in part the nature of conduit loans as they apply to multifamily unit financing:

> Conduit financing differs from conventional bank loans in several ways. First, conduit loans are pooled together when a certain dollar amount is reached, say $500 million. They are then "securitized" or packaged together and sold to investors who seek to maintain a specific yield or return on their capital. Since the loans are pooled together, it is very difficult to pay off a single loan out of the pool prior to the end of the term, and in many cases, the borrower is "locked out" or prohibited from prepaying the loan. Conventional bank loans, on the other hand, are not securitized but are instead treated as individual loans and maintained and serviced directly by the issuing bank.
>
> Another key difference is that unlike conventional bank loans, which are priced off of the prime lending rate, conduit loans are generally priced off of an index such as Treasury notes, which correspond to the term of the loan. A loan with a 10-year term, for example, may use the 10-year Treasury as its benchmark. A spread is then factored into the rate by adding the spread to the 10-year Treasury. Spreads are stated in "basis points," so a spread of 215 basis points is equivalent to 2.15 percent. If the 10-year Treasury is currently priced at 5.30 and the spread is 215 basis points (or "bips" as lenders like to call them), then the interest rate applied to the loan would be 7.45 percent. Conduit loans also differ from conventional bank loans in the degree of personal liability associated with each type. With conduit loans, there is usually no personal liability while there is almost always full personal liability for conventional bank financing.

After completing two or three smaller-scale commercial or multifamily purchases using a more traditional financing mechanism such as a conventional bank loan, you should be ready to accept the challenge of the more sophisticated conduit loans. Remember, too, that conduit loans are designed for investments with a longer holding period and therefore would not be suitable for a fix and flip type of application.

In summary, the three elements of time, volume, and property type must all be considered collectively rather than individually. For example, the financing instrument used for an Investor A, who acquires single-family property to hold on a long-term basis, is very different than that for Investor B, who purchases single-family property to buy and sell on a short-term basis. While Investor A purchases one property each year to hold for many years, Investor B purchases 50 properties each year and holds them just long enough to rehab and flip them. Although both investors are purchasing similar types of properties, the financing mechanisms for each investor are very different. Investor A will most likely get a 30-year conventional mortgage to finance his property, and Investor B will most likely use a line of credit to finance her activities. The same principles hold true for investors purchasing multifamily and commercial property. In fact, a change in any one of the three variables will have a direct effect on the financial instrument used in your investment activities. The more familiar you become with the interaction that occurs among these three variables, the better able you will be to use them to your advantage.

Chapter 3

Secondary Investment Elements and Their Effect on Financing Strategies

In Chapter 2, we examined the three primary financing elements around which all real estate investment activity centers. They are the elements of time, volume, and property type. In this chapter, we discuss the three secondary investment elements that affect real estate financing activities. They are the cost of funds, the amortization period, and the amount of funds borrowed (see Exhibit 3.1). It is essential for individuals to understand how each of these three variables affects the profitability of the various types of real estate investments. A material change of any one of the three elements would change the cash flow of the property. For income-producing properties, asset value is derived directly from the net income of the property, so a change in any one of the three secondary elements may have an impact on its value, whether negative or positive. With the proper financial model, an investor can easily assess the impact of changes in value by experimenting with these three elements, or variables.

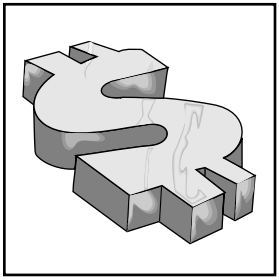

Exhibit 3.1
Secondary financing elements.

1. Cost of funds
2. Amortization period
3. Amount of funds borrowed

COST OF FUNDS

The *cost of funds* is the first of the three secondary financing elements that affect real estate financing and, consequently, real estate value. The cost to borrow funds is expressed in terms of an *interest rate* and represents the portion of the loan payment that the lender charges for loaning money. Changes in the interest rate charged to purchase income-producing property have a direct effect on the property's value. In Chapter 8, we explore in great detail the three primary appraisal methods, one of which is the *income capitalization method.* This appraisal method rests on the premise that a stream of income can be converted into a single capital value. If there is a reduction in the stream of income, the capital value must likewise be reduced. An increase to any degree in the cost of funds borrowed would have a negative effect on an investment property's income stream and would subsequently reduce its capital value.

The cost of funds, or interest rate, varies widely among lenders. Both banks and mortgage companies tend to be fairly competitive, as do conduit lenders. Banks typically offer loans for shorter durations and price their loans using the prime lending rate as the benchmark. Mortgage companies, on the other hand, often offer loans for longer durations and price them using an index such as Treasury

bills or the London Interbank Offered Rate (LIBOR). Likewise, conduit loans are also benchmarked off Treasury bills. The loan is priced according to a spread, which is added to the term of a Treasury note and which corresponds to the term of the loan. In other words, a loan with a 10-year term is priced by adding a spread to a 10-year Treasury note. Spreads are stated in what is referred to as *basis points.* A spread of 185 basis points is equivalent to 1.85 percent. If the 10-year Treasury is currently priced at 4.30 and the spread is 185 basis points, then the interest rate applied to the loan would be 6.15 percent.

The interest paid on borrowed money represents the cost of funds, so the higher the rate, the greater the amount paid. On a smaller loan of, let's say, $100,000, a difference of 0.5 percent in the interest rate will have only minimal impact on the viability of an investment opportunity. On a larger loan of $1 million, however, the difference of 0.5 percent is much greater. When applying for a loan, you should make every effort to negotiate the best possible rate, especially on larger loans. I recently met with one of the lenders with whom my company, Symphony Homes, does business to review our financial statements from the previous fiscal year and to plan for the coming year. Since I do several million dollars' worth of business with this lender each year, I don't hesitate to ask for better pricing. I reminded him that our company works with several other lenders who are eager to earn more of our business. My expectation is that he will soon be giving me a call with more favorable pricing.

To help better understand the impact of various differences in changes in the interest rate, take a moment to review Table 3.1. Using a real estate loan calculator developed for Symphony Homes, the effect of changes in interest rates can be examined on a base loan of $2.5 million. The loan spread matrix illustrates how changes in the rate affect changes in the monthly payments. With a loan amount of $2.5 million and a rate of 6.25 percent, the monthly payment would be $15,392.93. By reducing the rate by 0.5 percent, the payment is reduced to $14,589.32, which represents a monthly savings of $803.61 and an annual savings of $9,643.32 to the investor. The matrix allows you to quickly and easily examine the effect of changes in rate applied to different loan amounts at different rates.

Table 3.1 Chart of Monthly Payments

Symphony Homes, Inc. www.symphony-homes.com
The Value Play www.thevalueplay.com

Loan Amount: $2,500,000.00
Interest Rate: 6.25%
Term: 360 months

Total Interest Paid: $3,041,454.80
Total Amount Paid: $5,541,454.80

Loan Amounts Incremented by $5000 — Interest Rates Incremented by 1/2%

Loan / Rate	4.75%	5.25%	5.75%	6.25%	6.75%	7.25%	7.75%
$2,475,000	$12,910.77	$13,667.04	$14,443.43	$15,239.00	$16,052.80	$16,883.86	$17,731.20
$2,480,000	$12,936.85	$13,694.65	$14,472.61	$15,269.79	$16,085.23	$16,917.97	$17,767.02
$2,485,000	$12,962.94	$13,722.26	$14,501.79	$15,300.57	$16,117.66	$16,952.08	$17,802.84
$2,490,000	$12,989.02	$13,749.87	$14,530.96	$15,331.36	$16,150.09	$16,986.19	$17,838.66
$2,495,000	$13,015.10	$13,777.48	$14,560.14	$15,362.14	$16,182.52	$17,020.30	$17,874.49
$2,500,000	$13,041.18	$13,805.09	$14,589.32	$15,392.93	$16,214.95	$17,054.41	$17,910.31
$2,505,000	$13,067.27	$13,832.70	$14,618.50	$15,423.72	$16,247.38	$17,088.52	$17,946.13
$2,510,000	$13,093.35	$13,860.31	$14,647.68	$15,454.50	$16,279.81	$17,122.62	$17,981.95
$2,515,000	$13,119.43	$13,887.92	$14,676.86	$15,485.29	$16,312.24	$17,156.73	$18,017.77
$2,520,000	$13,145.51	$13,915.53	$14,706.04	$15,516.07	$16,344.67	$17,190.84	$18,053.59
$2,525,000	$13,171.60	$13,943.14	$14,735.21	$15,546.86	$16,377.10	$17,224.95	$18,089.41

Now let's take a look at how the reduction in the cost of funds by 0.5 percent has affected the value of the property. We have already established the owner would save an additional $9,643.32 each year. This means that the income stream from the property will increase by that same amount. To capitalize the value of the increase in the income stream, we simply convert the cash flow to a single capital value, as follows:

$$\text{Present value of income stream} = \frac{\text{income}}{\text{capitalization rate}} = \frac{\$9{,}643.32}{.08} = \$120{,}541.50$$

In this example, a capitalization rate, or cap rate, of 8.0 percent was assumed. Converting the additional income in this example gives us a single capital value of $120,541.50, which is a direct result of the reduction in the cost of funds by only 0.5 percent. Although it may initially seem that this would increase the value of the property, because interest payments do not affect NOI, the value of the property does not change. It does, however, affect the return on investment (ROI), since the added cash flow represents a savings to the investor, which in turn increases the rate of return. When you begin to understand the relationship between the cost of funds and its effect on value and returns, you can then begin to take full advantage of its powerful and dynamic force. Remember that all it takes is a small change in the interest rate to have a dramatic impact on the rate of return.

AMORTIZATION PERIOD

The *amortization period* is the second of the three secondary financing elements that affect real estate financing. While the interest paid on a loan refers to the cost of borrowing funds, the amortization period refers to the length of time used to calculate loan payments if the loan were fully amortized, or repaid, over the stated loan period.

An amortization schedule provides a list, or schedule, of the payments to be made over the life of the loan. This schedule shows the portion of each payment that is applied to principal and the portion of each payment that is applied to interest. This information is useful because it allows investors to see at a glance how much of the payment is being applied to reduce the balance of the loan at any given point over the period the loan is amortized. The shorter the amortization period, the higher the payment; conversely, the longer the amortization period, the lower the payment. Let's look at a simple example.

Loan amount = PV = \$500,000
Interest rate = i = 6.50%
Amortization period = n = 180; payment = pmt = \$4,355.54
Amortization period = n = 360; payment = pmt = \$3,160.34

In this example, the difference between a 15-year loan period and a 30-year loan period is \$1,195.20 per month. The question becomes, is it better to get a 15-year loan with a higher monthly payment or a 30-year loan with a lower monthly payment? I recommend using the 30-year amortization period because it provides greater flexibility. For example, if a person then wanted to apply more to the loan each month, let's say the equivalent difference of the 15-year payment, he or she would be able to do so, but would not be obligated to do so. Since cash flow is so important in the real estate business, investors should do everything possible to minimize the monthly cash outflows. This includes the portion paid out each month for principal and interest.

I've known other investors, however, whose intentions were to buy an investment property and hold it for the long term. Many of these investors preferred shorter amortization periods so they could repay an investment property's loan more quickly. Doing so would enable them to enjoy a higher cash flow from the property once the loan was repaid. Even in situations such as this, I recommend building flexibility into the loan by using a 30-year amortization period. The investor can then pay off the loan over a

shorter period of time if desired. This way the investor has the option to pay a little extra each month, but doesn't have to. This option is especially important when a unit is vacant and no income is being generated.

Table 3.2 illustrates a monthly loan amortization schedule using $500,000 as the amount borrowed, an interest rate of 6.5 percent, a 30-year period, and a monthly prepayment of $217. Only the first 39 months are shown for the sake of brevity. Now let's examine Table 3.3. This schedule illustrates the total amount applied to both interest and principal. Note how paying an additional $217 per month reduced the repayment period from 30 years to about 25 years. As has already been established, there is a trade-off when prepaying the loan since the monthly cash flow from the property is reduced by exactly the amount of additional principal paid. In this example, five years is shaved off of the total repayment schedule, but $217 per month is sacrificed in the process.

Another reason to use a longer amortization period is because, by doing so, the debt service coverage ratio (DSCR) improves. This is especially important to lenders. They want to make sure that the real estate being considered for investment purposes will generate enough cash to service the debt. In other words, lenders want and need to be assured that the real estate is throwing off enough cash on its own to repay the loan. Using a longer amortization period reduces the monthly cash outflow, which in turn leaves more cash available for the loan payment. The ratio is calculated as follows:

$$\text{Debt service coverage ratio} = \frac{\text{net operating income}}{\text{principal + interest}} = \text{DSCR}$$

The ratio is a simple measure of the relationship of cash generated from an investment to the debt required to pay for that investment. The minimum DSCR varies from lender to lender, but in general it can be as low as 0.75 or as high as 1.40. Most lenders look for a minimum DSCR of 1.00 to 1.20. This concept is more fully explored in Chapter 6.

Table 3.2 Loan Amortization Schedule—Monthly

Loan Amount: $500,000.00 Interest Rate: 6.500%
Number of Payments: 360 Payment Amount: $3,160.34

PMT	Month	Principal	Interest	Total Principal	Total Interest	Prepayment	BALANCE
PMT	Month	Principal	Interest	Total Principal	Total Interest	Prepayment	Balance
1	Jan 2005	$669.01	$2,708.33	$669.01	$2,708.33	$217.00	$499,330.99
2	Feb 2005	$672.63	$2,704.71	$1,341.64	$5,413.04	$217.00	$498,658.36
3	Mar 2005	$676.27	$2,701.07	$2,017.91	$8,114.11	$217.00	$497,982.09
4	Apr 2005	$679.94	$2,697.40	$2,697.85	$10,811.51	$217.00	$497,302.15
5	May 2005	$683.62	$2,693.72	$3,381.47	$13,505.23	$217.00	$496,618.53
6	Jun 2005	$687.32	$2,690.02	$4,068.79	$16,195.25	$217.00	$495,931.21
7	Jul 2005	$691.05	$2,686.29	$4,759.84	$18,881.54	$217.00	$495,240.16
8	Aug 2005	$694.79	$2,682.55	$5,454.63	$21,564.09	$217.00	$494,545.37
9	Sep 2005	$698.55	$2,678.79	$6,153.18	$24,242.88	$217.00	$493,846.82
10	Oct 2005	$702.34	$2,675.00	$6,855.52	$26,917.88	$217.00	$493,144.48
11	Nov 2005	$706.14	$2,671.20	$7,561.66	$29,589.08	$217.00	$492,438.34
12	Dec 2005	$709.97	$2,667.37	$8,271.63	$32,256.45	$217.00	$491,728.37
13	Jan 2006	$713.81	$2,663.53	$8,985.44	$34,919.98	$217.00	$491,014.56
14	Feb 2006	$717.68	$2,659.66	$9,703.12	$37,579.64	$217.00	$490,296.88
15	Mar 2006	$721.57	$2,655.77	$10,424.69	$40,235.41	$217.00	$489,575.31
16	Apr 2006	$725.47	$2,651.87	$11,150.16	$42,887.28	$217.00	$488,849.84
17	May 2006	$729.40	$2,647.94	$11,879.56	$45,535.22	$217.00	$488,120.44
18	Jun 2006	$733.35	$2,643.99	$12,612.91	$48,179.21	$217.00	$487,387.09
19	Jul 2006	$737.33	$2,640.01	$13,350.24	$50,819.22	$217.00	$486,649.76
20	Aug 2006	$741.32	$2,636.02	$14,091.56	$53,455.24	$217.00	$485,908.44
21	Sep 2006	$745.34	$2,632.00	$14,836.90	$56,087.24	$217.00	$485,163.10
22	Oct 2006	$749.37	$2,627.97	$15,586.27	$58,715.21	$217.00	$484,413.73
23	Nov 2006	$753.43	$2,623.91	$16,339.70	$61,339.12	$217.00	$483,660.30
24	Dec 2006	$757.51	$2,619.83	$17,097.21	$63,958.95	$217.00	$482,902.79
25	Jan 2007	$761.62	$2,615.72	$17,858.83	$66,574.67	$217.00	$482,141.17
26	Feb 2007	$765.74	$2,611.60	$18,624.57	$69,186.27	$217.00	$481,375.43
27	Mar 2007	$769.89	$2,607.45	$19,394.46	$71,793.72	$217.00	$480,605.54
28	Apr 2007	$774.06	$2,603.28	$20,168.52	$74,397.00	$217.00	$479,831.48
29	May 2007	$778.25	$2,599.09	$20,946.77	$76,996.09	$217.00	$479,053.23
30	Jun 2007	$782.47	$2,594.87	$21,729.24	$79,590.96	$217.00	$478,270.76
31	Jul 2007	$786.71	$2,590.63	$22,515.95	$82,181.59	$217.00	$477,484.05
32	Aug 2007	$790.97	$2,586.37	$23,306.92	$84,767.96	$217.00	$476,693.08
33	Sep 2007	$795.25	$2,582.09	$24,102.17	$87,350.05	$217.00	$475,897.83
34	Oct 2007	$799.56	$2,577.78	$24,901.73	$89,927.83	$217.00	$475,098.27
35	Nov 2007	$803.89	$2,573.45	$25,705.62	$92,501.28	$217.00	$474,294.38
36	Dec 2007	$808.25	$2,569.09	$26,513.87	$95,070.37	$217.00	$473,486.13
37	Jan 2008	$812.62	$2,564.72	$27,326.49	$97,635.09	$217.00	$472,673.51
38	Feb 2008	$817.03	$2,560.31	$28,143.52	$100,195.40	$217.00	$471,856.48
39	Mar 2008	$821.45	$2,555.89	$28,964.97	$102,751.29	$217.00	$471,035.03

Value Play Real Estate Software, 3.0.01 www.thevalueplay.com

Table 3.3 Loan Amortization Schedule—Annual

Loan Amount: $500,000.00 Number of Payments: 360			Interest Rate: 6.500% Payment Amount: $3,160.34	
Year	Period	Principal Paid During Period	Interest Paid During Period	Total Paid During Period
Year	Period	Total Annual Principal	Total Annual Interest	Total Annual Payment
1	Jan–Dec 2005	$8,271.63	$32,256.45	$40,528.08
2	Jan–Dec 2006	$8,825.58	$31,702.50	$40,528.08
3	Jan–Dec 2007	$9,416.66	$31,111.42	$40,528.08
4	Jan–Dec 2008	$10,047.30	$30,480.78	$40,528.08
5	Jan–Dec 2009	$10,720.18	$29,807.90	$40,528.08
6	Jan–Dec 2010	$11,438.12	$29,089.96	$40,528.08
7	Jan–Dec 2011	$12,204.17	$28,323.91	$40,528.08
8	Jan–Dec 2012	$13,021.51	$27,506.57	$40,528.08
9	Jan–Dec 2013	$13,893.60	$26,634.48	$40,528.08
10	Jan–Dec 2014	$14,824.07	$25,704.01	$40,528.08
11	Jan–Dec 2015	$15,816.85	$24,711.23	$40,528.08
12	Jan–Dec 2016	$16,876.14	$23,651.94	$40,528.08
13	Jan–Dec 2017	$18,006.37	$22,521.71	$40,528.08
14	Jan–Dec 2018	$19,212.30	$21,315.78	$40,528.08
15	Jan–Dec 2019	$20,498.97	$20,029.11	$40,528.08
16	Jan–Dec 2020	$21,871.82	$18,656.26	$40,528.08
17	Jan–Dec 2021	$23,336.63	$17,191.45	$40,528.08
18	Jan–Dec 2022	$24,899.53	$15,628.55	$40,528.08
19	Jan–Dec 2023	$26,567.11	$13,960.97	$40,528.08
20	Jan–Dec 2024	$28,346.32	$12,181.76	$40,528.08
21	Jan–Dec 2025	$30,244.75	$10,283.33	$40,528.08
22	Jan–Dec 2026	$32,270.28	$8,257.80	$40,528.08
23	Jan–Dec 2027	$34,431.48	$6,096.60	$40,528.08
24	Jan–Dec 2028	$36,737.42	$3,790.66	$40,528.08
25	Jan–Dec 2029	$38,221.21	$1,330.26	$39,551.47

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AMOUNT OF FUNDS BORROWED

The *amount of funds borrowed* is the last of the three secondary financing elements that affect real estate financing. The amount of funds borrowed, or loan amount, is the amount of money being borrowed to finance an investment. The relationship between the loan amount and the down payment is an inverse relationship. As the amount of money being borrowed for an investment property increases, the amount applied toward the down payment decreases;

Table 3.4 Scenario I: 5 Year Pro Forma Income Statement As of January 1st

Cost and Revenue Assumptions	
Land	350,000
Building	3,000,000
Improvements	0
Closing Costs	25,000
Total	3,375,000
Number of Units	75
Average Monthly Rent	600
Gross Monthly Revenues	45,000

Financing Assumptions			
Total Purchase	100.00%	3,375,000	
Owner's Equity	25.00%	843,750	
Balance to Finc	75.00%	2,531,250	
	Annual	Monthly	
Interest Rate	6.500%	0.542%	
Amort Period	25	300	
Payment	205,094	17,091	

Key Ratios	
Total Square Feet	64,500.00
Avg Sq Ft/Unit	860.00
Avg Rent/Sq Ft	0.70
Avg Cost/Sq Ft	52.33
Avg Unit Cost	45,000.00
Capitalization Rate	9.45%
Gross Rent Multiplier	6.25
Expense/Unit	3,417.92
Expense/Foot	3.97

Rental Increase Projections Average Monthly Rent Operating Expense Projections						
		0.00%	3.50%	4.00%	3.00%	3.00%
		600	621	646	665	685
		0.00%	-2.50%	0.00%	2.50%	2.50%

Operating Revenues		Actual Monthly	Projected Year 1	Year 2	Year 3	Year 4	Year 5
Gross Scheduled Income		45,000	540,000	558,900	581,256	598,694	616,654
Vacancy Rate	5.0%	2,250	27,000	27,945	29,063	29,935	30,833
Net Rental Income		42,750	513,000	530,955	552,193	568,759	585,822
Other Income		5,200	62,400	64,584	67,167	69,182	71,258
Gross Income	100.0%	47,950	575,400	595,539	619,361	637,941	657,080
Operating Expenses							
Repairs and Maintenance	12.2%	5,850	70,200	68,445	68,445	70,156	71,910
Property Management Fees	3.8%	1,845	22,140	21,587	21,587	22,126	22,679
Taxes	7.3%	3,477	41,724	40,681	40,681	41,698	42,740
Insurance	2.6%	1,250	15,000	14,625	14,625	14,991	15,365
Salaries and Wages	5.8%	2,780	33,360	32,526	32,526	33,339	34,173
Utilities	8.8%	4,230	50,760	49,491	49,491	50,728	51,996
Trash Removal	0.8%	400	4,800	4,680	4,680	4,797	4,917
Professional Fees	0.5%	250	3,000	2,925	2,925	2,998	3,073
Advertising	1.0%	500	6,000	5,850	5,850	5,996	6,146
Other	1.6%	780	9,360	9,126	9,126	9,354	9,588
Total Op. Exp.	44.6%	21,362	256,344	249,935	249,935	256,184	262,588

Net Operating Income	55.4%	26,588	319,056	345,604	369,425	381,758	394,491
Interest on Loan	28.6%	13,711	163,301	160,502	157,515	154,329	150,929
Dep. Exp. - Building		9,091	109,091	109,091	109,091	109,091	109,091
Dep. Exp. - Equip.		0	0	0	0	0	0
Net Income Before Taxes		3,786	46,664	76,011	102,819	118,338	134,471
Income Tax Rate	0.0%	0	0	0	0	0	0
Net Income After Taxes		3,786	46,664	76,011	102,819	118,338	134,471
Cash Flow From Operations							
Net Income After Taxes		3,786	46,664	76,011	102,819	118,338	134,471
Dep. Exp.		9,091	109,091	109,091	109,091	109,091	109,091
Total CF From Ops.		12,877	155,755	185,102	211,910	227,429	243,562
Interest on Loan		13,711	163,301	160,502	157,515	154,329	150,929
Total Cash Available for Loan Servicing		26,588	319,056	345,604	369,425	381,758	394,491
Debt Service		17,091	205,094	205,094	205,094	205,094	205,094
Remaining After Tax CF From Ops		9,497	113,962	140,509	164,331	176,663	189,397
Plus Principal Reduction		3,483	41,793	44,592	47,579	50,765	54,165
Total Return		12,980	155,755	185,102	211,910	227,429	243,562

CF/Debt Servicing Ratio	155.57%	155.57%	168.51%	180.12%	186.14%	192.35%

Net Income ROI		5.53%	9.01%	12.19%	14.03%	15.94%
Cash ROI		13.51%	16.65%	19.48%	20.94%	22.45%
Total ROI		18.46%	21.94%	25.12%	26.95%	28.87%

Net CFs From Investment - 1 Yr Exit	(843,750)	1,124,505				
Net CFs From Investment - 3 Yr Exit	(843,750)	113,962	140,509	1,667,046		
Net CFs From Investment - 5 Yr Exit	(843,750)	113,962	140,509	164,331	176,663	2,097,042

	Exit Price	Gain on Sale	Cap Rate		IRR
Estimated Exit Price/Gain On Sale - 1 Yr	3,500,000	125,000	9.12%	Annualized IRR - 1 Yr	33.27%
Estimated Exit Price/Gain On Sale - 3 Yr	3,900,000	525,000	9.47%	Annualized IRR - 3 Yr	34.72%
Estimated Exit Price/Gain On Sale - 5 Yr	4,200,000	825,000	9.39%	Annualized IRR - 5 Yr	31.07%

Table 3.5 Scenario II: 5 Year Pro Forma Income Statement As of January 1st

Cost and Revenue Assumptions	
Land	350,000
Building	3,000,000
Improvements	0
Closing Costs	25,000
Total	3,375,000
Number of Units	75
Average Monthly Rent	600
Gross Monthly Revenues	45,000

Financing Assumptions			
Total Purchase	100.00%	3,375,000	
Owner's Equity	10.00%	337,500	
Balance to Finc	90.00%	3,037,500	
	Annual	Monthly	
Interest Rate	6.500%	0.542%	
Amort Period	25	300	
Payment	246,113	20,509	

Key Ratios	
Total Square Feet	64,500.00
Avg Sq Ft/Unit	860.00
Avg Rent/Sq Ft	0.70
Avg Cost/Sq Ft	52.33
Avg Unit Cost	45,000.00
Capitalization Rate	9.45%
Gross Rent Multiplier	6.25
Expense/Unit	3,417.92
Expense/Foot	3.97

Rental Increase Projections Average Monthly Rent Operating Expense Projections						
		0.00%	3.50%	4.00%	3.00%	3.00%
		600	621	646	665	685
		0.00%	-2.50%	0.00%	2.50%	2.50%

Operating Revenues		Actual Monthly	Projected Year 1	Year 2	Year 3	Year 4	Year 5
Gross Scheduled Income		45,000	540,000	558,900	581,256	598,694	616,654
Vacancy Rate	5.0%	2,250	27,000	27,945	29,063	29,935	30,833
Net Rental Income		42,750	513,000	530,955	552,193	568,759	585,822
Other Income		5,200	62,400	64,584	67,167	69,182	71,258
Gross Income	100.0%	47,950	575,400	595,539	619,361	637,941	657,080
Operating Expenses							
Repairs and Maintenance	12.2%	5,850	70,200	68,445	68,445	70,156	71,910
Property Management Fees	3.8%	1,845	22,140	21,587	21,587	22,126	22,679
Taxes	7.3%	3,477	41,724	40,681	40,681	41,698	42,740
Insurance	2.6%	1,250	15,000	14,625	14,625	14,991	15,365
Salaries and Wages	5.8%	2,780	33,360	32,526	32,526	33,339	34,173
Utilities	8.8%	4,230	50,760	49,491	49,491	50,728	51,996
Trash Removal	0.8%	400	4,800	4,680	4,680	4,797	4,917
Professional Fees	0.5%	250	3,000	2,925	2,925	2,998	3,073
Advertising	1.0%	500	6,000	5,850	5,850	5,996	6,146
Other	1.6%	780	9,360	9,126	9,126	9,354	9,588
Total Op. Exp.	44.6%	21,362	256,344	249,935	249,935	256,184	262,588

Net Operating Income	55.4%	26,588	319,056	345,604	369,425	381,758	394,491
Interest on Loan	34.3%	16,453	195,961	192,602	189,018	185,195	181,115
Dep. Exp. - Building		9,091	109,091	109,091	109,091	109,091	109,091
Dep. Exp. - Equip.		0	0	0	0	0	0
Net Income Before Taxes		1,044	14,004	43,911	71,316	87,472	104,286
Income Tax Rate	0.0%	0	0	0	0	0	0
Net Income After Taxes		1,044	14,004	43,911	71,316	87,472	104,286
Cash Flow From Operations							
Net Income After Taxes		1,044	14,004	43,911	71,316	87,472	104,286
Dep. Exp.		9,091	109,091	109,091	109,091	109,091	109,091
Total CF From Ops.		10,135	123,095	153,002	180,407	196,563	213,376
Interest on Loan		16,453	195,961	192,602	189,018	185,195	181,115
Total Cash Available for Loan Servicing		26,588	319,056	345,604	369,425	381,758	394,491
Debt Service		20,509	246,113	246,113	246,113	246,113	246,113
Remaining After Tax CF From Ops		6,079	72,943	99,491	123,312	135,645	148,378
Plus Principal Reduction		4,179	50,152	53,511	57,095	60,918	64,998
Total Return		10,258	123,095	153,002	180,407	196,563	213,376

CF/Debt Servicing Ratio	129.64%	129.64%	140.42%	150.10%	155.11%	160.29%

Net Income ROI		4.15%	13.01%	21.13%	25.92%	30.90%
Cash ROI		21.61%	29.48%	36.54%	40.19%	43.96%
Total ROI		36.47%	45.33%	53.45%	58.24%	63.22%

Net CFs From Investment - 1 Yr Exit	(337,500)	585,595				
Net CFs From Investment - 3 Yr Exit	(337,500)	72,943	99,491	1,146,570		
Net CFs From Investment - 5 Yr Exit	(337,500)	72,943	99,491	123,312	135,645	1,597,553

	Exit Price	Gain on Sale	Cap Rate		IRR
Estimated Exit Price/Gain On Sale - 1 Yr	3,500,000	125,000	9.12%	Annualized IRR - 1 Yr	73.51%
Estimated Exit Price/Gain On Sale - 3 Yr	3,900,000	525,000	9.47%	Annualized IRR - 3 Yr	64.72%
Estimated Exit Price/Gain On Sale - 5 Yr	4,200,000	825,000	9.39%	Annualized IRR - 5 Yr	53.29%

conversely, as the loan amount decreases, the down payment increases. It is logical to assume that the more money borrowed, the greater the monthly payment will be, and the less money borrowed, the smaller the monthly payment will be. Although an investor might conclude from this reasoning that it makes sense to put down as much money as possible to decrease the monthly payment and thereby increase the property's cash flow, that conclusion would be wrong. According to the *other people's money* (OPM) principle, which deals with the concept of leverage, the greater the percentage of money borrowed the greater the return on equity will be. Even though the monthly payment will increase by borrowing more, since the returns are measured as a ratio of the income generated by the property to the amount of one's capital invested in it, the rate of return is greater due to the increase in leverage. The OPM principle, along with the principle of leverage, is discussed in greater detail in the next chapter.

Several years ago, I developed a financial model I use extensively to analyze and evaluate investment properties, which I call *The Value Play Income Analyzer.* In Part 2, "Case Study Review, The Practical Application of Valuation Analysis," the model is explained in much greater detail. For now, however, I'd like to focus on three key measurements in the model. They are net income return on investment (net income ROI), cash ROI, and total ROI. Let's take a moment to examine the effect of changes in the amount of funds borrowed on these three ratios by looking at two different scenarios.

In Table 3.4 (Scenario I), Investor A has used the Income Analyzer to evaluate an apartment building available for sale with a total purchase price of $3,375,000. Under this scenario, the total amount of funds borrowed by Investor A is $2,531,250. This leaves a balance of $843,750, or 25 percent, required for the down payment. In this scenario, Investor A will realize a net income ROI of 5.53 percent, a cash ROI of 13.51 percent, and a total ROI of 18.46 percent in Year 1 on the invested capital, or cash down payment. Although many investors would be satisfied with these returns, let's see if there is a way for us to improve them.

In Table 3.5 (Scenario II), all variables within the model are held constant and are exactly the same as in Table 3.4 with the exception

of two—the amount of funds borrowed and the down payment, or owner's equity. In Scenario II, the down payment has been decreased to $337,500, which is a 10 percent investment, and the amount of funds borrowed has been increased to $3,037,500. The monthly payment required to service the debt in this scenario is $20,509. This compares unfavorably to the monthly payment of $17,091 in Scenario I and results in a net decrease of remaining after tax cash flow (CF) of $3,418 per month.

At first glance, you may be inclined to believe that Investor A in Scenario I is better off than Investor B in Scenario II, since Investor A pockets an additional $3,418 per month. In Scenario II, Investor B will realize a net income ROI of 4.15 percent, a cash ROI of 21.61 percent, and a total ROI of 36.47 percent in Year 1 on the invested capital. According to our analysis, Investor B will earn almost twice as much as Investor A. By increasing the amount of funds borrowed and decreasing the amount of funds invested, you can actually earn a higher rate of return on your invested capital. While it is true that there is less cash remaining at the end of each period, the investor in Scenario II fares much better than the investor in Scenario I. This is because the returns are measured as a ratio of the remaining cash to the investor's equity or invested capital. Once again, by investing less of your own money, you actually earn a higher rate of return than you otherwise would, in spite of the fact that the remaining cash has decreased.

In summary, the three secondary investment elements that affect real estate financing activities are the cost of funds, the amortization period, and the amount of funds borrowed. Understanding the interaction among these three variables and their relationship to one another is essential for assessing how changes in any one of the three can affect the profitability of the various types of real estate investments. The better you understand these principles, the greater will be your chances for success in the real estate business.

Chapter 4

Additional Investment Elements and Their Effect on Financing Strategies

In Chapter 2, we examined the three primary financing elements around which real estate investment activity centers—time, volume, and property type. In Chapter 3 we learned about the three secondary financing elements that affect real estate financing activities—cost of funds, amortization period, and amount of funds borrowed. Three additional elements have an effect on real estate financing: loan duration, lender fees, and prepayment penalties (see Exhibit 4.1). Duration must be considered before obtaining a loan to ensure the life of it is best suited to an investor's needs. It is also important to be familiar with the many types of fees charged by lenders and to know their effect on the overall cost of an investment. Finally, investors should also be aware of any type of prepayment penalty that may be imposed by the lender.

LOAN DURATION

The first additional element that has an effect on real estate financing is *loan duration.* Loan duration refers to a loan's life, or term. For instance, a loan duration of 10 years means that it will expire at

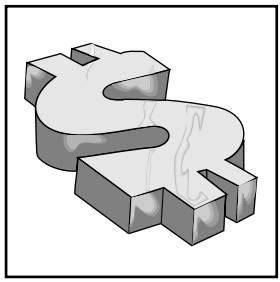

Exhibit 4.1
Additional financing elements.

1. Loan duration
2. Loan fees
3. Prepayment penalties

the end of the 10-year period and must at its expiration either be renewed or paid in full. A loan with a duration of 10 years may or may not have an amortization period equal to its duration period. Whereas *amortization* refers to the length of time used to calculate the amount of payment to be made each period, *duration* refers to the length of time the loan will exist. For example, a loan with a 10-year duration, or term, can have a 15-, 20-, or 30-year amortization period. At the end of its term, any remaining loan balance will have to be repaid in full if the lender chooses not to renew or extend it.

Regardless of what type of financing is obtained for an investment property, investors should be familiar with loan terms and the impact they will have on their financing of real estate. Using the most appropriate term is best determined by the estimated length of time an investment is intended to be held. For example, investors who intend to hold a property for a period of 10 or more years would most likely want to obtain a fixed-rate loan with a term that matches the full amortization period, which is typically 30 years. Financing the property with a shorter term, say five years, would force an investor to refinance the property at the end of the term, or in five years.

Depending on the current interest rate environment, it may be better to lock in a lower rate at the time of initial financing, since rates can change suddenly and without notice. Investors who plan to hold

a property for 10 years or more will need to procure a loan with a corresponding time frame. If a decline in market interest rates occurs at some point in the future, an investor always has the option to refinance. If prepayment penalties exist, however, they, too, must be factored into the refinance decision. An increase in market interest rates will not affect the mortgage, because a measure of protection has been built in to insulate the investment from a higher-rate environment by choosing the most appropriate financing term to begin with.

Loans having longer durations can sometimes work to an investor's disadvantage, especially if the property being purchased is intended to be held for only a short while. If, for instance, a rehab property has been identified and the property will be held for one year or less before disposing of it, then a loan with a shorter duration is preferable, because such loans typically have lower rates than those with longer durations. This is because lenders can more accurately predict interest rates over a shorter time frame than they can over a longer time frame.

A one-year adjustable rate mortgage, or ARM, is almost certain to have an interest rate ranging from ½ to 1 percent lower than a loan with a 30-year term. A one-year ARM typically has a fixed rate for the first six months or one year, and then adjusts either annually or semiannually thereafter. A comparable loan from a bank may carry a rate to match a one-year ARM, but may also have a one-year term, meaning that instead of adjusting, the loan will expire and have to be satisfied by either renewing it or repaying it.

When selecting the duration or term that best meets an investor's financing needs, the investment objectives must first be determined. Investors must establish beforehand how long a property is to be held before committing themselves to a particular debt instrument. Will the property be purchased and added to a portfolio containing other rental properties and subsequently held for many years, or will it instead be held for only a short period of time to capture a gain created by making improvements to it? Investors should establish their investment objectives prior to making a commitment to the lender and then choose a loan with a duration best suited to the desired opportunity.

LOAN FEES

The second additional element that has an effect on real estate financing is the *loan fee* assessed by the lender. Loan fees come in all shapes and sizes and in all kinds of disguises. They are masked by using terms such as *application fees, review fees, underwriting fees, loan-origination fees, mortgage broker fees,* and *points charged at closing.* Since some lenders are overly aggressive and assess a fee or charge for just about everything, I suggest asking for a list of all costs that will be charged by both the lender and the mortgage broker (if applicable). Although by law lenders and brokers are required to disclose all costs, these issues should be addressed up front. Even after receiving the schedule of costs, it pays to be careful, since some charges may show up on the settlement statement at the last moment just prior to the loan closing. This is especially true when using a mortgage broker.

Lenders are required by the federal Real Estate Settlement Procedures Act to provide borrowers with a good faith estimate (GFE) of the fees due at closing, and they must do so within three days of the loan application. These mortgage fees, also called *settlement costs,* cover the various expenses associated with mortgage financing. Since closing costs usually range from between 3 and 5 percent of the sale price, it's best to wait until receiving a good faith estimate before signing any loan. In fact, it's a good idea to obtain good faith estimates from several lenders and compare their respective costs. Take just a moment to review the good faith estimate in Exhibit 4.2. The form lists 15 different lender fees alone, as well as a number of additional fees by parties that may have an interest in the transaction.

Although the broker is legally obligated to disclose all reasonable and customary fees, the broker doesn't always know what fees the lender will charge. The broker and the lender are not one and the same. The broker acts as a third party to assist the purchaser in obtaining the most appropriate type of financing. If brokers use lenders they have not used before, they may not be aware of the lender's complete fee structure. I myself have been surprised on more than one occasion by unexpected charges that show up at the time of closing. I was especially surprised on a new build-to-suit

Exhibit 4.2 Good Faith Estimate (not a loan commitment).

This Good Faith Estimate is being provided by a mortgage broker, and no lender has yet been obtained.

The information provided below reflects estimates of the charges which you are likely to incur at the settlement of your loan. The fees listed are estimates - actual charges may be more or less. Your transaction may not involve a fee for every item listed. The numbers listed beside the estimates generally correspond to the numbered lines contained in the HUD-1 or HUD-1A settlement statement which you will be receiving at settlement. The HUD-1 or HUD-1A settlement statement will show you the actual cost for items paid at settlement.

HUD-1	DESCRIPTION OF CHARGES	AMOUNT
801	Loan Origination Fee @ % + $	
802	Loan Discount Fee @ % + $	
803	Appraisal Fee	
804	Credit Report	
805	Inspection Fee	
806	Mortgage Insurance Application Fee	
807	Assumption Fee	
808	Mortgage Broker Fee @ % + $	
809	Tax Related Service Fee	
810	Processing Fee	
811	Underwriting Fee	
812	Wire Transfer Fee	
813	Application Fee	
814	Commitment Fee	
815	Lender's Rate Lock-In Fee	
901	Interest @ /day for days	
902	Mortgage Insurance Premium	
903	Hazard Insurance Premium	
904	County Property Taxes	
906	Flood Insurance	
1001	Hazard Ins. @ /mo. for months	
1002	Mortgage Ins. @ /mo. for months	
1004	Tax & Assmt. @ /mo. for months	
1006	Flood Insurance @ /mo. for months	
1008	Aggregate Escrow Adjustment	
1101	Settlement or Closing/Escrow Fee	
1102	Abstract or Title Search	
1103	Title Examination	
1105	Document Preparation Fee	
1106	Notary Fee	
1107	Attorney's Fee	
1108	Title Insurance	
1201	Recording Fee	
1202	City/County Tax/Stamps	
1203	State Tax/Stamps	
1204	Intangible Tax	
1301	Survey	
1302	Pest Inspection	

"**S**"/"**B**"designates those costs to be paid by Seller/Broker. "**A**"designates those costs affecting APR."**F**"designates financed costs.

These estimates are provided pursuant to the Real Estate Settlement Procedures Act of 1974, as amended (RESPA). Additional information can be found in the HUD Special Information Booklet, which is to be provided to you by your mortgage broker or lender, if your application is to purchase residential property and the Lender will take a first lien on the property.

Mailing Address	Property Address

Proposed Loan Amount Preparation Date	Loan Type ☐ FHA ☐ VA ☐ Conventional	Estimated Interest Rate Loan Number

_____ _____ **Date** _____ _____ **Date**

_____ _____ **Date** _____ _____ **Date**

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home we sold several months ago that closed just recently. The mortgage broker charged its client over $6,000 in broker fees for a loan amount of only a little more than $200,000! That's equivalent to about 3 percent of the loan amount. What surprised me even more, however, was that the homeowner had not even received a good faith estimate until the day before the closing.

The loan application fee is a charge that some lenders assess at the time formal application is made. Application fees range anywhere from no charge at all to as much as $500 on single-family residential properties. On larger commercial or multifamily loans, the initial application fee can be as high as $2,500 to $5,000. The fee is charged to offset costs incurred by the lender or broker for items such as administrative costs and credit reports. Justification for the charges results from a need to recover costs as well as the inability of some applicants to qualify for loans. Charging an application fee serves to filter out those individuals who may not be capable of qualifying for a loan. If, for example, the applicant believes he may not be able to qualify for a loan and knows an application fee of $250 will be charged regardless of whether he qualifies, chances are he will not bother with the application. Although lenders who charge an application fee will most likely have fewer applicants, the quality of those applicants is likely to be higher.

Application fees are oftentimes negotiable. If you know you have good credit and will have no problem qualifying for a loan, be sure to tell the lender or broker and ask for the application fee to be waived. Many times the answer will be yes. The party taking the application, however, may elect to charge the fee up front and agree to credit it back to you at the time of closing. This helps reduce the risk to the lender that the borrower will switch to another mortgage company or bank at some point in the process. If the borrower has paid a $500 application fee, for example, on a single-family investment property, or perhaps a $5,000 fee on a multifamily property, and knows she will receive a credit for it at the time of closing, there's a very good chance she will stay with the lender to see the loan through to the closing.

Underwriting fees have come about over the past few years as yet another way to tack on additional charges. The justification for this charge is similar to that of the application fee in that, similarly to

personnel who are paid for processing the loan application, the underwriting department must be paid for its job of underwriting the loan. Using that logic, it seems reasonable to expect that at some point in the future, we might begin seeing other types of fees show up, such as a "loan committee fee" for reviewing the loan, or perhaps a "human resources fee" to cover the cost of hiring all the other departments that are charging us fees. The list is limited only by one's imagination.

Loan-origination fees, still another way of charging the borrower, are usually equivalent to one point, or 1 percent, of the total amount of the loan. On a $100,000 loan, for example, the fee would be $1,000. Justification for this fee is supposedly based on the costs incurred by the lender to actually make the loan once it has been approved. Legal documents must be drawn up and processed, the loan must be funded, and everything must be properly recorded. Some lenders will waive the loan-origination fee altogether or roll it into the interest rate on the loan by increasing the rate by 25 basis points, which is the equivalent of one-fourth of a point.

Mortgage brokers earn the majority of their income from the fees generated by placing loans. Since they are not direct lenders, brokers do not earn anything from the interest being charged. Interest is paid to the lender and not to the broker. A mortgage broker is similar to a real estate broker in that they are both compensated only when they sell something. Both types of brokers are paid on a percentage basis. While the real estate agent is paid a *commission,* the mortgage broker is paid *points.* Brokers typically charge between 1 and 2 percent of the loan amount, sometimes more and sometimes less. Factors that may affect the fees they charge are items such as the borrower's creditworthiness, the size of the loan, and their ability to receive back-end fees from the lender. Don't be fooled by brokers who charge 1 percent on a $100,000 loan amount and tell you they are making only $1,000 on the transaction. Brokers are almost always compensated by the lender for differences in the spread of the rate charged. For example, if the base rate a lender charges is 6.00 percent with zero points to the borrower, the broker will likely be paid a back-end fee of 1 percent by the lender. If the broker is able to sell the same loan to you at, let's say 6.25 percent, the broker can double his or her income on the loan and receive 2 percent from

the lender. Both front-end and back-end fees are legally required to be disclosed on the good faith estimate. Borrowers have a right to know how much they are being charged for the lender's services. If you're an investor with good credit and have a strong personal financial statement, mortgage brokers are less likely to play such games with you. You're probably familiar with the term *caveat emptor,* but just in case you're not, the literal translation means "buyer beware" or "let the buyer beware." In the case of loan fees, however, I suppose we could say "let the borrower beware."

Points are often made available to borrowers to buy down the interest rate applied to a loan. Since one point is equivalent to 1 percent, an investor paying one point on a $100,000 loan would pay $1,000 in additional up-front fees. For every point paid, the interest rate on the loan is decreased by approximately ⅛ to ¼ of a percent. This is only a general guideline, as rate spreads vary widely among lenders, but the lender you are working with can usually provide an exact quote by looking at rate sheets. Since rate spreads are dynamic and change with minor fluctuations in the market, the rate quoted may be good for just that particular moment, or it may be good for the remainder of the day.

Take a moment to review Table 4.1. In this example, six different rate scenarios are compared. The loan amount of $1 million and the term of 240 months are held constant, while the interest rate and the points are changed in each scenario. A base interest rate of 7.00 percent with zero points is applied on the first line. In each subsequent rate scenario, the interest rate is decreased in quarter-point increments while simultaneously increasing the amount of discount points paid by the borrower. In the first example, an investor who borrows $1 million and pays no points and holds the loan throughout the duration of its 20-year life would pay a total of $1,860,717.45, with a monthly payment of $7,752.99. In the last example, the investor borrows the same $1 million for the same 20-year period, but instead elects to pay five discount points to buy the rate down from 7.00 percent to 5.75 percent. The investor in this scenario would pay a total of $1,735,000.42, which includes the $50,000 for points paid, and would have a monthly payment of $7,020.84. Buying down the rate in this example would save the investor $732.15 per month and $125,717.03

Table 4.1 Loan Comparisons

Symphony Homes, Inc. www.symphony-homes.com
The Value Play www.thevalueplay.com

Loan Amount	Interest Rate	Payments	Points	Payment	Total Paid	Cost of Loan	Cost of Points
$1,000,000.00	0.07%	240	0%	$7,752.99	$1,860,717.45	$860,717.45	$0.00
$1,000,000.00	0.0675%	240	1%	$7,603.64	$1,834,873.62	$824,873.62	$10,000.00
$1,000,000.00	0.065%	240	2%	$7,455.73	$1,809,375.53	$789,375.53	$20,000.00
$1,000,000.00	0.0625%	240	3%	$7,309.28	$1,784,227.69	$754,227.69	$30,000.00
$1,000,000.00	0.06%	240	4%	$7,164.31	$1,759,434.54	$719,434.54	$40,000.00
$1,000,000.00	0.0575%	240	5%	$7,020.84	$1,735,000.42	$685,000.42	$50,000.00

Value Play Real Estate Software, 3.0.01 www.thevalueplay.com

over the life of the loan. What this example assumes, however, is that the investor will hold the property for the full twenty-year period. If an investor determines ahead of time that a property is going to be maintained in her portfolio for the long term, then it makes sense to pay the additional points up front. On the other hand, if the property is going to be held for only five years, then it is better to pay the higher interest rate with zero points. In this example, an investor would need to hold the property for five years and nine months to realize any benefit of paying the additional points. The break-even point can be calculated by dividing the cost of points over the savings per month. In this example, the break-even point is calculated as follows:

$$\text{Breakeven} = \frac{\text{cost of points}}{\text{monthly savings}}$$

$$= \frac{\$50{,}000}{(\$7{,}752.99 - \$7{,}020.84)} = 68.29 \text{ months}$$

One additional factor to consider is what the future value of the $50,000 applied toward the discount points would be if it were instead used to purchase another investment property. We have already established that over a 20-year investment horizon, buying the interest rate down by applying the $50,000 would save $125,717.03 over and above all other costs. The question becomes, can the $50,000 be used to invest in another asset over a 20-year period to achieve an even greater return? To determine this, we must solve for *i,* which is the rate required to earn a return on the investment of $125,717.03. To set the problem up correctly, we know that $50,000 is the total amount invested, and $125,717.03 is the total amount returned. Using a financial calculator, the answer can easily be solved as follows:

Initial investment = present value = PV = $50,000 (cash flow out)
Total amount returned = future value = FV = $125,717.03 (cash flow in)
Number of years = n = 20

To solve for the total return, solve for *i*
Interest rate = *i* = 4.72%

By solving for *i,* we discover that an investor would have to earn a return of 4.72% or greater to come out ahead. If the investor could not earn at least a 4.72% return, he would be better off paying down the interest rate with the $50,000, assuming, of course, that the property will be held for the 20-year duration.

Now let's assume the investor has an alternative choice, which is to invest the $50,000 in a small multifamily apartment building. Let's also keep the math very simple by assuming he is able to purchase a building with only 10 percent down, which is not at all an unreasonable assumption. Using this kind of leverage, the investor is able to purchase a building valued at $500,000 ($50,000 ÷ 0.10 = $500,000). Let's also assume the investor purchased the property at a 10 cap, which means the capitalization rate is 10 percent. An apartment building with a cost of $500,000 and a cap rate of 10 will yield a net operating income (NOI) of $50,000, which is the amount of money left over after vacancy losses and operating expenses have been deducted from gross revenues. It is the portion of income available to service, or pay, the debt used to finance an investment. Take a moment to review the following equations.

$$\text{Price} = \frac{\text{net operating income}}{\text{capitalization rate}} = \frac{\$50{,}000}{0.10} = \$500{,}000$$

$$PV \text{ of apartment building} = \frac{\text{NOI}}{\text{cap rate}} = \frac{\$50{,}000}{.10} = \$500{,}000$$

$$\text{Cap rate} = \frac{\text{net operating income}}{\text{price}} = \frac{\$50{,}000}{\$500{,}000} = 10.0\%$$

Now let's take the analysis a step further by calculating the required debt service on the $450,000 loan that was required to finance the building. We'll also assume the investor will use the same loan program as he did with the first investment, as follows:

Loan amount = PV = $450,000
Number of years = n = 20
Interest rate = i = 7.0%
Annual debt service = pmt = $42,476.82

Let's take a moment to recap. We have established that the investment of $50,000 in a $500,000 apartment building will yield $50,000 of NOI and will be used to pay the annual debt service of $42,476.82. Where does that leave us? Let's take a look.

$$\$50,000.00 - \$42,476.82 = \$7,523.18 = \text{remaining cash}$$
$$= \text{cash return on investment}$$
$$\$7,523.18/\$50,000.00 = 15.05\% \text{ cash ROI}$$

In this example, the investor would earn a cash ROI of about 15 percent, which compares favorably to the 4.72 percent return if the same $50,000 were used to buy down the interest rate. It is important to note also that the cash ROI does not reflect the added value of the tax savings resulting from depreciation, nor does it reflect the added value of a reduction in the principal balance, or loan balance, that occurs over the life of the loan. In summary, it appears that our investor will fare much better by investing the $50,000 in an apartment building than by buying down the interest rate on the purchase of his first investment property.

PREPAYMENT PENALTIES

The third additional element that has an effect on real estate financing is known as a *prepayment penalty.* Although you would think a bank or other lending institution would be happy to have its loan repaid, believe it or not, many financial institutions charge their customers a substantial fee for repaying a loan prematurely. This is especially true on larger commercial and multifamily loans. You may think, "Why would anyone want to pay off a loan early?" There are two primary reasons loans are prepaid. The first is due to changes in interest rates. If, for example, an investor obtained a large

loan with a fixed rate of 7 percent, and rates then declined to 6 percent, the investor would most likely want to take advantage of the favorable change by refinancing. When people refinance, it is oftentimes through another institution. This means the existing lender loses a good loan to a competitor and, as a result, loses the income associated with that loan. To discourage customers from refinancing early in the life of the loan, lenders build in a prepayment penalty. See Exhibit 4.3 for a sample of prepayment penalty disclosures.

The second primary reason loans are prepaid results from a change in ownership. If, for example, an investor obtained a loan with a five-year term that had a provision for a prepayment penalty and decided to sell the property after just one year, the lender would charge a fee, or penalty, for prepaying the loan. Up until the mid-1980s or so, most loans were *assumable,* which meant the buyer could assume, or transfer, the note into her name without having to get a new loan. If the loan could be assumed by another party, then it would not have to be prepaid and no penalty would be assessed. Although assumable loans still exist, they are not nearly as common as they used to be. In fact, most single-family mortgage notes have a "due on sale" clause, which means that the note must be repaid in full if a sale or transfer in ownership occurs.

Prepayment penalty fees are structured in numerous ways and can sometimes be substantial. Prepayment fee structures range from a simple declining penalty structure to a quite complex fee structure for commercially oriented conduit loans. For example, a loan with a simple declining prepayment penalty structure having a three-year term may have a fee structure as follows:

Prepay Loan in Year	Prepayment Penalty Fee
1	5%
2	4%
3	3%
4	0%

In this example, if an investor borrowed money and then decided to repay the loan in Year 1, a penalty of 5 percent of the outstanding loan balance would be imposed on her. If she repaid the loan in full in Year

Exhibit 4.3

Prepayment penalty disclosure (2% penalty—Missouri).

YOU MAY HAVE TO PAY A PENALTY IF YOU SIGN A PREPAYMENT PENALTY RIDER TO NOTE AND YOU PREPAY ALL OR A PORTION OF YOUR LOAN AHEAD OF SCHEDULE SET FORTH IN YOUR NOTE.

WHAT IS A PREPAYMENT?
"Prepay" means to pay more than your scheduled principal and interest payment. Anything you pay in excess of your scheduled monthly payment amount of principal and interest, provided you have no outstanding late charges or other fees due, will be applied to reduce, or prepay, your outstanding loan balance ahead of the schedule contemplated in your Note. The most common form of "prepayment" occurs when you payoff your loan in its entirety by either refinancing or selling your property and using the sale proceeds to payoff the loan.

WHAT IS A PREPAYMENT PENALTY AND WHY SHOULD I ACCEPT IT?
A prepayment penalty is a penalty you must pay if you prepay your loan. It is your choice whether or not your loan has a prepayment penalty. Generally speaking, your acceptance of a prepayment penalty has value to your lender and to you. The lender benefits because the risk of losing the investment in your loan is diminished in the early years. You benefit because you are able to get a lower interest rate and margin, and/or reduce your out-of-pocket closing costs. In other words, if you want to waive the prepayment penalty, your rate and margin may be higher, and/or your closing costs may be increased. Ask us how your rate and margin and/or closing costs would change without the Prepayment Penalty Rider to Note.

CAN YOU MAKE PREPAYMENTS WITHOUT PAYING A PENALTY?
Yes. In any 12-month period during the term of the prepayment penalty, you can prepay up to 20% of your original loan balance

without penalty. After the term of the prepayment penalty, you can prepay your loan without penalty.

DOES A PREPAYMENT PENALTY LAST FOR THE LIFE OF THE LOAN?
No. The prepayment penalty applies only during the early term of the loan. The most common "Prepayment Penalty Term is three years, although your prepayment penalty term may be different (see your prepayment penalty rider to note for your actual prepayment penalty term). Once this term has expired, you will no longer have to pay a prepayment penalty if you prepay your loan.

HOW IS THE PREPAYMENT PENALTY CALCULATED?
Your prepayment penalty is equal to 2 percent of the balance of the Note. Any prepayment is payable at the time of the loan payoff or upon request from the note holder.

PREPAYMENT PENALTY TERM
I have discussed my prepayment options with my loan officer and have decided to obtain the following prepayment penalty term:

[ ] First five (5) years of the loan _____ _____ Initials

[ ] First four (4) years of the loan _____ _____ Initials

[ ] First three (3) years of the loan _____ _____ Initials

[ ] First two (2) years of the loan _____ _____ Initials

[ ] First one (1) year of the loan _____ _____ Initials

[ ] No prepayment penalty _____ _____ Initials

Acknowledged by:

_____ _____

Borrower Date Borrower Date

CS-004 09/99
Missouri

2, she would incur a prepayment penalty of 4 percent of the remaining loan balance. If the loan were repaid in Year 3, a 3 percent penalty would be imposed. Finally, if she prepaid the loan at any time during Year 4 or thereafter, there would be no prepayment penalty.

Let's look at an example to determine how prepayment penalties affect a loan transaction. In this example, Investor Green has just acquired a small multifamily apartment building with a purchase price of $800,000. While Investor Green has bought and sold many single-family houses over the years, this transaction represents his very first apartment deal. Since the loan amount is substantially more than he is used to borrowing through his traditional financing sources, Investor Green is forced to locate a new source of funding. Investor Green is new to the world of high finance and agrees to a loan with prepayment penalty fees structured as follows:

Prepay Loan in Year	Prepayment Penalty Fee
1	4%
2	3%
3	0%

Investor Green closes on the property and is now the proud owner of his first apartment building. Shortly after purchasing it, Green happens to come across a book titled *The Complete Guide to Buying and Selling Apartments* (New Jersey: John Wiley & Sons, 2004), and discovers a technique that author Steve Berges refers to as the *value play.* The value play strategy advocates a buy-and-sell philosophy rather than a buy-and-hold approach. The idea is to purchase a property that has upside potential, create value in it by making property improvements, increasing revenues, and decreasing expenses, and subsequently sell it to capture the gain, then move on to the next deal and start the process over. Investor Green decides to implement the value play strategy with his recent purchase and, after improving the property and discovering ways to enhance its revenues, decides to sell in Year 2. Let's now take a look at how the prepayment penalties affected his transaction. To keep the calculations simple, we'll also assume this is an interest-only loan with no payments made to the principal balance.

Purchase price = $800,000
Loan amount = $680,000
Interest rate = 6.25%
Loan origination Fee = 0.0%
Turnaround time = 18 months
Interest paid = $680,000 × 6.25% ÷ 12 × 18 = $63,750
Year 2 prepayment penalty = $680,000 × 3.0% = $20,400
Total interest and fees = $63,750 + $20,400 = $84,150
Effective interest rate = ($84,150 ÷ $680,000) ÷ 18 × 12 = 8.25%

As illustrated in this example, although the stated interest rate of 6.25 percent would be considered a competitive rate for most investors, the effective rate of 8.25 percent is not nearly as attractive. If our good friend Investor Green had been told up front that his interest rate would be 8.25 percent, he probably would have politely told the lender, "No thank you," and moved on to the next lender. Although he left an extra $20,400 on the table, because Green adopted the value play strategy and applied it to this transaction, he was able to walk away with a handsome profit. Next time around, however, he'll be a little wiser by negotiating with the lender in advance for the best possible terms, which includes the elimination of prepayment penalties.

As an investor, you should define your objectives with each and every property you buy *before* you buy it. This includes defining your time investment time horizon as well. If, for example, you intend to purchase a property and implement the value play strategy, you know you're going to be holding the note for only a short period of time. If, for instance, you obtained a $1 million loan with a 5 percent penalty in Year 1 and prepaid it in that same year, you would be subject to paying a penalty of $50,000. Ouch! No one wants to leave that much money on the table. You can easily avoid getting into a situation like this by knowing what your investment time horizon is ahead of time. Understanding the nature of prepayment penalties and how they are applied can potentially save you tens of thousands of dollars. Minimize your exposure by obtaining a loan that doesn't have a prepayment penalty to begin with. Then you don't have to worry about it.

In summary, three additional financing considerations investors

need to be mindful of are a loan's duration, any collateral fees that may be charged by the lender or mortgage broker upon the origination of the loan, and any penalties which may be imposed as a result of paying off the loan early. The prudent investor should obtain financing with shorter durations to take advantage of more favorable rates and also to lock in rates for longer durations for those investment opportunities that may have longer life cycles. The careful investor should also use a cost-benefit analysis to determine whether it makes sense to buy down the interest rate by paying additional points up front. Finally, the careful investor will become familiar with the specifics of any prepayment penalty clauses should they exist.

Chapter 5

Structuring Financial Instruments

In Chapters 2, 3, and 4, we learned about the many different elements that directly impact financing for investment properties. Factors such as the time horizon, the volume of transactions, and the type of property being purchased all influence an investor's decision-making process. Furthermore, financing elements such as the cost of funds, the amortization period, and the amount of funds being borrowed affect the viability and profitability of a potential investment opportunity. Finally, elements such as loan duration, lender fees, and prepayment penalties will also have an impact on whether an income-producing property can meet an investor's return criteria. In this chapter, we not only explore the different ways investors can structure purchases, but also the advantages and disadvantages of each (see Exhibit 5.1). We also analyze the effect these various financing mechanisms have on returns.

LEVERAGE

A lever is a tool supported by a fulcrum that can be used to lift heavy objects. Archimedes, an ancient Greek mathematician and physicist, calculated the law of the lever. He is reported to have said that if he had a lever long enough and a fulcrum large enough, he could lift the world. When applied to real estate, the principle of *leverage* enables

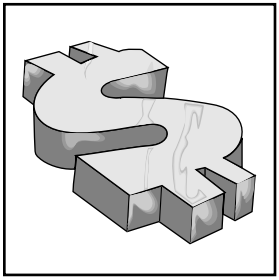


Exhibit 5.1
Structural elements.

1. Leverage
2. Debt
3. Equity
4. Partnerships
5. Blended financing and WACC
6. Options

investors to purchase properties they would otherwise not be capable of purchasing. Applying the law of leverage to the various financing mechanisms that are available can potentially allow individuals to greatly magnify the return on their investments. In fact, without leverage, many people would not even be able to purchase real estate since they can barely save enough money to make even a small down payment.

Investors use the law of leverage to help them *lever up* the returns on their holdings. The application of this law suggests that investors will use a *lever* to lift something that they would otherwise not be able to lift. The lever is supported by a *fulcrum,* which is defined as the support on which the lever turns. In the case of real estate, the fulcrum represents the use of other people's money, commonly referred to as the *OPM principle.* On one end of the lever is an investor's initial capital outlay, however small it may be, and on the other end of the lever is the real estate being levered. The fulcrum enables investors to apply the law of leverage.

The law of leverage as it applies to real estate rests on the premise that the cost of other people's money must be less than the return

on the asset being invested in. For example, if an investor borrows funds from a financial institution in the form of debt, the cost of that debt must be less than the expected return on the assets it is invested in. If it is not, then it makes no sense to borrow those funds, because the investor will lose money.

Let's look at a simple example. If the interest rate on a loan is 6.0 percent and the expected return on assets (ROA) is 10 percent, then the leverage is said to be *positive* and would represent a viable investment opportunity. On the other hand, if the cost of funds is 8.5 percent and the expected ROA is 5.75 percent, the leverage is said to be *negative* and would not represent a viable investment opportunity. The difference between the cost of funds and the ROA is referred to as the *spread.* One of the most common mistakes novice investors make is based on the false assumption that any property purchased with nothing down must be a good investment since they didn't have to put any money down. What they fail to realize, however, is that if the property has a negative spread and a negative monthly cash flow because it is highly leveraged, the investment will not generate a positive return. On the contrary, it will generate a negative return requiring monthly cash injections that can literally destroy investors if they have no reserves.

Take a moment to review Table 5.1. It illustrates the effect of price appreciation using no leverage and an initial investment of $500,000, which represents 100 percent of the purchase price. The table applies 5, 10, and 20 percent growth rates over a period of 25 years. An investor in this scenario using an annual growth rate of 5 percent will enjoy a total return of 238.6 percent over the 25-year period. Not bad.

Now let's compare the returns in Table 5.1 to those in Table 5.2, which illustrates the effect of price appreciation on leverage using an initial investment of $75,000, or 15 percent of the purchase price. This table also applies 5, 10, and 20 percent growth rates over a period of 25 years. An investor in this scenario using an annual growth rate of 5 percent will enjoy a total return of a remarkable 1,590.9 percent over the same 25-year period! The use of leverage has allowed the investor in the second scenario to enjoy a return almost seven times greater than the investor in the first scenario.

Table 5.1 Effect of Leverage on Invested Capital Applying Annual Appreciation Only

Purchase Price:	$500,000
Percent Down:	100.0%
Down Payment:	$500,000

Number of Years	Annual Appreciation Rate					
	5.0%	Ret on Inv	10.0%	Ret on Inv	20.0%	Ret on Inv
1	525,000	5.0%	550,000	10.0%	600,000	20.0%
2	551,250	10.3%	605,000	21.0%	720,000	44.0%
3	578,813	15.8%	665,500	33.1%	864,000	72.8%
4	607,753	21.6%	732,050	46.4%	1,036,800	107.4%
5	638,141	27.6%	805,255	61.1%	1,244,160	148.8%
6	670,048	34.0%	885,781	77.2%	1,492,992	198.6%
7	703,550	40.7%	974,359	94.9%	1,791,590	258.3%
8	738,728	47.7%	1,071,794	114.4%	2,149,908	330.0%
9	775,664	55.1%	1,178,974	135.8%	2,579,890	416.0%
10	814,447	62.9%	1,296,871	159.4%	3,095,868	519.2%
11	855,170	71.0%	1,426,558	185.3%	3,715,042	643.0%
12	897,928	79.6%	1,569,214	213.8%	4,458,050	791.6%
13	942,825	88.6%	1,726,136	245.2%	5,349,660	969.9%
14	989,966	98.0%	1,898,749	279.7%	6,419,592	1183.9%
15	1,039,464	107.9%	2,088,624	317.7%	7,703,511	1440.7%
16	1,091,437	118.3%	2,297,486	359.5%	9,244,213	1748.8%
17	1,146,009	129.2%	2,527,235	405.4%	11,093,056	2118.6%
18	1,203,310	140.7%	2,779,959	456.0%	13,311,667	2562.3%
19	1,263,475	152.7%	3,057,955	511.6%	15,974,000	3094.8%
20	1,326,649	165.3%	3,363,750	572.7%	19,168,800	3733.8%
21	1,392,981	178.6%	3,700,125	640.0%	23,002,560	4500.5%
22	1,462,630	192.5%	4,070,137	714.0%	27,603,072	5420.6%
23	1,535,762	207.2%	4,477,151	795.4%	33,123,686	6524.7%
24	1,612,550	222.5%	4,924,866	885.0%	39,748,424	7849.7%
25	1,693,177	238.6%	5,417,353	983.5%	47,698,108	9439.6%

This simple example does not even take into consideration the effect of income generated, tax benefits, or principal reduction.

DEBT

In *The Complete Guide to Investing in Rental Properties* (New York: McGraw-Hill, 2004), I described the use of debt in the following excerpt.

Table 5.2 Effect of Leverage on Invested Capital Applying Annual Appreciation Only

Purchase Price:	$500,000
Percent Down:	15.0%
Down Payment:	$75,000

Number of Years	Annual Appreciation Rate					
	5.0%	Ret on Inv	10.0%	Ret on Inv	20.0%	Ret on Inv
1	525,000	33.3%	550,000	66.7%	600,000	133.3%
2	551,250	68.3%	605,000	140.0%	720,000	293.3%
3	578,813	105.1%	665,500	220.7%	864,000	485.3%
4	607,753	143.7%	732,050	309.4%	1,036,800	715.7%
5	638,141	184.2%	805,255	407.0%	1,244,160	992.2%
6	670,048	226.7%	885,781	514.4%	1,492,992	1324.0%
7	703,550	271.4%	974,359	632.5%	1,791,590	1722.1%
8	738,728	318.3%	1,071,794	762.4%	2,149,908	2199.9%
9	775,664	367.6%	1,178,974	905.3%	2,579,890	2773.2%
10	814,447	419.3%	1,296,871	1062.5%	3,095,868	3461.2%
11	855,170	473.6%	1,426,558	1235.4%	3,715,042	4286.7%
12	897,928	530.6%	1,569,214	1425.6%	4,458,050	5277.4%
13	942,825	590.4%	1,726,136	1634.8%	5,349,660	6466.2%
14	989,966	653.3%	1,898,749	1865.0%	6,419,592	7892.8%
15	1,039,464	719.3%	2,088,624	2118.2%	7,703,511	9604.7%
16	1,091,437	788.6%	2,297,486	2396.6%	9,244,213	11659.0%
17	1,146,009	861.3%	2,527,235	2703.0%	11,093,056	14124.1%
18	1,203,310	937.7%	2,779,959	3039.9%	13,311,667	17082.2%
19	1,263,475	1018.0%	3,057,955	3410.6%	15,974,000	20632.0%
20	1,326,649	1102.2%	3,363,750	3818.3%	19,168,800	24891.7%
21	1,392,981	1190.6%	3,700,125	4266.8%	23,002,560	30003.4%
22	1,462,630	1283.5%	4,070,137	4760.2%	27,603,072	36137.4%
23	1,535,762	1381.0%	4,477,151	5302.9%	33,123,686	43498.2%
24	1,612,550	1483.4%	4,924,866	5899.8%	39,748,424	52331.2%
25	1,693,177	1590.9%	5,417,353	6556.5%	47,698,108	62930.8%

Other people's money can be provided to you in one of two forms—either debt or equity. The most common type of financing is debt. Debt is most often provided in the form of some type of loan which can come from any number of sources including banks, mortgage companies, family members, friends, credit cards, and home equity loans to name a few. Financing with debt typically requires that you repay a loan with predetermined terms and conditions such as the repayment term (number of years to repay the

loan), the interest rate, and any prepayment penalties which may be imposed for paying off a loan early.

One primary advantage of using debt is its lower cost of capital than other forms of financing such as equity. Another advantage of using debt is that it is typically more readily available than equity. One key disadvantage of using debt is that the debt must be serviced. In other words, you have to make periodic payments on the loan. Using debt as a source of financing will usually have a direct negative impact on the cash flow from your rental house since loans usually require monthly payments. It should be obvious to you that the more you borrow for a particular investment, the greater your monthly payment will be, and the greater your monthly payment, the less the property's after tax cash flow will be. As a smart investor, you must be sure that you have structured the purchase of your rental house in such a manner that will allow you to service the debt on it, whatever the source of that debt is, without a negative cash flow. This is after all expenses have been accounted for. You should have a minimum of a 1.1 to 1.2 ratio of free cash flow left over after all expenses have been paid to ensure that you can adequately meet the debt requirements. Debt is a wonderful tool, but like any tool, you must exercise caution and respect when using it. Otherwise you can quickly find yourself in trouble. You must be in control of your debt. Do not allow your debt to control you.

From this excerpt, we learn that the primary advantages of using debt are that it is readily available and that it can typically be obtained at a lower cost than alternative financing sources such as equity. In Chapter 3, we examined the effect of different interest rates on the value and returns of an income-producing property. The lower the cost of funds, the greater the cash flow, and the greater the cash flow, the greater an investor's returns.

We also learned that one key disadvantage is that debt usually requires that some type of periodic payment be made. This is especially important because an investor purchasing a non-income-producing property may have a difficult time making the required

periodic payments. For example, when I purchase land on which to build houses, my preference is to defer all interest and tax payments for as long as I can. If possible, I structure the financing in such a manner that no payments are due until a lot is released. When a house is ready to be built on a particular lot, all accrued interest and taxes are paid on the lot at that time. The payment is made from the construction loan used to build the house. Structuring the financing in this manner enables me to lever up without having the burden of making periodic payments on the land.

One additional advantage of using debt is that the interest portion of the payment is tax deductible, because interest is treated as an expense for tax purposes. Since the interest portion of a debt payment is tax deductible, the effective interest rate is lower than it otherwise would be. This provides investors with an added incentive to use debt rather than equity, since they are able to further reduce their cost of funds. Let's take a moment to look at an example to see how this works.

Loan amount = $100,000
Interest rate = 6.50%
Annual interest paid = $100,000 × 6.50% = $6,500
Investor's tax rate = 35%
Reduction in taxes = $6,500 × 35% = $2,275
Effective interest rate = ($6,500 − $2,275) = $4,225 ÷ $100,000
= 4.225%

This example assumes a loan amount of $100,000 and cost of funds of 6.50 percent. An investor in a 35 percent tax bracket would realize $2,275 in savings as a result of the reduction in tax liability. The annual cost of funds is reduced from $6,500 to $4,225, which in turn reduces the effective tax rate to 4.225 percent.

EQUITY

Another common method of funding an investment is by raising capital in the form of equity. Whereas debt represents money that is borrowed, equity represents money that is invested. Equity financing can be provided by any number of sources and commonly

involves the formation of a legal partnership or corporation. Family, friends, business associates, and private investors can all be good sources of equity financing. One of the main reasons for using equity financing is to minimize the cash flowing out of income-producing properties. The repayment of equity financing can be structured in any number of ways. For example, you can agree with the investor to pay a specified percentage of the profits at the end of each quarter, semiannually, or even annually. You could also agree to defer all payments until such time as the property is sold. Sharing profits with an equity investor can be based on income, capital gains, or any combination of the two. Preserving as much cash as possible, especially in the earlier years of investing when cash reserves tend to be smaller, can mean the difference between success and failure in the real estate business.

Although not as common as lenders who provide financing in the form of loans, or debt, a number of institutional investors are willing to fund investment projects in the form of equity. In other words, instead of *lending* money to buyers, investors contribute *capital* in the form of equity. In essence, they become shareholders. Capital contributions from equity investors allow the smaller private investors to leverage up into larger commercial or multifamily properties that they otherwise would not be capable of purchasing.

Equity investors typically require a minimum return on their investment that is higher than if the funds had been borrowed. Furthermore, because they are shareholders, equity investors also expect to share in the profits of a property that result from its sale. Most of the larger institutional investors are looking to place large sums of capital and oftentimes will not even consider a project less than $5 million in size. Since they will fund up to 80 or 90 percent of the capital required, the private investor will need to be prepared to invest a minimum of 10 to 20 percent. Let's look at an example to see how this might work for a commercial strip center with a purchase price of $5 million.

Purchase price = $5,000,000
Total equity = 20% = $5,000,000 × 20% = $1,000,000
Institutional share = 80% = $1,000,000 × 80% = $800,000
Investor share = 20% = $1,000,000 × 20% = $200,000

Structuring the financing in this manner allows smaller investors the opportunity to acquire larger income-producing properties than would otherwise be possible. In this example, the investor is able to purchase a $5 million commercial property with only $200,000. Instead of the normal 15 to 20 percent down, the investor has to come up with only 4 percent of the total purchase price, as follows:

$$\text{Investor share of total purchase price} = \frac{\$200{,}000}{\$5{,}000{,}000} = 4\%$$

Institutional firms like partnering with local investors who are familiar with the market in a specific area. Local investors oftentimes have a good idea of which areas are preferable for various reasons. For example, they may have insight into which areas are enjoying positive, even strong, growth and which areas are deteriorating and should likely be avoided. Local investors can also help with, or even be responsible for, the management of the property.

Don't assume that institutional firms are standing by with an open checkbook waiting to invest in the first property that you bring to them. That isn't the case. These investors have accumulated large pools of capital because they are very careful, not because they throw money at every opportunity presented to them. As a smaller investor who is familiar with the local market, you will have to carefully select a property that you believe has potential and represents a sound investment. Then you need to be prepared to put together a well-thought-out business plan, which will include data specific to the area and the property, such as the unemployment rate, average vacancy rates, and rental rates for similar properties. Institutional investors are very selective when they purchase properties, so be prepared to sell them not only on the property and the area, but on yourself as well.

PARTNERSHIPS

Combining your own resources with those of a partner is another way to raise financing for investment properties. The type of partner I am referring to in this section is a friend, family member, or business acquaintance. This differs from the large institutional investor

described in the previous equity financing section. Partnerships can be structured in a variety of ways. For instance, capital infusions by partners can take the form of debt or equity, partners can play an active or a passive role, and terms for the repayment provisions can be defined in any number of creative ways. While bringing in a partner certainly has its advantages, probably one of the most challenging aspects is finding one you can work with.

If your partner participates simply by loaning money in the form of debt, then a fixed amount will be repaid to that partner under predefined terms and conditions. Unlike more traditional sources of debt financing, payments can be structured in any manner the two of you agree on. For example, you may agree to make both principal and interest payments, interest-only payments, or perhaps defer all payments until the property is sold. Regardless of how the payments are structured, the amount repaid is predetermined as set forth in a fully executed promissory note and is not based on the profitability of the property. Furthermore, the two of you may choose to secure the loan by the property, or you may choose to secure it by some other form of collateral, or you may choose not to secure the loan at all. At a minimum, the promissory note should be witnessed and recordable. The two of you may choose *not* to record the note for any number of reasons, but the partner loaning the money should have the right to record the instrument if he or she so chooses. An alternative to securing debt financing from a partner is to obtain equity financing. If your partner agrees to invest in your project using equity, then he or she will share the risk with you. If your project goes south, your partner's investment in the project goes south with you. On the other hand, if you hit a home run, your partner will score right along with you. Both you and your partner will enjoy the benefit of sharing in the profits.

Partners may take either an active or passive role in helping you manage and operate the property. For example, you may decide to have your partners actively participate by taking advantage of whatever skill sets they may have. If they have good management skills, for instance, you may want them to help manage the property. On the other hand, you may choose to have your partners play a completely passive role wherein their only contribution is investment capital. In summary, allowing partners to participate can be beneficial to you by

providing additional capital for a project that otherwise may be out of reach financially. Finally, partners may be able to contribute services or specific skills that you may be lacking.

We've discussed several of the advantages of working with partners. Now let's take a moment to review some of the challenges. Perhaps the biggest of them is finding the right partner to work with. Just as a married couple who are in tune with each other can live and work and dream together in harmony year after year, so can partners work together to achieve great financial success. As in a marriage, success requires give and take in the relationship. The partners must be able to get along with each other and work together in a spirit of harmony. There must always be a cooperative effort exerted by each partner. This doesn't mean there can't be any disagreements, for certainly there will be; however, you need to have the ability to resolve your differences peaceably.

It also helps to clearly define each partner's duties and responsibilities and to then allow them to work within the agreed-upon framework. As with our spouses, we are sometimes too quick to criticize and too slow to compliment. It is tempting to micromanage other people's performance and point out that they are "not doing it the right way." Working closely together with a partner takes just the right balance of temperament and respect for each other. Husbands and wives often search for years to find the right companion; even then, marriages often result in divorce. Finding the right partner to work with does not happen overnight. Even when you think you may have found the right business partner, the relationship can fail for any number of reasons.

You should consider in advance before ever forming a partnership how its potential failure may affect the relationship you have with that individual, especially if it is a family member. I know of one particular instance where a father-in-law invested much of his savings in his son-in-law's residential construction business. Two years later, the family business went belly-up when the son-in-law declared bankruptcy. I'm sure this failure placed a tremendous strain on the family's relationships. On a more successful note, however, I am equal partners with my brother-in-law, Don Mahoney, in our residential construction company, Symphony Homes. I respect his role as the master builder

of our homes, and he in turn respects my role as the master builder of our company. I don't try to tell him how to build the houses, and he doesn't try to tell me how to build the company. That's not to say that we don't have input for each other. He offers his comments and opinions to me, which I gratefully accept, and I offer my comments and opinions to him. Although we have our differences from time to time, it has definitely been a win-win partnership for us. Without Don to ensure that each and every home is built as it should be, I would not have been able to enjoy a fraction of the success in our company that I do today. Likewise, without me to develop our business, Don wouldn't have nearly as many houses to build as he does today.

BLENDED FINANCING AND THE WEIGHTED AVERAGE COST OF CAPITAL

When purchasing income-producing properties, especially larger ones, investors often combine several sources of financing, including both debt and equity. For example, an investor may purchase a 450-unit apartment building using a first mortgage for 70 percent of the total purchase price plus improvements, then raising another 15 percent of the total purchase price plus improvements through equity arrangements, then borrowing an additional 10 percent of the total for capital improvements from another lender, and finally, investing 5 percent of his or her own capital. Since the four different sources that provide the financing will most likely charge different rates, a blended rate must be calculated. This blended rate is known as the *weighted average cost of capital* (WACC). A company's WACC is the average rate of return required by all of its creditors and investors.

Calculating the WACC for a business or company enables its owners to determine the threshold for future projects or investments. If a real estate firm holding a portfolio of properties, for instance, calculated its WACC at 7.40 percent, assuming the firm's cost of capital was held constant, it would have to be able to earn a minimum of 7.40 percent to justify investing in another property. If the expected return was less than 7.40 percent, the firm would retain its investment resources until a more favorable opportunity presented itself.

An investment firm's cost of capital is calculated by first determining the weight of each component of debt or equity and then multiplying that weight by its respective cost. Take a moment to study the following formula.

Weighted average cost of capital = (proportion of debt × cost of debt) + (proportion of equity × cost of equity) = WACC

The formula can also be written as follows:

$$\text{Weighted average cost of capital} = \left(\frac{\text{bonds}}{\text{bonds} + \text{securities}}\right) \times \text{bond rate} + \left(\frac{\text{securities}}{\text{bonds} + \text{securities}}\right) \times \text{securities rate} = \text{WACC}$$

$$\text{WACC} = \left(\frac{B}{B+S}\right) \times R_B + \left(\frac{S}{B+S}\right) \times R_S$$

where

WACC is the firm's weighted average cost of capital
B is the value of bonds, or debt, used for financing
S is the value of stocks, or equity, used for financing
R_B is the cost of debt, or interest rate
R_S is the cost of equity, or the expected return on equity

Now let's apply the WACC formula to an example. Assume the following:

Value of real estate portfolio = $25 million
Total outstanding debt = $20 million
Total outstanding equity = $5 million
Average cost of debt = 6.20%
Average cost of equity = 10.40%

$$\text{WACC} = \left(\frac{\$20{,}000{,}000}{\$20{,}000{,}000 + \$5{,}000{,}000}\right) \times 6.20\%$$

$$+ \left(\frac{\$5{,}000{,}000}{\$20{,}000{,}000 + \$5{,}000{,}000}\right) \times 10.40\% = \left(\frac{\$20{,}000{,}000}{\$25{,}000{,}000}\right)$$

$$\times 6.20\% + \left(\frac{\$5{,}000{,}000}{\$25{,}000{,}000}\right) \times 10.40\% = (.80 \times .0620)$$

$$+ (.20 \times .1040) = .0496 + .0208 = .0704 = 7.04\% = \text{WACC}$$

In this example, the weighted average cost of capital for the real estate portfolio is 7.04 percent. If the investment firm that owned the portfolio decided to purchase another property, its managers would carefully examine the firm's cost structure. Assuming a similar cost structure was required to purchase the property, then the manager's threshold would be a minimum of 7.04 percent. That means the total return from the property must yield an income stream of at least 7.04 percent to increase the total return to the firm. Anything less than that means that the cost of financing the property would be greater than the income earned from it and would therefore have a negative impact on earnings.

Although the WACC calculation is a useful tool for individuals or businesses investing on a larger scale, it is just as useful for those individuals or businesses investing on a smaller scale. As an example, an investor buying a $1 million commercial building must pull $200,000 out of her mutual fund, which has been averaging a 12.0 percent rate of return. She will borrow the remaining $800,000 at an interest rate of 6.0 percent. The WACC in this example would be as follows:

$$\text{WACC} = \left(\frac{\$800{,}000}{\$800{,}000 + \$200{,}000}\right) \times 6.00\%$$

$$+ \left(\frac{\$200{,}000}{\$800{,}000 + \$200{,}000}\right) \times 12.00\% = \left(\frac{\$800{,}000}{\$1{,}000{,}000}\right)$$

$$\times 6.00\% + \left(\frac{\$200{,}000}{\$1{,}000{,}000}\right) \times 12.00\% = (.80 \times .0600)$$

$$+ (.20 \times .1200) = .0480 + .0240 = .0720 = 7.20\% = \text{WACC}$$

At first glance, it appears that because the WACC is 7.20 percent, our investor is better off leaving her money in the mutual fund so it can continue to earn 12.00 percent rather the 7.20 percent shown in the calculation; however, because financial leverage was introduced, this may or may not be the case. If the property was purchased at a capitalization rate of 8.50 percent, that means its net operating income would be $85,000 annually before interest. Applying a simple interest-only calculation would require annual debt service as follows:

Net operating income = $85,000
Debt service = $800,000 × 6.00% = $48,000
Net income before taxes = $37,000

Now let's compare the earnings of $37,000 to the yield on our investor's savings if left in her mutual fund.

Mutual fund savings = $200,000
Expected rate of return = 12.00%
Earnings before taxes = $24,000
Difference between investments = $37,000 − $24,000 = $13,000
Yield on investor's equity = $37,000/$200,000 = 18.50%

In this simple example, by introducing the concept of financial leverage, the investor would be able to earn an 18.50 percent rate of return by purchasing the commercial building versus a 12.00 percent rate of return by leaving her money invested in a mutual fund. Calculating the weighted average cost of capital enables the investor to better understand her true cost of capital. Although she is borrowing funds at an interest rate of 6.00 percent, because she is investing funds that would otherwise earn 12.00 percent, her true WACC is 7.20 percent.

OPTIONS

Option agreements are used by investors to gain control of an asset without having to take legal title to it. Options give investors the legal right to purchase an asset at a predetermined price. The use of options is used by investors every day in the stock market to gain control of the rights to either buy or sell various types of securities. An investor could purchase, for instance, a put option for 1,000 shares of Intel with a strike price of $35. This gives the investor the right to sell shares of Intel at $35. The Black-Scholes model is the standard by which options are valued. As with all options, time *t* is one of the variables that determine its value. Investors have the right to exercise an option at their discretion within a specified period of time. While it is possible that an investor will buy or sell at precisely the right time to lock in a gain, it is also possible that the option will expire worthless and that the investor will lose the money invested to purchase it. In the case of the investor who purchased a put option for 1,000 shares of Intel, it is hoped that the price of the stock will fall so that the investor can sell it at the higher strike price of $35 after having purchased it at any price less than its strike price.

An option works essentially the same way with real estate as it does with a stock. Some sellers may require the purchaser to meet additional obligations, such as assuming responsibility for interest and taxes; however, these items are negotiable. When an option is used with real estate, investors have the legal right to purchase a specified piece of property at a predetermined price within a given time frame. As with stocks, *t* will eventually expire worthless if the option is not exercised. At some point before the expiration of the option agreement, the investor may exercise her right to purchase the property at whatever price was established. In addition, since a legal interest is held in the property, that interest is usually transferable. This gives the investor the right to sell the property without ever taking title to it. Options are a terrific tool investors can use to purchase property with very little cash of their own. This is especially true if another buyer is found before actually having to take title to it. Another benefit of using options is that they provide

investors with the ability to limit their risk exposure in a particular property to only the premium paid for the option. If the investor decides not to exercise the right to purchase, the option expires worthless, and only the premium paid for the option is lost. Depending on the value of the subject property, an option may potentially cost tens of thousands of dollars. While this may represent a substantial amount of money, keep in mind that the price paid for an option is relative to the value of the property being sought. Although the Black-Scholes model is the standard used to price options for stocks, option premiums for real estate are typically based on whatever price is negotiated by the parties that have an interest in it. I personally have paid anywhere from about 1 percent of the total purchase price to as much as 5 percent for an option.

Some of the real estate investment activities employed by Symphony Homes include the use of options for the development and construction of single-family houses. Options are used to acquire rights to property to build on without ever taking legal title until we are ready to begin construction. The company does, however, have a recordable interest in the property. In Chapter 2, I referred to a recent real estate transaction that was worth $3.3 million. An option agreement was used to acquire the rights to that property, which gives Symphony Homes the ability to build on any one of the lots in an entire community at a predetermined price. When our company has a purchase agreement to build a new home for a client on one of those lots, we then exercise the option on that lot and take legal title to it. Although we do have a predetermined strike price, or purchase price, on all of the lots, interest and taxes begin accruing from the date the agreement is signed. The advantage to us in this case is that even though we do eventually have to pay those costs, we are able to defer them until we are actually ready to begin construction on a lot. This provision allows us to minimize our outgoing cash flow and thereby retain as much working capital as possible to take advantage of other potential opportunities.

Let's take a moment to compare the use of an option agreement on this transaction to the use of traditional bank financing. By using an option, we were able to gain control of the lots in an entire community with only 1 percent down. By comparison, purchasing

developed land through more traditional means such as bank financing typically requires at least a 20 percent down payment.

	Scenario 1: Option Agreement	Scenario 2: Traditional Bank Financing
Purchase price	$3,300,000	$3,300,000
Option fee	1%	20%
Total cash required	$3,300,000 × 1% = $33,000	$3,300,000 × 20% = $666,000
Difference = $660,000 – $33,000 = $627,000		

In this example, using an option agreement allowed me to gain control of an entire community with only $33,000. If I had approached a bank to finance the project, it would have required $660,000 in total cash. Using an option agreement provided me with a net favorable reduction in the amount of cash required of $627,000. I think you would agree with me that this is a significant sum of money. The use of an option here allowed me to take full advantage of the law of leverage by gaining control of real estate valued in excess of $3 million for a meager 1 percent of the purchase price. Now that's what I call leverage!

The advantages of using an option in this case are twofold. The first advantage is that if we have difficulty selling new homes to prospective buyers in this particular community, we are not stuck with the ongoing burden and cost of owning the lots. The only thing we have at risk is our option money. The second advantage is that if we were to actually purchase the lots, the sale would trigger an increase in taxes due to a new and much higher assessed value, because the value of finished lots is much higher than when the developer first starts improving the land. This is because in the state of Michigan, property values are not reassessed until a transfer of ownership has occurred. They are instead capped at a maximum increase by a change in prices similar to that of the Consumer Price Index (CPI). As the new owners, Symphony Homes would then be obligated to assume the new, higher tax liability.

In summary, the use of options can be an incredibly effective tool for real estate investors who are interested in gaining control of investment property without having to take title to it. Options enable investors to gain control of property with very little money down,

which thereby allows them to maximize the use of leverage. I recommend, however, that options agreements be used prudently. Remember that time is one of the variables of an option agreement, and when *t* expires, so does the option. Carefully study the market as it applies to your particular investment opportunity before committing any capital to it to determine whether the probability of the outcome is favorable. This will help minimize the risk of any loss of capital.

Chapter 6

Real Estate Investment Performance Measurements and Ratios

Investors use a variety of methods to help them evaluate potential investment opportunities. These range from as unscientific an approach as a hot tip from a real estate broker who supposedly has inside connections, to general rules of thumb, to advanced mathematical models that analyze every facet of a property's income and expenses. My experience has been that the majority of less experienced investors really have no idea how to go about properly analyzing real estate, especially when it comes to multifamily and commercial properties. Most of them rely on using comparable sales of similar properties to help assess value. Although this is a good place to start, it should by no means be considered exhaustive. A more comprehensive approach requires the use of all or part of the 10 essential performance measurements outlined in Exhibit 6.1. A thorough mastery of these measurements is crucial to your success in this business. Without understanding them, how can you possibly know whether you're paying too much for a property? Likewise, how can you know if you're getting a good deal? The answer is you can't.

One primary method of measuring relationships that exist between the variables of an investment's income components is through the

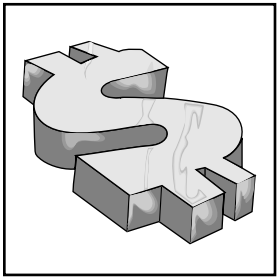


Exhibit 6.1
Ten essential performance measurements.

1. Net income return on investment
2. Cash return on investment
3. Total return on investment
4. Net operating income
5. Capitalization ratio
6. Debt service coverage ratio
7. Turnover ratio
8. Gross rent multiplier
9. Operating ratio
10. Break-even ratio

use of ratios. A ratio is a mathematical equation used to express the relationship between sets or groups of numbers. The use of ratios for analyzing income-producing properties is essential to properly and fully understand their respective values. Furthermore, ratios provide a gauge or general rule of thumb so that a specific property's value can quickly be determined relative to similar properties that may be for sale.

Two precepts must be remembered when applying ratio analysis. The first is the notion that *value is relative.* In *The Complete Guide to Investing in Rental Properties* (New York: McGraw-Hill, 2004), I described this precept as follows:

> The smart investor knows that perhaps more important than any other part of the investment process is having a

thorough understanding of the concept of real estate values. I like to compare the process of purchasing rental houses to that of shopping for a new car. If you're anything at all like most people, before you buy a new car you're likely to look at all of the newspaper ads related to the type of car you want. Then you'll probably call several of the local dealers to gather some general information and determine which models they have in stock. After that, you'll begin comparison shopping by going around to several dealerships to see which one is offering the best deal. Somewhere along the way, you will have narrowed your selection of cars down to one or two models. Finally, you'll begin the arduous task of negotiating price and terms with the salesperson. Since you've shopped around quite a bit already, you are already familiar with the car's price and what represents a good value. A good value in this case means that the price is equal to or less than fair market value relative to all other cars that are similar in design and features. If you can't reach an agreement with the salesperson, then it's on to the next dealer to try again until finally, you've found just the right car at just the right price.

Since purchasing a rental house for investment purposes costs anywhere from five to ten times more than a new car, don't you think it would be in your best interests to spend at least as much time shopping for a house as you do a car? Yes, of course it would. The more houses you look at in a particular market, the greater you understand their relative values. The fact that a 1200-square-foot house with three bedrooms, two baths, and a two-car garage is priced at $125,000 in a particular neighborhood means absolutely nothing by itself. It is only when you compare the price of that house to the price of all other similar houses in the same area that its price becomes meaningful.

Using the logic described here, we have established the precept that indeed, value is relative. This logic leads us to the second

precept, which is that *performance measurements are relative.* The notion that value is relative leads us to conclude that the performance measurements that capture those values must also be relative. For example, what might be considered a good cap rate in one area might very well be considered poor in another area. These areas do not have to be in different parts of the country, either. They can quite easily be in the same metropolitan area. Since cap rates are a function of property values, and property values are in part determined by the location of the property, an investment property in a less than desirable neighborhood would command a higher cap rate (and lower price) to attract buyers who prefer a higher yield. Conversely, an investment property in a highly desirable neighborhood would command a lower cap rate (and higher price) to attract buyers who prefer a higher-quality asset.

The notion that value and performance measurements are relative is essential for investors to both understand and apply. Without this knowledge, it would be very easy to overpay for a property. Be sure to factor these precepts in when analyzing potential investment opportunities.

NET INCOME RETURN ON INVESTMENT

One thing almost all investors have in common is a desire to know the answer to the question, "How much will I make on my investment?" Put another way, investors want to know what the return on their invested dollars will be, or what their return on investment (ROI) will be. The ROI performance measurement can be applied to measure the effectiveness of all types of assets and is especially useful in real estate. The ROI measurement captures the relationship between net income and invested capital, cash flow and invested capital, and the asset's total return and invested capital.

The first of these measurements, *net income return on investment,* captures the relationship between net income and invested capital. This is helpful to financial managers who focus primarily on the traditional income statement. Net income is derived by subtracting all items that are classified as expenses for reporting

purposes from gross revenues. Net income is calculated both before and after taxes. It gets a little tricky in that whenever a payment is applied to a mortgage, not all of the payment is treated as an expense. For example, the interest, taxes, and insurance portion of a payment are treated as expenses. The principal portion of the payment, however, is treated as a balance sheet item and has no effect on the income statement. When a payment is applied to principal, two things happen. First, cash is reduced, and second, the loan balance is reduced. The balance sheet remains precisely in balance, as one asset is used to reduce a liability by an equivalent amount.

The net income ROI performance measurement is calculated as follows:

$$\text{Net income ROI} = \frac{\text{gross income} - \text{operating expenses} - \text{interest} - \text{depreciation}}{\text{owner's equity}}$$

We explore this performance measurement more fully by studying a detailed example in Part 2, "Case Study Reviews."

CASH RETURN ON INVESTMENT

The second performance measurement is referred to as the *cash return on investment,* also known as the cash-on-cash return. It is the ratio between the remaining cash after debt service and invested capital, also known as owner's equity. This ratio differs from the net income ROI in that it excludes all noncash items, such as depreciation expense, and includes the nonincome portion of loan payments that are made to principal loan balances. As a general rule, investors tend to focus more on this performance measurement than they do on the net income ROI measurement since it represents the cash return on their investment.

The cash ROI performance measurement is calculated as follows:

$$\text{Cash ROI} = \frac{\text{remaining cash after debt service}}{\text{cash investment}}$$

The cash ROI, then, is the ratio between the remaining cash *after* debt service and invested capital, or owner's equity. This performance ratio is important to investors because it measures the monthly and annual cash returns on the cash they have invested.

TOTAL RETURN ON INVESTMENT

The third performance measurement is referred to as the *total return on investment.* The total return on investment is similar to the cash ROI with one important distinction—it accounts for that portion of return that is not cash, namely, the reduction in principal. In other words, it takes into account the portion of the loan that is reduced each period by the payments that are applied to the remaining loan balance, or the principal portion of the loan payment. The total ROI is the ratio between the remaining cash after debt service plus principal payments and invested capital. The total ROI is calculated as follows:

$$\text{Total ROI} = \frac{\text{remaining cash after debt service + principal reduction}}{\text{cash investment}}$$

The total ROI performance ratio does exactly as its name implies. It provides a measurement of the total return of an investor's capital by capturing both the cash and noncash portions of the return. The noncash portion is similar to making a house payment amortized over a period of years. The value is there in the form of a buildup of equity and a decrease in the liability, or mortgage, as the loan balance is reduced a little at a time over several years. The gain is realized in the form of cash at the time of sale. The total ROI can be calculated as both before-tax and after-tax performance measurements.

NET OPERATING INCOME

The fourth performance measurement is known as *net operating income* (NOI). Net operating income is the income that remains after all operating expenses have been paid. It is also the amount of income available to service the property's debt—in other words, to pay on any outstanding loan balances such as a mortgage or seller-financed note. Net operating income is also the numerator in the quotient used to calculate the capitalization rate. NOI is calculated as follows:

Gross income − total operating expenses = net operating income

The net operating income is a key figure to understand because it is needed to calculate a property's cap rate. It can also be used to estimate the approximate sales price of an income-producing property. For example, if you know that office buildings in a given market are selling for an estimated cap rate of eight (8 percent), and the NOI from a particular building is $240,000, then the estimated selling price for the building should be approximately $3 million. The calculation is made as follows:

$$\frac{\text{Net operating income}}{\text{Cap rate}} = \text{sales price}$$

$$\frac{\$240{,}000}{.08} = \$3{,}000{,}000$$

Now take a moment to review Table 6.1. The table provides a detailed example of how NOI is derived in a typical apartment building. These figures will vary widely, of course, among apartment buildings depending on factors such as whether the tenant or the management is paying for utilities, local tax rates, labor costs, and other factors.

Table 6.1 Net Operating Income

Operating Revenues	Annual
Gross Scheduled Income	700,489
Less Vacancy	24,340
Net Rental Income	676,149
Utility Income	71,877
Other Income—Laundry, Misc.	16,760
Gross Income	764,786
Operating Expenses	
General & Administrative	
Management Fees	26,767
Office Supplies	4,691
Legal and Accounting	1,404
Advertising	1,938
Total General & Administrative	34,801
Repairs and Maintenance	
Repairs, Maintenance, Make Readies	69,664
Contract Services	5,088
Patrol Services	4,831
Grounds and Landscaping	4,751
Total Repairs and Maintenance	84,334
Salaries and Payroll	
Office	33,780
Maintenance	21,920
Payroll Taxes	9,176
Total Salaries and Payroll	64,876
Utilities	
Electric	82,459
Gas	20,056
Water and Sewer	54,548
Trash	8,387
Telephone	1,378
Total Utilities	166,827
Other	
Real Estate Taxes	38,536
Insurance	19,447
Total Other	57,982
Total Operating Expenses	408,821
Net Operating Income	355,965

CAPITALIZATION RATIO

The fifth performance measurement is referred to as the *capitalization ratio,* or cap rate, which is the ratio between net operating income and sales price. Like the other performance measurements, the cap rate is a relevant measurement, which means that a favorable cap rate in one market may be considered unfavorable in another market. The cap rate is calculated as follows:

$$\frac{\text{Net operating income}}{\text{Sales price}} = \text{capitalization rate}$$

The cap rate is an indicator of value that measures the conversion a single payment or a series of payments, such as in a perpetuity, into a single value. The process of converting income into a single value then is what we refer to as *capitalization.* The cap rate captures this measurement in a single value. It is very similar to the *yield* on a financial instrument such as a certificate of deposit. In *The Complete Guide to Buying and Selling Apartments* (New Jersey: John Wiley & Sons, 2004), I discussed this crucial performance measurement at length. Following is an excerpt from Chapter 4.

> As you can see, this ratio is really a very simple calculation used to measure the relationship between the income generated by the property and the price it is being sold for. To help put this in a better perspective for you, let's refer back to the beginning of this chapter when we discussed certificates of deposits. We knew the value of a CD was calculated by its respective yield. The cap rate measures that exact same relationship!
>
> $$\text{Present value of CD} = \frac{\text{income}}{\text{rate}} = \frac{\$10{,}000}{.05} = \$200{,}000$$
>
> Or to look at it another way . . .

$$\text{Rate} = \frac{\text{income}}{PV} = \frac{\$10{,}000}{\$200{,}000} = .05 = 5\%$$

Buying an apartment building as related to this equation is really no different than buying a CD from your local bank. As an investor, you are willing to pay or invest a certain amount of capital in order to achieve a desired return. You know that the rates paid by banks for CDs will vary within a given range, let's say 4%–6%, so you will most likely shop around a little bit to find the most favorable rate. The same is true of apartment complexes. The rate paid, or yield on your investment, will vary within a given range, generally 8%–12%, depending on a variety of market conditions including supply and demand issues, the current interest rate environment, and tax implications imposed by local, state, and federal authorities.

Let's look at an example. We know that NOI is derived by subtracting total operating expenses from gross income. If you were to pay all cash for an apartment building, then NOI represents the portion of income that is yours to keep (before taxes and capital improvements), or the yield on your investment. If you were considering purchasing an apartment building that yielded $50,000 annually and the seller had an asking price of $800,000, should you buy it? Let's plug in the numbers to our equation and find out.

$$\text{Net operating income} = \$50{,}000$$

$$\text{Sales price} = \$800{,}000$$

$$\text{Cap rate} = \frac{\text{NOI}}{\text{price}} = \frac{\$50{,}000}{\$800{,}000} = .0625 = 6.25\%$$

In this example, you can see that the asking price of $800,000 provides us with a yield of only 6.25%. Let's

assume that comparable properties in this particular market are selling for cap rates of 10%. Armed with that knowledge, we can easily determine a more reasonable value for the property by solving for sales price as follows:

$$\text{Cap rate} = \frac{\text{NOI}}{\text{price}}$$

$$\text{Price} = \frac{\text{NOI}}{\text{cap rate}} = \frac{\$50{,}000}{.10} = \$500{,}000$$

So in this example, based on the limited information we have, we know the apartment is overpriced by $300,000. Understanding this simple, yet powerful equation is fundamental to properly assessing value. Armed with this knowledge, you can quickly determine if the asking price of an apartment building is reasonable.

The cap rate is one of the most important performance measurements available to investors. You can see by the example illustrated here that an investor who is unfamiliar with this key ratio could have potentially overpaid for the apartment building by an astonishing $300,000. I should add that you can't always rely on the advice or opinion of a real estate agent when it comes to analyzing income-producing properties such as apartment buildings. Many well-meaning agents don't understand value any better than the average person. Unless agents specialize in multifamily or commercial property, they will most likely *not* truly understand the value of an income-producing asset. I've also met my share of agents who do work in this industry and who still don't understand value. My advice to you is to familiarize yourself with cap rates by looking at and analyzing as many income-producing properties as you can. By doing so, you will be able to rely on your own judgment and not the opinions of others.

The cap rate is an important performance measurement to be used not only with apartment buildings, but with any kind of

income-producing real estate. The cap rate is so important, in fact, that it is the premise on which one of three traditional appraisals methods are based. The *income capitalization method,* as it is referred to, is discussed in greater detail in Chapter 8, "The Valuation of Real Property."

DEBT SERVICE COVERAGE RATIO

The sixth performance measurement is known as the *debt service coverage ratio* (DSCR). The DSCR is a ratio that measures the relationship between available cash after operating expenses have been paid and the cash required to make the required debt payments. This ratio is especially important to lenders, as they want to ensure that the property being considered for investment purposes will generate enough cash to cover any and all debt obligations. In other words, they want and need to be assured that the real estate is throwing off enough cash to repay the loan. The debt service coverage ratio is calculated as follows:

$$\text{Debt service coverage ratio} = \frac{\text{net operating income}}{\text{principal + interest}} = \text{DSCR}$$

The ratio is a simple measure of the relationship of cash generated from an investment to the debt required to pay for that investment. The minimum DSCR varies from lender to lender, but in general it can be as low as 0.75 or as high as 1.40. Most lenders look for a minimum DSCR of 1.00 to 1.20.

Several factors can impact the DSCR. For example, if an investor increases the amortization period from 20 years to 30 years, the monthly payment will decrease. Since NOI isn't affected by a change in the amortization period, the DSCR will increase. Take a moment to review Tables 6.2 and 6.3. The two tables are identical except for the amortization period, which is 20 years in Table 6.2 and 30 years in Table 6.3.

Using a 20-year amortization period in Table 6.2 results in a DSCR of 116.03 percent. If the lender's minimum required DSCR

was 120.00 percent, this property would fail, because it falls below the minimum. That doesn't necessarily mean the lender would reject the loan, however, as compensating factors may be taken into consideration. Now take a moment to study Table 6.3.

In this example, a 30-year loan amortization period is used, which results in a decrease in the amount of cash required to service the debt each month. The DSCR in this example is 138.65 percent, which compares favorably to the DSCR of 116.03 percent in Table 6.3. Since the lender's minimum required DSCR is 120.00 percent, the property structured with the longer amortization period of 30 years meets the lender's minimum requirement.

OPERATING EFFICIENCY RATIO

The next performance measurement is referred to as the *operating efficiency ratio* (OER). The OER is a computation that measures the operating expenses of an investment property relative to its size. The ratio is useful for both multifamily and commercial real estate properties. It is calculated as the ratio of total operating expenses to total square feet. The result provides a measure of how efficiently the property can be operated. The lower the number, the less it costs to manage and operate the property. The calculation is made as follows:

$$\text{Operating efficiency ratio} = \frac{\text{total operating expenses}}{\text{square feet}} = \text{OER}$$

In the examples illustrated in Tables 6.2 and 6.3, the total operating expenses in Year 1 are $120,000 and the total square feet are 38,200. The resulting OER is 3.14, calculated as follows:

$$\text{OER} = \frac{\$120{,}000}{38{,}200} = 3.14$$

This calculation tells us is that it costs $3.14 per square foot on average to operate the property. The operating efficiency ratio captures

Table 6.2 Debt Service Coverage Ratio

Financing and Income Analysis											
Cost and Revenue Assumptions		**Financing Assumptions**			**Key Rent Ratios**	
Purchase Price	985,000	Total Purchase	100.00%	1,002,000	Total Square Feet	38,200.00
Improvements	0	Owner's Equity	15.00%	150,300	Total Price/Sq Ft	26.23
Closing Costs	17,000	Balance to Finc	85.00%	851,700	Fair Market Value/Sq Ft	27.50
Total	1,002,000				Rental Income/Sq Ft	0.43
			Annual	Monthly	Total Income/Sq Ft	0.47
Estimated Monthly Rent Income	16,400	Interest Rate	6.000%	0.500%	Capitalization Rate	8.48%
Other Income	1,500	Amort Period	20	240	Gross Rent Multiplier	5.09
Total Income	17,900	Payment	73,222	6,102	Operating Efficiency Ratio	3.14

Rental Increase Projections						
Average Monthly Rent		0.00%	4.00%	3.50%	2.50%	2.00%
Operating Expense Projections		16,400	17,056	17,653	18,094	18,456
		0.00%	-2.00%	-2.00%	-2.00%	-1.00%

		Actual	Projected				
Operating Revenues		Monthly	Year 1	Year 2	Year 3	Year 4	Year 5
Gross Scheduled Rental Income		16,400	196,800	204,672	211,836	217,131	221,474
Vacancy Rate	5.0%	820	9,840	10,234	10,592	10,857	11,074
Net Rental Income		15,580	186,960	194,438	201,244	206,275	210,400
Other Income		1,500	18,000	18,720	19,375	19,860	20,257
Gross Income	100.0%	17,080	204,960	213,158	220,619	226,134	230,657
Operating Expenses							
Repairs and Maintenance	14.1%	2,400	28,800	28,224	27,660	27,106	26,835
Property Management Fees	5.0%	850	10,200	9,996	9,796	9,600	9,504

Property Management Fees	5.0%	850	10,200	9,996	9,796	9,600	9,504
Taxes	9.4%	1,600	19,200	18,816	18,440	18,071	17,890
Insurance	7.0%	1,200	14,400	14,112	13,830	13,553	13,418
Salaries and Wages	10.5%	1,800	21,600	21,168	20,745	20,330	20,126
Utilities	5.9%	1,000	12,000	11,760	11,525	11,294	11,181
Professional Fees	0.9%	150	1,800	1,764	1,729	1,694	1,677
Advertising	2.9%	500	6,000	5,880	5,762	5,647	5,591
Landscaping	2.9%	500	6,000	5,880	5,762	5,647	5,591
Total Operating Expenses	58.5%	10,000	120,000	117,600	115,248	112,943	111,814
Net Operating Income	41.5%	7,080	84,960	95,558	105,371	113,191	118,843
Cash Flow From Operations							
Total Cash Available for Loan Servicing		7,080	84,960	95,558	105,371	113,191	118,843
Debt Service		6,102	73,222	73,222	73,222	73,222	73,222
Remaining CF From Ops		978	11,738	22,336	32,149	39,969	45,621
Plus Principal Reduction		1,843	22,739	24,141	25,630	27,211	28,889
Total Return		2,822	34,477	46,477	57,779	67,180	74,511
CF/Debt Servicing Ratio		116.03%	116.03%	130.50%	143.91%	154.59%	162.31%
Net Operating Income ROI			56.53%	63.58%	70.11%	75.31%	79.07%
Cash ROI			7.81%	14.86%	21.39%	26.59%	30.35%
Total ROI			22.94%	30.92%	38.44%	44.70%	49.57%

Table 6.3 Debt Service Coverage Ratio

Financing and Income Analysis

Cost and Revenue Assumptions	
Purchase Price	985,000
Improvements	0
Closing Costs	17,000
Total	1,002,000
Estimated Monthly Rent Income	16,400
Other Income	1,500
Total Income	17,900

Financing Assumptions		
Total Purchase	100.00%	1,002,000
Owner's Equity	15.00%	150,300
Balance to Finc	85.00%	851,700
	Annual	Monthly
Interest Rate	6.000%	0.500%
Amort Period	30	360
Payment	61,276	5,106

Key Rent Ratios	
Total Square Feet	38,200.00
Total Price/Sq Ft	26.23
Fair Market Value/Sq Ft	27.50
Rental Income/Sq Ft	0.43
Total Income/Sq Ft	0.47
Capitalization Rate	6.48%
Gross Rent Multiplier	5.09
Operating Efficiency Ratio	3.14

Rental Increase Projections					
Average Monthly Rent	0.00%	4.00%	3.50%	2.50%	2.00%
Operating Expense Projections	16,400	17,056	17,653	18,094	18,456
	0.00%	-2.00%	-2.00%	-2.00%	-1.00%

Operating Revenues		Actual Monthly	Projected Year 1	Year 2	Year 3	Year 4	Year 5
Gross Scheduled Rental Income		16,400	196,800	204,672	211,836	217,131	221,474
Vacancy Rate	5.0%	820	9,840	10,234	10,592	10,857	11,074
Net Rental Income		15,580	186,960	194,438	201,244	206,275	210,400
Other Income		1,500	18,000	18,720	19,375	19,860	20,257
Gross Income	100.0%	17,080	204,960	213,158	220,619	226,134	230,657
Operating Expenses							
Repairs and Maintenance	14.1%	2,400	28,800	28,224	27,660	27,106	26,835
Property Management Fees	5.0%	850	10,200	9,996	9,796	9,600	9,504

Taxes	9.4%	1,600	19,200	18,816	18,440	18,071	17,890
Insurance	7.0%	1,200	14,400	14,112	13,830	13,553	13,418
Salaries and Wages	10.5%	1,800	21,600	21,168	20,745	20,330	20,126
Utilities	5.9%	1,000	12,000	11,760	11,525	11,294	11,181
Professional Fees	0.9%	150	1,800	1,764	1,729	1,694	1,677
Advertising	2.9%	500	6,000	5,880	5,762	5,647	5,591
Landscaping	2.9%	500	6,000	5,880	5,762	5,647	5,591
Total Operating Expenses	58.5%	10,000	120,000	117,600	115,248	112,943	111,814
Net Operating Income	41.5%	7,080	84,960	95,558	105,371	113,191	118,843
Cash Flow From Operations	88.4%						
Total Cash Available for Loan Servicing		7,080	84,960	95,558	105,371	113,191	118,843
Debt Service		5,106	61,276	61,276	61,276	61,276	61,276
Remaining CF From Ops		1,974	23,684	34,282	44,094	51,915	57,567
Plus Principal Reduction		848	10,459	11,104	11,789	12,516	13,288
Total Return		2,822	34,143	45,386	55,883	64,431	70,855
CF/Debt Servicing Ratio		138.65%	138.65%	155.95%	171.96%	184.72%	193.95%
Net Operating Income ROI			56.53%	63.58%	70.11%	75.31%	79.07%
Cash ROI			15.76%	22.81%	29.34%	34.54%	38.30%
Total ROI			22.72%	30.20%	37.18%	42.87%	47.14%

the relationship between operating expenses and size and can therefore be a useful measurement in evaluating similar properties. If the average OER in a specific market is 3.00, or $3.00 per square foot, then this property would be considered to be within range, but slightly above average.

GROSS RENT MULTIPLIER

The next performance measurement is referred to as the *gross rent multiplier* (GRM). The gross rent multiplier measures the relationship between the total purchase price of a property and its gross scheduled income. It is the ratio of price to income. The GRM calculation is made as follows:

$$\text{Gross rent multiplier} = \frac{\text{purchase price}}{\text{gross scheduled income}} = \text{GRM}$$

The GRM is similar to the cap rate in that it captures the relationship between revenues and price; however, there are two primary differences. The first is that while the GRM measures the relationship between gross revenues and price, the cap rate measures the relationship between net revenues, or NOI, and price. The second difference is that one ratio is inverted compared to the other. For example, purchase price is the numerator in the GRM quotient, but it's the denominator in the cap rate. While a higher cap rate is preferred to a lower cap rate, a lower GRM is preferred to a higher GRM. This is true because the ratio will decrease the lower the purchase price is relative to income. It will also decrease the higher the income is relative to the purchase price.

In the examples illustrated in Tables 6.2 and 6.3, the GRM of 5.09 measures the relationship between the total purchase price and the gross scheduled income in Year 1.

$$\text{GRM} = \frac{\$1{,}002{,}000}{\$196{,}800} = 5.09$$

In the model used to make the calculation, both improvements and closing costs have been factored into the analysis. Although there are no improvements in this example, they are typically included if major capital expenditures are expected. If the improvements are expected to increase the gross revenues, that, too, should be taken into consideration. The GRM can be calculated on either an as-is basis with no changes or improvements to the property, or on a pro forma basis, which includes both improvements and the expected increase in revenues that would result from the improvements.

OPERATING RATIO

The next performance measurement used to analyze income producing properties is the operating ratio (OR), which is the ratio between total operating expenses and gross income. Like the operating efficiency ratio, it provides a gauge of how efficiently a given property is being operated. Whereas the OER measures efficiency relative to a property's total square footage, the OR measures efficiency relative to a property's income. The calculation is made as follows:

$$\text{Operating ratio} = \frac{\text{total operating expenses}}{\text{gross income}} = \text{OR}$$

Depending on the type of income property, an OR can range from about 30 percent to as high as 70 percent or even more. Commercial properties tend to have a lower OR since most of the expenses are passed through to the tenant. Multifamily properties, on the other hand, tend to have a somewhat higher OR since the expenses that are passed through vary. For example, an apartment building being operated as an "all bills paid" property will certainly have higher expenses relative to its income compared to a similar property in which the utilities are paid by the tenants.

In the examples illustrated in Tables 6.2 and 6.3, the OR of

58.5 percent measures the relationship between total operating expenses and gross income and is calculated as follows:

$$\text{OR} = \frac{\$120{,}000}{\$204{,}960} = 58.5\%$$

The result in this example of 58.5 percent is somewhat on the high side, but does not fall outside the range of normal ratios. An investor looking to create value in an income-producing property would carefully examine each factor that contributes to the operating expenses. In other words, a high OR may signal that repairs and maintenance are abnormally high, or perhaps that management expenses could be trimmed. Conversely, an unusually low OR could signal that not all of the operating expenses are being reported. If repairs and maintenance, for example, are known to average 10 to 15 percent of gross income but are being reported as only 3 or 4 percent, then either the property is in exceptionally good condition or not everything is being reported.

BREAK-EVEN RATIO

The final investment performance measure we examine is known as the *break-even ratio* (BER), which measures the relationship between total cash inflows and total cash outflows. The BER is similar to the OR in that both ratios use total operating expenses as part or all of the numerator and gross income as the denominator. The difference between the two is that the BER includes as part of the numerator the debt service. The BER serves as a performance measurement of cash flows from a property, and the OR serves as a performance measurement of income and expenses.

As the break-even ratio's name implies, the break-even point is the point at which the total cash inflows are exactly equal to the total cash outflows. A property with a *negative cash flow* has a ratio greater than 1.0, which means that its cash outflows exceed its cash inflows; conversely, a property with a *positive cash flow* has a ratio

less than 1.0, which means that its cash inflows exceed its cash outflows. The break-even ratio is calculated as follows:

$$\text{Break-even ratio} = \frac{\text{total operating expenses + debt service}}{\text{gross income}}$$

$$= \text{BER}$$

In the examples illustrated in Tables 6.2 and 6.3, the BER would be calculated by adding the total operating expenses of $120,000 to the debt service of $61,276 and then dividing this sum by the property's gross income of $204,960. Take a moment to review the calculation.

$$\text{BER} = \frac{\$120{,}000 + \$61{,}276}{\$204{,}960} = 88.4\%$$

The property in this example has a positive cash flow since the BER is 88.4 percent, which is less than 1.0, or 100 percent. I strongly recommend to investors who have adopted a buy-and-hold strategy to invest in only those properties that have a positive cash flow and a BER of less than 1.0. To do otherwise means that additional cash must be invested each month. A property with a negative cash flow is just like my three growing sons. They are constantly hungry and have to be fed all the time! Unless you have deep pockets, a hungry property will eat your lunch if you're not careful! If you're buying a property for the purpose of a quick rehab or flip, then a positive cash flow isn't as important, because you don't need as much cash to sustain the project. The negative cash flow, along with the building improvements, is factored into the analysis to determine whether the project represents a viable opportunity.

In summary, each of the 10 real estate investment performance measurements discussed in this chapter can be used by investors to assist in properly analyzing potential investment opportunities. Wise investors who elect to master these principles will no doubt gain greater insight into property values and their worth relative to alternative opportunities.

Chapter 7

Advanced Real Estate Investment Analysis

In the previous chapter, we examined 10 different real estate investment performance measurements, which enabled us to better understand how an income-producing property was performing at a given point in time. These measurements are considered to be *static measurements,* meaning that they do not take into account a property's performance over more than one time period. Instead, performance is measured at either a specific point in time or over one period of time, for example, one month or one year. This chapter focuses on advanced methods of real estate investment analysis by measuring performance over multiple periods of time. These financial concepts deal with the time value of money and are especially helpful to individuals investing in real estate over a prolonged period of time.

FUTURE VALUE ANALYSIS

The first of these financial measurements is referred to as *future value* (FV). The future value concept seeks to determine the value of an investment over multiple periods of time by using the principle of compounding. This principle is used to attribute the interest earned on interest. For example, interest as it applies to money is simply the cost of money to the borrower and the income to the lender. Compound interest is the interest paid on the interest to the borrower and

the interest earned on the interest by the lender. The future value concept helps investors to know what a particular property will be worth over a given period of time.

Let's look at a simple example to better understand the concept of future value and compounding. Banker Smith has offered to pay Investor Jones 5 percent annually for a certificate of deposit held for three years. How much will Investor Jones's initial investment of $1,000 be worth at the end of the three-year period? To find the solution, we start by introducing the following terms.

PV = present value = the value of an investment today
FV = future value = the value of an investment at some point in the future
i = the interest rate
n = the number of periods

In this example, our terms are applied as follows:

PV = $1,000
FV = ?
i = 5.00%
n = 3 years
FV in Year 1 = $1,000.00 (1 + .05) = $1,000.00 × 1.05 = $1,050.00
FV in Year 2 = $1,050.00 (1 + .05) = $1,050.00 × 1.05 = $1,102.50
FV in Year 3 = $1,102.50 (1 + .05) = $1,102.50 × 1.05 = $1,157.63

In this example, at the end of Year 3, Investor Jones would receive a total of $1,157.63 from Banker Smith. Now let's look at solving the same problem another way.

$FV = PV\,(1 + i)^3$
$FV = \$1{,}000\,(1 + .05)^3$
$FV = \$1{,}000\,(1.1576)$
$FV = \$1{,}157.63$

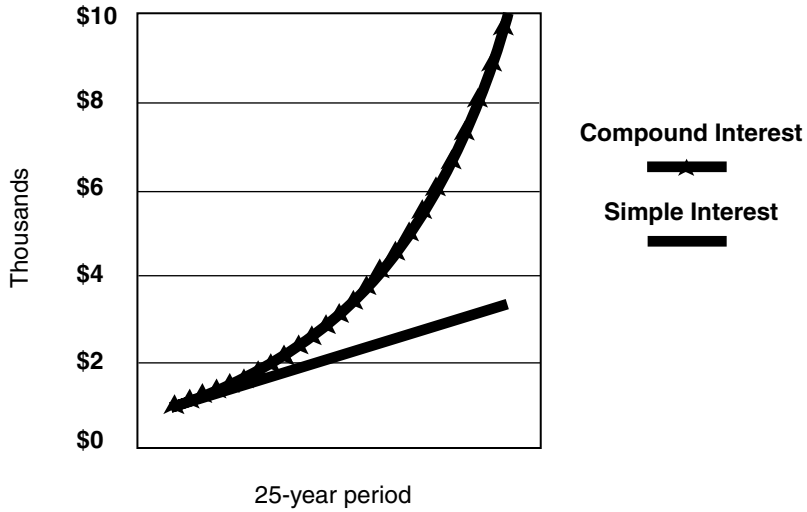
Applying future value principles to real estate helps investors determine the value of their invested capital at some distant point in

the future. A working knowledge of the principle of compounding is essential to understanding the effects of returns which are generated over multiple periods of time. It is this compounding component that allows the growth of an investment to accelerate over time. Take a moment to review Exhibit 7.1.

Exhibit 7.1 illustrates the difference between growth rates in an initial investment of $1,000 earning 10 percent per year over a 25-year period. The line that curves up sharply is earning interest at a compounded rate, and the line that is linear is earning interest at a simple rate. The future value of a $1,000 investment earning 10 percent interest and compounded annually over 25 years is $9,850. By comparison, the future value of a $1,000 investment earning 10 percent simple interest annually over 25 years is only $3,400. In this example, the power of compounding has allowed one investment to grow at a rate almost three times faster than the other investment.

Exhibit 7.1

Effect of compound interest versus simple interest.



Now take a moment to study Table 7.1. This table provides the factor or value by which an investment can be multiplied to calculate its future value at a specific interest rate and time period. For example, to find out how much a $25,000 investment growing at a rate of 12 percent would be worth in 15 years, locate the corresponding value in the table and multiply it by the amount of the investment, as follows:

FV of $25,000 at 12% in 15 years, where
$PV = \$25{,}000$
$i = 12.00\%$
$n = 15$ years
Corresponding value from Table 7.1 = 5.47357
$FV = \$25{,}000 \times 5.47357 = \$136{,}839$

Although Table 7.1 is useful in helping to determine the future value of an investment, it is limited to the rates and time periods within the table. A financial calculator, on the other hand, can be used to calculate the future value of an investment of any size at any rate over any period of time. Most financial calculators are very easy to use. As long as any three of the four variables are known, the fourth one can easily be solved for. As an example, an investor with $5,000 wants to know how long she must hold an investment growing at an annual rate of 8 percent before her investment is worth $25,000. In this example, we must solve for n by entering into the calculator the known values as follows:

$PV = \$5{,}000$
$FV = \$25{,}000$
$i = 8.00\%$

Once these values have been entered, then simply solve for n.

$$n = 21 \text{ years}$$

In summary, the concept of future value enables businesses and individuals to determine the value of an investment at some point in

Table 7.1 Value of $1 at Various Compound Interest Rates and Time Periods

Year	2.00%	4.00%	6.00%	8.00%	10.00%	12.00%	14.00%	16.00%	18.00%	20.00%
1	1.02000	1.04000	1.06000	1.08000	1.10000	1.12000	1.14000	1.16000	1.18000	1.20000
2	1.04040	1.08160	1.12360	1.16640	1.21000	1.25440	1.29960	1.34560	1.39240	1.44000
3	1.06121	1.12486	1.19102	1.25971	1.33100	1.40493	1.48154	1.56090	1.64303	1.72800
4	1.08243	1.16986	1.26248	1.36049	1.46410	1.57352	1.68896	1.81064	1.93878	2.07360
5	1.10408	1.21665	1.33823	1.46933	1.61051	1.76234	1.92541	2.10034	2.28776	2.48832
6	1.12616	1.26532	1.41852	1.58687	1.77156	1.97382	2.19497	2.43640	2.69955	2.98598
7	1.14869	1.31593	1.50363	1.71382	1.94872	2.21068	2.50227	2.82622	3.18547	3.58318
8	1.17166	1.36857	1.59385	1.85093	2.14359	2.47596	2.85259	3.27841	3.75886	4.29982
9	1.19509	1.42331	1.68948	1.99900	2.35795	2.77308	3.25195	3.80296	4.43545	5.15978
10	1.21899	1.48024	1.79085	2.15892	2.59374	3.10585	3.70722	4.41144	5.23384	6.19174
11	1.24337	1.53945	1.89830	2.33164	2.85312	3.47855	4.22623	5.11726	6.17593	7.43008
12	1.26824	1.60103	2.01220	2.51817	3.13843	3.89598	4.81790	5.93603	7.28759	8.91610
13	1.29361	1.66507	2.13293	2.71962	3.45227	4.36349	5.49241	6.88579	8.59936	10.69932
14	1.31948	1.73168	2.26090	2.93719	3.79750	4.88711	6.26135	7.98752	10.14724	12.83918
15	1.34587	1.80094	2.39656	3.17217	4.17725	5.47357	7.13794	9.26552	11.97375	15.40702
16	1.37279	1.87298	2.54035	3.42594	4.59497	6.13039	8.13725	10.74800	14.12902	18.48843
17	1.40024	1.94790	2.69277	3.70002	5.05447	6.86604	9.27646	12.46768	16.67225	22.18611
18	1.42825	2.02582	2.85434	3.99602	5.55992	7.68997	10.57517	14.46251	19.67325	26.62333
19	1.45681	2.10685	3.02560	4.31570	6.11591	8.61276	12.05569	16.77652	23.21444	31.94800
20	1.48595	2.19112	3.20714	4.66096	6.72750	9.64629	13.74349	19.46076	27.39303	38.33760
21	1.51567	2.27877	3.39956	5.03383	7.40025	10.80385	15.66758	22.57448	32.32378	46.00512
22	1.54598	2.36992	3.60354	5.43654	8.14027	12.10031	17.86104	26.18640	38.14206	55.20614
23	1.57690	2.46472	3.81975	5.87146	8.95430	13.55235	20.36158	30.37622	45.00763	66.24737
24	1.60844	2.56330	4.04893	6.34118	9.84973	15.17863	23.21221	35.23642	53.10901	79.49685
25	1.64061	2.66584	4.29187	6.84848	10.83471	17.00006	26.46192	40.87424	62.66863	95.39622

the future by applying the principle of compounding to the amount of the initial investment. As long as any three of the four variables are known, the fourth unknown variable can be easily solved for.

PRESENT VALUE ANALYSIS

In the previous section, we examined the concept that deals with the time value of money as it applies to some point in the future. This concept, referred to as future value, allows us to determine the worth of an investment or financial instrument at a future time by introducing the notion of compounding. In this section, we examine the exact opposite concept, known as *present value* (PV). Present value is derived by adjusting the known future value of an asset at a predetermined interest rate, or *discount rate,* from a known future point in time backward to its value today. Present value analysis is a tool used by investment professionals every day in a myriad of business decisions, including investing in assets such as equipment to be used for expansion, financial instruments yielding a particular income stream, and income-producing real estate such as office buildings.

The notion of present value allows investors to calculate the known future value of an asset or financial instrument in today's dollars through a process referred to as *discounting.* For example, it answers a question such as, "How much do I need to invest today if I want to retire in 10 years with $1 million in an investment known to yield 12 percent?" In this example, our terms are applied as follows.

$PV = ?$
$FV = \$1{,}000{,}000$
$i = 12.00\%$
$n = 10$ years

To solve this problem, recall the future value equation as follows:

$$FV = PV\,(1 + i)^n$$

Now let's rewrite the equation to solve for the present value of an asset, as follows:

$FV = PV\ (1 + i)^n$
$PV = FV\ 1\backslash(1 + i)^n$
$PV = \$1{,}000{,}000\ 1\backslash(1 + .12)^{10}$
$PV = \$1{,}000{,}000\ 1\backslash(3.1058)$
$PV = \$1{,}000{,}000 \times .321973$
$PV = \$321{,}973$

You would need $321,973 to invest today in an asset yielding 12 percent to be able to retire in 10 years with $1 million. By experimenting with the time and interest rate elements of this equation, investors can explore various options that may be available to them. For example, if you don't have $321,973 today to invest, but you still want to retire with $1 million, you could either extend the value of time or increase the yield. Adjusting either one of these variables would decrease the amount of money needed to achieve your goal.

Now take a moment to review Table 7.2. This table provides the factor or value by which an investment can by multiplied to calculate its present value at a specific interest rate and time period. For example, to calculate the present value of an investment discounted at a rate of 12 percent that would be worth $25,000 in 15 years, locate the corresponding value in the table and multiply it by the amount of its future value, as follows:

PV of $25,000 at 12% in 15 years, where
$FV = \$25{,}000$
$i = 12.00\%$
$n = 15$ years
Corresponding value from Table 7.2 = .18270
$PV = \$25{,}000 \times .18270 = \$4{,}567$

The concept of present value calculations is a fundamental and essential tool used by firms in many aspects of operating their businesses. While future value calculations rely on the process of compounding to derive value, present value calculations rely on the process of discounting to derive value. Present value calculations allow investors to determine the worth of an asset whose future

Table 7.2 Present Value of $1 at Various Compound Interest Rates and Time Periods

Year	2.00%	4.00%	6.00%	8.00%	10.00%	12.00%	14.00%	16.00%	18.00%	20.00%
1	0.98039	0.96154	0.94340	0.92593	0.90909	0.89286	0.87719	0.86207	0.84746	0.83333
2	0.96117	0.92456	0.89000	0.85734	0.82645	0.79719	0.76947	0.74316	0.71818	0.69444
3	0.94232	0.88900	0.83962	0.79383	0.75131	0.71178	0.67497	0.64066	0.60863	0.57870
4	0.92385	0.85480	0.79209	0.73503	0.68301	0.63552	0.59208	0.55229	0.51579	0.48225
5	0.90573	0.82193	0.74726	0.68058	0.62092	0.56743	0.51937	0.47611	0.43711	0.40188
6	0.88797	0.79031	0.70496	0.63017	0.56447	0.50663	0.45559	0.41044	0.37043	0.33490
7	0.87056	0.75992	0.66506	0.58349	0.51316	0.45235	0.39964	0.35383	0.31393	0.27908
8	0.85349	0.73069	0.62741	0.54027	0.46651	0.40388	0.35056	0.30503	0.26604	0.23257
9	0.83676	0.70259	0.59190	0.50025	0.42410	0.36061	0.30751	0.26295	0.22546	0.19381
10	0.82035	0.67556	0.55839	0.46319	0.38554	0.32197	0.26974	0.22668	0.19106	0.16151
11	0.80426	0.64958	0.52679	0.42888	0.35049	0.28748	0.23662	0.19542	0.16192	0.13459
12	0.78849	0.62460	0.49697	0.39711	0.31863	0.25668	0.20756	0.16846	0.13722	0.11216
13	0.77303	0.60057	0.46884	0.36770	0.28966	0.22917	0.18207	0.14523	0.11629	0.09346
14	0.75788	0.57748	0.44230	0.34046	0.26333	0.20462	0.15971	0.12520	0.09855	0.07789
15	0.74301	0.55526	0.41727	0.31524	0.23939	0.18270	0.14010	0.10793	0.08352	0.06491
16	0.72845	0.53391	0.39365	0.29189	0.21763	0.16312	0.12289	0.09304	0.07078	0.05409
17	0.71416	0.51337	0.37136	0.27027	0.19784	0.14564	0.10780	0.08021	0.05998	0.04507
18	0.70016	0.49363	0.35034	0.25025	0.17986	0.13004	0.09456	0.06914	0.05083	0.03756
19	0.68643	0.47464	0.33051	0.23171	0.16351	0.11611	0.08295	0.05961	0.04308	0.03130
20	0.67297	0.45639	0.31180	0.21455	0.14864	0.10367	0.07276	0.05139	0.03651	0.02608
21	0.65978	0.43883	0.29416	0.19866	0.13513	0.09256	0.06383	0.04430	0.03094	0.02174
22	0.64684	0.42196	0.27751	0.18394	0.12285	0.08264	0.05599	0.03819	0.02622	0.01811
23	0.63416	0.40573	0.26180	0.17032	0.11168	0.07379	0.04911	0.03292	0.02222	0.01509
24	0.62172	0.39012	0.24698	0.15770	0.10153	0.06588	0.04308	0.02838	0.01883	0.01258
25	0.60953	0.37512	0.23300	0.14602	0.09230	0.05882	0.03779	0.02447	0.01596	0.01048

value is known in today's dollars by discounting it back at a specified or required rate. Understanding the principle of present value enables business owners to make prudent decisions relating to the use of available capital for investment purposes.

NET PRESENT VALUE ANALYSIS

In the previous section, we learned about using present value formulas to determine the value of an asset in today's dollars of a known future value at a specific discount rate and period of time. In this section, we examine another financial tool used to measure investments. It's known as *net present value* (NPV). The financial analysis of assets using net present value calculations is identical to that of present value calculations with one exception. In a present value calculation, an investor simply wants to determine how much should be invested today to earn a particular rate of return over a given period of time, so solving for PV is all that is required. In a net present value calculation, however, the cost of the investment is already known. Because of this, investors seeking to purchase an income-producing asset use the PV formula to discount the value of the asset back at a predetermined minimum expected rate of return. If the present value of the asset exceeds its cost, the difference is a positive NPV. In this case, the investor would approve the purchase of the asset since it met or exceeded her minimum expected rate of return. If, however, the present value of the asset is less than its cost, the difference results in a negative NPV in which case, the investor would reject the purchase since it did not meet her minimum expected rate of return.

Let's look at an example to better understand how the net present value calculation can be useful to a business. Assume a business that has a minimum required rate of return of 8 percent is considering the purchase of an income-producing asset with a purchase price of $500,000. The future value of the asset in eight years is expected to be $1.1 million. Using the minimum required rate of return of 8 percent, should the company purchase the asset? To answer that question, we must first solve for its present value.

PV of $1.1 million at 8% in 10 years, where
FV = $1,100,000
i = 8.00%
n = 10 years
Corresponding value from Table 7.2 = .46319
PV = $1,100,000 × .46319 = $509,512

To determine the net present value of this investment, the initial cost of the asset must now be subtracted from the present value.

NPV = *PV* − cost
NPV = $509,512 − $500,000 = $9,512
NPV = $9,512

Since the NPV is positive, it meets the minimum rate of return required by the business and therefore merits further consideration. A NPV greater than zero means that not only does the asset meet the minimum rate of return, but by definition, it actually exceeds it. By substituting the actual cost of the asset for PV, we can solve for *i* using a financial calculator, as follows:

PV = $500,000
FV = $1,100,000
n = 10 years
i = ?

Using a financial calculator, enter the values as illustrated for each of the three known variables. Be sure to enter the PV of $500,000 as a negative value since it represents a cash flow out. All other variables should be entered as positive values. The solution for *i* is as follows:

PV = $500,000
FV = $1,100,000
n = 10 years
i = 8.20%

To summarize, the yield on this investment is 8.20 percent, which exceeds the minimum rate of return required by the business. When analyzing these types of investment opportunities, recall that firms must take into consideration their cost of capital. In this example, if the company's cost of capital was 6.00 percent, investing in the asset would yield an incremental 2.20 percent. The net present value calculation is a tool commonly used by investors from many different industries, including real estate.

INTERNAL RATE OF RETURN

In the previous section, the financial analysis principle of net present value enabled us to first calculate the present value of an investment and then subtract the actual cost of the asset from its present value. The NPV calculations were made with a minimum rate of return already established by the firm. In this section, instead of solving for the NPV, we solve for the *internal rate of return* (IRR). The IRR calculation measures the yield or rate of return on an investment rather than its present value. The present value is assumed to be the initial cost of the asset. The IRR calculation measures the yield from a series of cash flows across a specified period of time and includes the cost of the asset, the cash flows from the asset, and the salvage value of the asset at the end of its useful life. In the case of plant and equipment, an asset's useful life may be exhausted at the end of a period due to functional or technical obsolescence. The useful life of real estate, which may actually increase in value over time, is said to be exhausted when the property is divested.

Let's look at an example. Assume Investor Lincoln wants to add an additional space to a small retail strip center. Construction costs to add the space are estimated to be $100,000. As illustrated in Table 7.3, Lincoln has two choices. In Scenario 1, he can lease the space to Tenant A on a lease-option agreement for three years at a rate of $10,000 per year and then sell the space at the end of the three-year period for $110,000. In Scenario 2, he can lease the

space to Tenant B on a lease option agreement for six years at a rate of $10,000 per year for the first three years and $12,500 for the next three years, then sell the space at the end of the six-year period for $120,000.

The internal rate of return in Scenario 1 is 12.94 percent. The income generated from three years' worth of cash flows is the equivalent of earning an annualized rate of return of 12.94 percent on Investor Lincoln's initial investment of $100,000. If, however, Investor Lincoln chooses to hold the property for six years, his yield increases to 13.40 percent. Because the IRRs in this example are marginally close, there may be other factors such as tax issues that could affect Lincoln's decision to choose one scenario over the other; however, with all other things being equal, the higher yield in Scenario 2 suggests that Investor Lincoln should choose this alternative over Scenario 1.

Let's look at another example using The Value Play Income Analyzer, a proprietary model used for analyzing income properties such as apartment buildings. In Table 7.4, the cash flows of a 50-unit apartment building are examined to determine its respective internal rate of return.

In Table 7.4, note the net cash flows from investment section in the lower portion of the table. This section is used to display the net cash flows from the property. The first value in the Year 1 exit section of –$514,250 is a cash-flow-out value that represents the owner's initial equity. This is followed by a cash-flow-in value of $683,618, derived by adding the following values.

Table 7.3 Internal Rate of Return

Cash Flows	Scenario 1	Scenario 2
Initial Investment	(100,000)	(100,000)
Cash Flow in Year 1	10,000	10,000
Cash Flow in Year 2	10,000	10,000
Cash Flow in Year 3	120,000	10,000
Cash Flow in Year 4		12,500
Cash Flow in Year 5		12,500
Cash Flow in Year 6		132,500
Internal Rate of Return	12.94%	13.40%

Owner's equity	$514,250
After-tax cash flows	$97,983
Principal reduction	$46,385
Gain on sale	$25,000
Total	$683,618

The cash flow in value of $683,618 assumes the owner sells the property at the end of Year 1 at a cap rate of 9.43 percent, which is comparable to the 9.50 cap rate at the time of purchase (shown in the key ratios section). If the property was sold at the end of the first year, based on its projected cash flows it would earn an internal rate of return of 32.93 percent. Take a moment to review the net cash flows from investment in Year 3. The initial cash flow out, which is the owner's equity, of $514,250 is the same as in the Year 1 scenario. The income earned from Years 1, 2, and 3 is then factored in, as well as the reduction in principal and gain on sale of $450,000. Based on the projected cash flows in the Year 3 scenario, the property would generate an IRR of 46.05 percent. Now take a moment to examine the net cash flows from investment in Year 5. The cash flows are derived in the same manner as in the previous two scenarios, but include income and principal reduction for Years 4 and 5 as well. Based on the projected cash flows in the Year 5 scenario, the property would earn an internal rate of return of 40.21 percent.

While the internal rate of return calculation is widely used by investors to measure the yield on a series of cash flows, there is one caveat. The IRR calculation works best when the initial cash flow is negative and all subsequent cash flows are positive. Additional negative values in the cash flow stream can potentially create multiple solutions. In an excerpt taken from *Investment Analysis for Real Estate Decisions* (Chicago: Dearborn Trade, 1997, p. 222), authors Greer and Kolbe note that the IRR calculation can be problematic under certain conditions. The authors assert the following.

Table 7.4 Property Analysis Worksheet
The Value Play Income Analyzer

Cost and Revenue Assumptions	
Land	500,000
Building	2,500,000
Improvements	0
Closing Costs	25,000
Total	3,025,000
Number of Units	60
Average Monthly Rent	700
Gross Monthly Revenues	42,000

Financing Assumptions			
Total Purchase	100.00%	3,025,000	
Owner's Equity	17.00%	514,250	
Balance to Finc	83.00%	2,510,750	
	Annual	Monthly	
Interest Rate	5.750%	0.479%	
Amort Period	25	300	
Payment	189,543	15,795	

Key Ratios	
Total Square Feet	52,500.00
Avg Sq Ft/Unit	875.00
Avg Rent/Sq Ft	0.80
Avg Cost/Sq Ft	57.62
Avg Unit Cost	50,416.67
Capitalization Rate	9.50%
Gross Rent Multiplier	6.00
Expense/Unit	3,307.90
Expense/Foot	3.78

Rental Increase Projections Average Monthly Rent Operating Expense Projections					
	0.00%	3.00%	3.50%	3.00%	3.00%
	700	721	746	769	792
	0.00%	-2.00%	-1.00%	1.50%	2.00%

Operating Revenues		Actual Monthly	Projected Year 1	Year 2	Year 3	Year 4	Year 5
Gross Scheduled Income		42,000	504,000	519,120	537,289	553,408	570,010
Vacancy Rate	5.0%	2,100	25,200	25,956	26,864	27,670	28,501
Net Rental Income		39,900	478,800	493,164	510,425	525,737	541,510
Other Income		600	7,200	7,416	7,676	7,906	8,143
Gross Income	100.0%	40,500	486,000	500,580	518,100	533,643	549,653
Operating Expenses							
Repairs and Maintenance	13.0%	5,265	63,180	61,916	61,297	62,217	63,461
Property Management Fees	3.5%	1,418	17,010	16,670	16,503	16,751	17,086
Taxes	7.9%	3,200	38,400	37,632	37,256	37,815	38,571
Insurance	2.0%	812	9,744	9,549	9,454	9,595	9,787
Salaries and Wages	4.4%	1,800	21,600	21,168	20,956	21,271	21,696
Utilities	5.2%	2,120	25,440	24,931	24,682	25,052	25,553
Trash Removal	0.3%	125	1,500	1,470	1,455	1,477	1,507
Professional Fees	0.7%	300	3,600	3,528	3,493	3,545	3,616
Advertising	1.2%	500	6,000	5,880	5,821	5,909	6,027
Other	2.5%	1,000	12,000	11,760	11,642	11,817	12,053
Total Op. Exp.	40.8%	16,540	198,474	194,505	192,559	195,448	199,357

Net Operating Income	59.2%	23,961	287,526	306,075	325,541	338,195	350,296
Interest on Loan	29.7%	12,031	143,158	140,420	137,520	134,448	131,195
Dep. Exp. - Building		7,576	90,909	90,909	90,909	90,909	90,909
Dep. Exp. - Equip.		0	0	0	0	0	0
Net Income Before Taxes		4,354	53,459	74,747	97,112	112,838	128,191
Income Tax Rate	0.0%	0	0	0	0	0	0
Net Income After Taxes		4,354	53,459	74,747	97,112	112,838	128,191
Cash Flow From Operations							
Net Income After Taxes		4,354	53,459	74,747	97,112	112,838	128,191
Dep. Exp.		7,576	90,909	90,909	90,909	90,909	90,909
Total CF From Ops.		11,930	144,368	165,656	188,021	203,747	219,101
Interest on Loan		12,031	143,158	140,420	137,520	134,448	131,195
Total Cash Available for Loan Servicing		23,961	287,526	306,075	325,541	338,195	350,296
Debt Service		15,795	189,543	189,543	189,543	189,543	189,543
Remaining After Tax CF From Ops		8,165	97,983	116,532	135,997	148,652	160,752
Plus Principal Reduction		3,865	46,385	49,124	52,024	55,095	58,348
Total Return		12,031	144,368	165,656	188,021	203,747	219,101

CF/Debt Servicing Ratio	151.69%	151.69%	161.48%	171.75%	178.43%	184.81%
Net Income ROI		10.40%	14.54%	18.88%	21.94%	24.93%
Cash ROI		19.05%	22.66%	26.45%	28.91%	31.26%
Total ROI		28.07%	32.21%	36.56%	39.62%	42.61%

Net CFs From Investment - 1 Yr Exit	(514,250)	683,618				
Net CFs From Investment - 3 Yr Exit	(514,250)	97,983	116,532	1,222,780		
Net CFs From Investment - 5 Yr Exit	(514,250)	97,983	116,532	135,997	148,652	1,610,979

	Exit Price	Gain on Sale	Cap Rate		IRR
Estimated Exit Price/Gain On Sale - 1 Yr	3,050,000	25,000	9.43%	Annualized IRR - 1 Yr	32.93%
Estimated Exit Price/Gain On Sale - 3 Yr	3,450,000	425,000	9.44%	Annualized IRR - 3 Yr	46.05%
Estimated Exit Price/Gain On Sale - 5 Yr	3,700,000	675,000	9.47%	Annualized IRR - 5 Yr	40.21%

> Problems associated with the internal rate of return can result in conflicting decision signals from this and other discounted cash flow approaches. Generally, such a conflict arises because the internal rate of return signal is distorted. If heeded, it might result in serious investment error. Potential dissonance stems from peculiarities of the internal rate of return equation, which can yield more than one solution, and from problems associated with the reinvestment assumption inherent in choices among alternative investments that exhibit different patterns of anticipated after tax cash flows.

Mathematicians and analysts alike have attempted to resolve the problems that occur with IRR calculations resulting from the reversal in signals in a series of cash flows. Three of the more common methods used to address these issues are (1) the modified internal rate of return, or MIRR, (2) the adjusted rate of return, and (3) the financial management rate of return. According to Greer and Kolbe, the MIRR method "solves the multiple root problem by discounting all negative cash flows back to the time at which the investment is acquired and compounding all positive cash flows forward to the end of the final year of the holding period." The modified approach eliminates the reversal-of-signals problem and provides a unique solution for a series of cash flows. The adjusted rate of return method assumes the investor has in essence borrowed funds from one period and repaid them in another period, again attempting to deal with positive and negative changes in values. Finally, the financial management rate of return method, developed by M. Chapman Findley and Stephen D. Messner, integrates two intermediate rates. The first, a cost-of-capital rate, is applied to negative that which are discounted back to the beginning of the investment time period where $t = 0$. The second rate is a reinvestment rate and is applied to positive values that are compounded forward to the end of the investment time period.

In summary, this chapter has focused on several advanced methods of real estate investment analysis by measuring performance over multiple periods of time. These financial analysis tools enable

individuals and businesses to evaluate investments extending over various periods of time and having various streams of cash flow. Most financial analysis methods use discounting and compounding calculations to express the sum of a stream of cash flows in either present value or future value terms, thereby enabling investors to make decisions based on predetermined minimum rates of return.

Chapter 8

The Valuation of Real Property

APPRAISAL DEFINED

An appraisal is an estimate of an object's worth or value. Appraisals are used to determine the value of both personal property and real property. For example, you may want to have an independent appraisal done on a diamond ring with a $20,000 price tag before investing that kind of money in it. The appraisal could then be used for insurance purposes in the event the ring was lost or stolen. Appraisals are also used to determine the worth and value of real property, such as land or buildings. In *Income Property Valuation* (Massachusetts: Heath Lexington Books, 1971, p. 9), author William N. Kinnard states the following as it relates to the appraisal process:

> An appraisal is a professionally derived conclusion about the present worth or value of specified rights or interests in a particular parcel of real estate under stipulated market conditions or decision standards. Moreover, it is (or should be) based on the professional judgment and skill of a trained practitioner. Its conclusions should be presented in a thoroughly logical and convincing way to a client or an interested third party who requires the value estimate to help make a decision or solve a problem involving the real estate in question.

An appraisal opinion is usually delivered in written form. A professional appraisal report should contain as a minimum the essential ingredients of an appraisal identified as (1) the identity and legal description of the real estate; (2) the type of value being estimated; (3) the interests being appraised; (4) the market conditions or decision standards in terms of which the value estimate is made (frequently identified by specifying an "as of" date or effective date for the appraisal); and (5) the value estimate itself. Moreover, the report should indicate the data and reasoning employed by the appraiser in reaching his value conclusion, any special or limiting conditions that impinged on his analysis and conclusion, and the appraiser's certification and signature.

THE NATURE OF PRICE AND VALUE

As Kinnard clearly states, the process for appraising real property is well defined and specific. Although objective in its format, property values vary widely for many reasons. A 1,000-square-foot house with three bedrooms and two baths, for example, may be worth only $60,000 in Dallas, Texas, while in Hollywood, California, that same house may sell for $150,000. Real estate values are impacted by many different micro- and macroeconomic forces, including supply and demand issues, the current interest rate environment, local and national economic conditions, the desirability of the location, and differences in tax rates. The same appraisal standards applied to a particular piece of real property in one region may yield entirely different results for a similar piece of real property in another region. Likewise, an appraisal of those same properties today would almost certainly be different than an appraisal conducted 10 years ago.

Although the terms *price* and *value* are similar in meaning, they are not the same. An appraisal is an estimate of value and provides no indication of what price will actually be paid for a piece of real property. For example, an individual shopping for a new refrigerator will first determine all the desired features she must have, and then begin to shop for one matching her requirements. Once a model is

selected, she will then most likely shop around at several locations to determine which store is offering the best price. By purchasing the refrigerator at the lowest price available, not only is the buyer able to save money, but she is also said to have received the best value. Although two identical refrigerators at two different locations may have the same resell value, the one that originally sold for less money has a greater equivalent value.

The appraisal provides the basis for price, but buyers and sellers are free to negotiate. Kinard asserts, "In the perfect market of economic theory, informed and rational buyers would pay no more, and informed and rational sellers would accept no less, than the present worth of the anticipated future benefits from ownership of an asset." As a result of various differences in economic conditions, however, the actual price paid may be, and often is, different than the stated value in an appraisal report. Price is therefore a reflection of the past. It is what has already occurred. Value, on the other hand, reflects the price that should be paid "in the perfect market of economic theory." Value is therefore a forecast of price. It is what *may* occur at some point in the future, not what *has* occurred at some point in the past.

THREE PRIMARY APPRAISAL METHODS

Three primary methods are used by appraisers to determine the value of real estate: the replacement cost method, the sales comparison method, and the income capitalization method. (See Exhibit 8.1). Each method of valuation has its place and serves a unique function in assessing the worth of real property. Commercial properties such as retail centers, office buildings, and apartment complexes, for example, rely primarily on the income method, while single-family houses typically rely on the sales comparison method.

REPLACEMENT COST METHOD

The *replacement cost method,* or cost approach, is most commonly used for estimating the replacement value of physical assets for

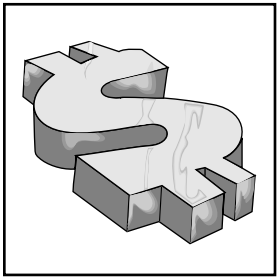


Exhibit 8.1
Three primary appraisal methods.

1. Replacement cost method
2. Sales comparison method
3. Income capitalization method

insurance purposes. For example, should a house be destroyed in a hurricane, an insurance company would want to know the actual cost to replace it. The income method and the sales comparison method are of little or no consequence in estimating replacement costs. The insurance policy you have on your personal residence most likely includes a replacement cost policy with built-in premium adjustments that automatically increase each year due to rises in labor and material costs. Butler Burgher, Inc., an appraisal firm in Houston, Texas, stated the following in an appraisal report that was completed for one of my apartment projects.

> The cost approach is based on the premise that the value of a property can be indicated by the current cost to construct a reproduction or replacement for the improvements minus the amount of depreciation evident in the structures from all causes plus the value of the land and entrepreneurial profit. This approach to value is particularly useful for appraising new or nearly new improvements.

The replacement cost approach is most commonly used when estimating the actual costs associated with replacing the physical assets of a house or building. For example, for an office building

completely destroyed by fire, the value established from the cost approach would be useful in helping to determine exactly how much an insurance company would pay for the resulting damages.

An additional factor taken into consideration when the replacement cost approach is used is *depreciation,* which encompasses deterioration, functional obsolescence, and external obsolescence. *Deterioration* is said to occur when property loses value because of average wear and tear over a period of time. For example, a 10-year-old roof that has a 25-year life is said to have deteriorated, or depreciated, by 10/25, or 40 percent. *Functional obsolescence* is described as a loss in property value resulting from outdated home designs or mechanical equipment. The value of a house with only gas space heaters rather than central heating, for example, would be adversely affected. Finally, *external obsolescence* is described as a loss in property value resulting from changes in the surrounding neighborhood or community. For instance, the value of a house would be adversely affected if it were located in a neighborhood that had experienced a significant increase in crime. An increase in traffic and noise levels may also contribute to a decline in value.

The underlying rationale of the replacement cost approach is that an informed buyer would not be willing to pay more for a particular house than the cost of building an identical house on a comparably sized lot in a similar neighborhood. The basic formula for calculating the replacement cost approach is as follows:

$$\text{Replacement cost} = \text{cost of construction} - \text{depreciation} + \text{land value}$$

Let's look at an example. Assume the subject property is similar in design, size, and quality to a new house that costs $100,000 to build, not including the lot. The subject property is 30 years old and has depreciated in value by 25 percent due to normal wear and tear, as well as a general decline in the neighborhood in which it is located. The value of the lot is estimated at $20,000. Using the replacement cost approach, the value of the subject property is calculated as follows:

$$\text{Replacement cost} = \$100{,}000 - (\$100{,}000 \times 25\%) + \$20{,}000$$

$$\text{Replacement cost} = \$100{,}000 - \$25{,}000 + \$20{,}000 = \$95{,}000$$

In this example, since the subject property has declined in value, using the replacement cost approach indicates a value of $95,000. This compares to a total value of $120,000 for a new house, which includes a comparable lot, for a difference of $25,000, the amount of loss suffered by the subject property from depreciation.

SALES COMPARISON METHOD

The second primary appraisal method is the *sales comparison method,* or market approach, which is the method deemed most appropriate for the proper determination of value for single-family houses. This includes both owner-occupied and non-owner-occupied single-family dwellings. The sales comparison method is by far the most commonly used approach of the three methods, because the number of single-family dwellings is much greater than any other type of property. This method is based on the logic that the price paid for recent sales of like properties represents the price buyers are willing to pay and is therefore representative of true market value. The price paid may vary for many reasons, including changes in interest rates, changes in unemployment rates, changes in general economic conditions, as well as changes in the cost of materials and land. All of these factors combine to cause changes in the supply and demand of available properties.

The sales comparison method is based on the premise of substitution and maintains that a buyer would not pay more for real property than the cost of purchasing an equally desirable substitute in its respective market. This method also assumes that all comparable sales used in the appraisal process are legitimate arm's-length transactions to help ensure accuracy of the data used in the report. The sales comparison method furthermore provides that comparable sales used have occurred under normal market conditions. For example, this assumption would exclude properties bought and sold

under foreclosure conditions—that is, those purchased from a bank's real estate owned, or REO, portfolio.

The sales comparison method typically examines three or more like properties and adjusts their value based on similarities and differences among them. For example, if the subject property had a two-car garage and the comparable property had a three-car garage, an adjustment would be made for the difference to bring the values more in line with each other. In this case, the comparable property's value would be adjusted downward to compensate for the additional garage unit. In other words, the value of the additional garage unit is subtracted to make it the equivalent of a two-car garage. Butler Burgher provides further clarification of the sales comparison method:

> The sales comparison approach is founded upon the principle of substitution which holds that the cost to acquire an equally desirable substitute property without undue delay ordinarily sets the upper limit of value. At any given time, prices paid for comparable properties are construed by many to reflect the value of the property appraised. The validity of a value indication derived by this approach is heavily dependent upon the availability of data on recent sales of properties similar in location, size, and utility to the appraised property.
>
> The sales comparison approach is premised upon the principle of substitution—a valuation principle that states that a prudent purchaser would pay no more for real property than the cost of acquiring an equally desirable substitute on the open market. The principle of substitution presumes that the purchasers will consider the alternatives available to them, that they will act rationally or prudently on the basis of their information about those alternatives, and that time is not a significant factor. Substitution may assume the form of the purchase of an existing property with the same utility, or of acquiring an investment which will produce an income stream of the same size with the same risk as that involved in the property in question. . . .

> The actions of typical buyers and sellers are reflected in the comparison approach.

According to Butler Burgher, the sales comparison appraisal method examines like properties and adjusts their respective values based on similarities and differences between them. This method is most often used in valuing single-family houses. Recall that the objective of using this method is to determine the subject property's value. Unlike the cost approach, which seeks to establish the cost of reconstruction for the subject property, the sales comparison approach seeks to establish its market value. Recall also that the market value of a property is *not* the same as its price. The appraiser's objective is to determine a value that reflects the *most likely* price a buyer is willing to pay for a particular property given similar properties to choose from.

While the use of sales comparables, or *comps,* as they are also referred to, is an important factor to consider in the analysis of estimating the value of larger income-producing properties, greater weight is usually given to the income capitalization method discussed in the next segment. The sales comparison method is designed to examine and compare the physical attributes of real property, not the income generated by it.

INCOME CAPITALIZATION METHOD

The third primary appraisal method is the *income capitalization method,* used to value real property that generates some type of income, which is employed for investment purposes. In *Income Property Valuation,* author Kinard describes the process of capitalization as follows:

> Real estate is a capital good. This means that the benefits from owning it—whether in the form of money income or amenities, or both—are received over a prolonged period of time. Operationally, this means more than one year; in fact, it is typically for 10, 20, 40 or more years.