Chapter 18

FINANCING ASSET ACQUISITIONS

INTRODUCTION

People finance their investments to enhance their returns through the use of positive financial leverage, to increase the scale of their investments, or to purchase assets, such as real estate and business assets, that they would be unable to afford without borrowing or other financing.

This chapter discusses the following topics:

1. Financial leverage

2. Margin trading

3. Secured vs. unsecured debt

4. Long-term vs. short-term debt

5. Mortgage loan programs

6. Other mortgage financing alternatives

7. Refinance loans

8. Mortgage (loan) math

9. Mortgage and loan financial planning applications

10. Fixed-rate versus adjustable-rate loans

11. Determining how much home one can afford

12. Leasing

FINANCIAL LEVERAGE

Leveraging is the use of techniques that permit investors to control or benefit from an investment with a given dollar value while using less than that given dollar value of the investors’ own money. Essentially, as the name implies, it is similar to the action of a lever that permits a person to move a boulder larger than he could move with his hands alone. Leveraging permits investors to control more or larger investment assets than they could control with their own equity alone.

Financial leverage is the use of borrowed funds to supplement the investor’s own dollar investment (equity) to increase the scale of investment. For example, investors can purchase stocks, bonds, and other marketable securities, real estate, business assets, and the like using some combination of the investors’ and borrowed funds. If the investment returns on the assets exceed the interest rates they pay on their loans, the investors’ returns on theirequity will rise above the returns on the underlying assets, giving them what is called *positive leverage*. Conversely, if the returns on the assets are less than the interest rates paid on their loans, the investor’s returns will fall below the return on the underlying asset, giving them what is called *reverse* or *negative leverage*. Investors may be able to deduct the interest expense against investment income on their tax returns, subject to limitations.

For example, if a person in a 33⅓% combined federal and state tax bracket invests $1,000 for one year at a fully taxable 10% rate of return, she will have $1,066.70 after tax at the end of the year. The after-tax rate of return is 6.67%.

Now suppose the investor can borrow $1,000 at 5% interest and add it to her $1,000 investment. This $2,000 total investment will earn $200 before tax. The investor must pay $1,000 plus $50 interest back to the lender, so the investor is left with $1,150 before tax, assuming the interest is tax deductible or $1,100 after tax. The investor has increased the after-tax return on her equity from 6.67% to 10% through the use of financial leverage.

Certain types of investments, marketable securities, are subject to government-mandated borrowing limitations, called margin requirements. Margin requirements or borrowing limitations for real estate, business assets, private placements, non-publicly-traded limited partnership interests, and other non-exchange-traded investments generally are not subject to regulation. The equity requirements generally are determined by mutual agreement among the parties to the transaction and the lenders.

MARGIN TRADING

Securities traded on organized exchanges or in the over-the-counter market are subject to minimum investor equity requirements, called margin requirements, as set by the Federal Reserve Board’s Regulation T. These rules apply to the amount of equity investors must have and maintain in both securities purchased with financial leverage (e.g., stocks) and those that are inherently leveraged (e.g., futures contracts). These limitations apply regardless of the source of borrowing – brokerage firm, bank, or even family members. The Financial Industry Regulatory Authority (FINRA) and other exchanges have their own rules that generally match the Reg. T requirements, but which may be more restrictive.

If investors borrow money to leverage their investments from their brokerage firm, or trade in securities with inherent leverage, they must set up a margin account. The minimum portion of the purchase price that the customer must deposit is called the *initial margin* and is the customer’s initial equity in the account. Subsequently, investors must maintain a specified minimum level of equity relative to the market value of the investment called the *maintenance margin*. The maintenance margin requirement is generally lower than the initial margin requirement. If an investor’s margin falls below the required maintenance level, the brokerage firm will issue a *margin call* requiring the investor to deposit additional funds within a specified period of time. If the investor fails to do so, the brokerage firm will sell the assets and close out the investor’s position. Brokerage firms may have their own margin requirements that are more restrictive than those spelled out in Reg. T or the FINRA guidelines.

How do margin requirements vary among different securities?

Margin requirements tend to vary somewhat depending upon each brokerage firms own house rules, but competition tends to keep them quite close to Reg. T requirements and the FINRA guidelines.

SECURED VS. UNSECURED DEBT

Debts of an individual or business can be either secured or unsecured.

*Unsecured debt* is debt that does not have any *collateral* to satisfy the debt in case the debtor is no longer able to pay. Examples of unsecured debt are credit cards, utility bills, medical bills, and other contracts where no collateral is pledged to the creditor. If an unsecured creditor wishes to collect a debt that has not been paid, the only recourse is a lawsuit against the debtor. If the debtor enters bankruptcy, unsecured debt can be discharged by the bankruptcy proceeding.

*Secured debt* is debt that is backed by some type of *collateral*. Mortgage debt is an example of secured debt. Also, most car loans are forms of secured debt. A secured creditor is generally in a better position than an unsecured creditor because if the debtor does not pay back the loan, the creditor can take back the property either through repossession or a foreclosure action. After the property is taken back by the creditor, the creditor may be able to collect any additional deficiency if the repossessed property is worth less than the debtor owes. This deficiency would then become unsecured debt. Secured debt is not discharged in a bankruptcy proceeding.

LONG-TERM VS. SHORT-TERM DEBT

Businesses can use short-term debt to get through the slow times that they may experience, such as a retail store or a restaurant with seasonal business cycle. Short-term loans can last anywhere from 90 days to up to three years, depending on the purpose of the loan. One might use these types of loans to cover accounts payable, pay salaries in the short-term, or provide the business with cash until accounts receivable are paid. Most short-term loans are unsecured loans, although some loans to acquire inventory might be secured by the inventory itself. For accounting purposes, most short-term debt is considered to be a current liability.

Long-term debt generally is classified as debt that is paid off over a period of time that exceeds one to three years. Some commentators and organizations define short-term debt as up to one year, others as up to three years. The idea behind long-term debt is to use it to purchase an asset that has a long-term use, such as a home or business equipment that is expected to be used over a long period of time.

MORTGAGE LOAN PROGRAMS

Fixed Rate Mortgages

With *Fixed Rate Mortgage* (FRM) loans, the interest rate and monthly mortgage payments remain fixed for the term of the loan. Fixed-rate mortgages are available for 10, 15, 20, 25, 30, or even longer in some circumstances. Generally, the shorter the term of a loan, the lower the interest rate the lender will charge on the loan.

The most popular mortgage terms are 15 and 30 years. With the traditional 30-year fixed rate mortgage, monthly payments are lower than they would be on a shorter-term loan. But if a person can afford higher monthly payments, a 15-year fixed rate mortgage allows the borrower to repay the loan twice as fast and save more than half the total interest costs of a 30-year loan.

The payments on fixed-rate fully-amortizing loans are calculated so that at the end of the term the mortgage loan is paid in full. During the early amortization period, a large percentage of the monthly payment is used for paying the interest. As the loan is paid down, more of the monthly payment is applied to principal. The mathematics of loans are discussed further later in this chapter.

The principal advantages of fixed rate loans are their relative simplicity and the fixed and certain periodic payments. Other types of loans generally are more complicated, but they may offer features and flexibilities that better serve investors’ particular needs.

Adjustable Rate Mortgages

An Adjustable Rate Mortgage (ARM) loan is any mortgage loan program that allows the lender to periodically reset or adjust the loan's interest rate, according to agreed measurements and at pre-set periods. The mortgage lender does not have free reign with the adjustments. Today's ARM loan borrowers actually have several protections built into the residential ARM loan program.

Advantages of ARM Loans

The residential ARM loan was first introduced into the national market as the Variable Rate loan. This term still remains in use with credit cards and installment loans, but it has been replaced in the mortgage industry with the more specific and catchy ARM description.

Many homebuyers are wary of ARM loans. Older homeowners, who remember the 19% interest rate of the 1970s, are especially leery of the inherent risks of ARM programs. However, ARM loans do have their advantages, which make them ideal for people who can see the home or property purchase as a financial investment. In fact, ARM loans are the programs of choice for experienced real estate investors.

When homebuyers are planning to keep the home for three years or less, they will save money virtually all the time by selecting an ARM loan, instead of a fixed-rate loan. After the third year, depending on how the market reacts, the fixed-rate or balloon loans generally are better. Even if the owners decide to stay past the third year, many ARMs have a conversion option and some lenders provide no-lender-cost refinances.

With the development of 3/1, 5/1 and 7/1 ARMs( which are discussed in more detail below) ARM programs now offer an even greater opportunity for homebuyers planning on up to a seven-year ownership period with any one property.

The reason for the ARM loan's advantage is that even with any wild increases in the market's current interest rates, the rate increase caps – or limits – means that monthly payments normally remain lower with the ARM loan for at least two years to three years.

Second, ARM loans are attractive during periods of high interest rates. History has shown that interest rate fluctuations are normal and tend to be cyclical. During times of comparatively higher rates, borrowers can elect to go with an ARM loan that has a much lower interest rate than the regular 30-year fixed-rate. When the market finally improves to lower rates, the borrower can refinance his or her loan.

Even if homeowners plan to keep their newly found property forever, if they are searching for a mortgage loan during a period of relatively higher interest rates, they should consider going with the lower teaser rate of the ARM loan. Then, once interest rates have decreased, they may just refinance the mortgage loan to a lower rate – preferably a fixed-rate program. Sometimes, their current lender will give them a free refinance, just so they can keep them as a borrower.

ARM Loan Details

An Adjustable-Rate Mortgage (ARM) allows the lender to change the interest rate – at periodic intervals – without altering other conditions of the loan agreement. When the lender adjusts the interest rate, they also adjust the monthly Principal and Interest (P&I) payment. By so doing, the ARM loan allows the borrower to share more of the loan's risk. This lowers the lender's relative risk exposure, so the interest rate on ARMs is usually much lower than those on comparable fixed-rate loans. Several distinct features of the ARM loan are:

1. *ARM periods*. The period is the span of time that a lender must wait before it can readjust the interest rate of the ARM loan. The lender may only change the interest rate on a loan once each period, normally on the anniversary date of each period. The exceptions are ARM loans based on the prime rate, which normally have no set period. This is the case with many credit cards, business loans, and commercial loans. Many home equity lines of credit also use the prime rate and are subject to interest rate changes with only one month's notice. Banks adjust the prime rate according to overall market conditions. The prime rate may not change for two years in a row; then it may increase five times in one month.

Readjustment periods can range from one month to several years, with one-year ARM periods being the most common. Generally speaking, ARMs with shorter periods usually provide lower interest rates, because shorter periods give the lender more opportunities to adjust the interest rate – and thus further lower the lender's overall risk exposure. Do not confuse the loan term or amortization with the period. A 30-year amortization is the norm for all ARM loans, although shorter amortization settings and terms are also available. As the table below shows, the ARM period does not affect the term and amortization. The ARM period merely indicates how often the loan's interest rates – and consequently, its monthly payments – are adjusted.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Rates adjust every** | **Term** | **Amortization** |
| 3-month ARM | 3 months | 30 years | 30 years |
| 6-month ARM | 6 months | 30 years | 30 years |
| 1-year ARM | 1 year | 30 years | 30 years |
| 3-year ARM | 3 years | 30 years | 30 years |

In addition to the above standard ARM programs, *balloon* or *two-step ARM* programs have also become more popular. The most common are 3/1, 5/1, 7/1, and 10/1 ARMs.

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Rates adjust  every** | **Term** | **Initial Amortization** |
| 3/1 ARM | 1 year; after the 3rd year | 30 years | 30 years |
| 5/1 ARM | 1 year; after the 5th year | 30 years | 30 years |
| 7/1 ARM | 1 year; after the 7th year | 30 years | 30 years |
| 10/1 ARM | 1 year; after the 10th year | 30 years | 30 years |
| 2-year/6-month | 6-month; after the 2nd year | 30 years | 30 years |

These ARM loans are one-year ARM loans, however the interest rate is fixed for the first three, five, seven or ten years, depending on the program. For example, a 3/1 ARM is basically a one-year ARM loan with one-year periods. However, for the first three years, the ARM loan's rate is fixed (will NOT adjust). After the third year, the ARM loan's rate will begin adjusting as normal. The 2-year/6-month ARM is primarily used by non-conforming[[1]](#endnote-1) loan programs. The interest rate is fixed for the first two years; after that fixed period, the loan's interest rates begin adjusting every six months.

2. *Index and margin***.** When lenders adjust an ARM loan's interest rate, they must do so according to the agreement set forth in the original promissory note signed at the closing. The standard method for adjusting an ARM interest rate is to add the defined margin to the current index rate. With straight ARM loans, the interest rates and monthly payments are adjusted on the anniversary date of the loan.

The margin is a constant amount – usually 2.750 to 3.250 for most conforming[[2]](#endnote-2) ARM loans – which is added to the index to determine the new interest rate. The margin is set when the borrower signs the loan note at the closing and it stays the same throughout the life of the loan.

Although the margin remains constant, the index may change and is the basis of the ARM loan's adjustments. The interest rate on ARM loans is tied to the rates of securities, financial papers, or a basket of indicators that adequately reflect market conditions. This indicator rate normally is called the index rate. The most popular and commonly known indexes are:

a) *U.S. Treasury Bills*. The T-Bill index rate is based on the yield prices established by the daily sale and trade of the U.S. Treasury Bills on the financial markets. There are actually several T-Bills (2-year, 6-month, 3-year, etc.), but the one-year T-Bill is the most commonly used index.

b) *Prime rate***.** The prime rate is the rate that banks charge to their best customers, usually commercial. The prime rate actually is higher than other indices because it factors in the bank's profit margin. Although, each bank sets its own prime rate, they tend to be uniform as they are all based on the same market data.

c) *Cost-of-Funds Index (COFI)***.** The COFI index is calculated by each of the Federal Reserves' regional districts, the most popular of which is the 11th District. The Cost-of-Funds index is a monthly survey of the cost to the banks of the money they have at their disposal. Thus, the COFI index takes into account current CD rates, savings account rates and other costs that banks must pay for funds.

d) *London InterBank Offered Rate (LIBOR)***.** The LIBOR index has become the index of choice for non-conforming lenders, especially with sub-prime (B/C/D/E) credit loans. The LIBOR rate tends to remain close to – though slightly higher – than the T-Bill rate.

The index is a publicly available and trusted mechanism that measures changes in the economy (generally) and the mortgage industry and real estate market (specifically). The index measures fluctuations in the financial markets on a continuous basis. The loan's promissory note will indicate the specific index the lender will use to adjust interest rates.

3. *Caps*. At the anniversary (one-year, six-month, etc., depending on period) of the ARM loan, the lender adjusts the interest rates and payments by adding the constant loan margin to the index rate. However, this raw index-plus-margin number is not necessarily the borrower's new interest rate. This preliminary rate must be within the restrictions established by the specific loan program's caps. The new interest rate and monthly payment is the index plus margin, less whatever restrictions are required by the program's caps. Caps protect the borrower by limiting the movement of the interest rate, payments and principal balances, normally associated with ARM loans. There are four types of caps that lenders use with ARM loans: periodic, lifetime, payment, and principal.

a) The *periodic cap* limits how much the loan's interest rate may change from one period to the next. The norm for most conforming lenders is a periodic cap of one or two percentage points. For example, if the loan program specifies a periodic cap of 2.00 percentage points, then the borrower's loan rate cannot increase (or decrease) by more than two percentage points from one period to the next. Thus, if the borrower had an interest rate of 5.5%, even if the index shot up to 8%, the most that the borrower's new rate can be is 7.5%. If, in the next period, the index jumps again, say, to 11%, the most the lender can increase the rate is again 2% over the previous rate of 7.5%, or to 9.5%. Now, if the index stays at 11%, in the next period the lender could increase the rate by 1.5% to 11%.

b) The *lifetime cap* establishes a maximum – and sometimes minimum – level that the interest rate may never surpass during the entire life of the loan. Most conforming loan programs set a lifetime cap of five or six percentage points, applied to the start rate. For example, an ARM loan with a 6% life cap and a starting rate of 5.50 would have a maximum limit of 11.50%. This means that even if the index would increase to 17.50% (which happened in the late 1970s), this ARM loan's interest rate would never exceed 11.50%. For many ARM loans, the start rate is the lifetime floor cap. The loan's interest rate will never go below that start rate. Obviously, this is a great benefit for lenders when rates really drop.

c) The *payment cap* limits how much the loan's monthly payment (not rate) may change from one period to the next. The typical payment cap, if any, would be 7% to 12% of the current payment. For example, if an ARM loan had a payment cap of 7% and a current mortgage payment of $1,000, the new payment would be a maximum of $1,070 per month ($1000 x 1.07). However, payment caps do not limit the increases of interest rates. Consequently, payment caps may induce *negative amortization*, which means that the principal balance increases instead of decreases.

d) The *principal cap* often accompanies loans with payment caps, by placing a ceiling on negative amortization. The principal cap limits the principal from increasing more than some specified percentage of the original loan balance. For example, on a 100,000 mortgage, if the principal cap percentage is 125%, the principal amount increase will never exceed 25% of the original loan balance, or $125,000 in total.

4. *Negative amortization***.** Negative amortization occurs in some ARM loans with payment caps whenever the monthly payments are not enough to cover the interest due on the debt. Unless the loan explicitly waives this unpaid interest, that deficit amount is added to the principal balance. Worse yet, as unpaid interest is added to the principal balance, the borrower will be charged interest on the unpaid interest. Because this situation could lead to endlessly increasing principal balances, ARM loans with payment caps usually also contain principal caps, as a protection against negative amortization. Principal caps still allow negative amortization to increase the principal balance, but sets limits on how high the principal may increase. The lender usually waives any unpaid interest that arises after the loan reaches the principal limit.

Most borrowers perceive negative amortization as very undesirable. However, ARM loans with payment caps and potential negative amortization are still prevalent, because they usually offer very low start rates. For borrowers who intend to keep a loan for only a year or so – even though the loan is amortized for 30 years – these loans could be wise investments.

5. *Conversion option*. The conversion option is an additional protection for most ARM and balloon loan borrowers that permit them to convert the ARM into a long-term fixed-rate loan. The conversion option is not a refinance, although it looks and acts like one. Rather, the conversion option amends the original mortgage loan note, without substantially changing the mortgage and title record. For example, an ARM loan borrower who is in the third year of her loan can convert it into a 27-year fixed-rate loan. The interest rate of the new fixed-rate loan will be based on the market rates at the time the loan is converted, as predefined in the conversion option clause. Most lenders charge a fee of $200 to $500 to prepare, execute and record the conversion documents. Borrowers must also meet certain requirements to exercise the conversion option. They cannot be delinquent on the account or have an unacceptable payment history. In addition, the option to convert typically has a time limit. In most cases, borrowers must exercise the conversion option sometime after the first full year and before the end of the fifth year of the loan.

6. *Adjustment Process*. As the rate is adjusted at the beginning of each period, the new payment is not calculated on the same 30-year amortization as the beginning payments. The amortization for the new payment calculation usually is only for the remaining term. The lender, as does the borrower, normally wants the loan to be completely repaid within the standard 30-year period. Consider the following graph of how payments are adjusted at the beginning of each year of a one-year ARM:

|  |  |  |  |
| --- | --- | --- | --- |
| **ARM Period** | **Interest Rate** | **Loan Amount** | **Amortization Period** |
| Year 1 | Start Rate | Original Loan | 360 (30 years) |
| Year 2 | Margin + Current Index | Current Balance | 348  (29 years) |
| Year 3 | Margin + Current Index | Current Balance | 336  (28 years) |
| Year 4 | Margin + Current Index | Current Balance | 324  (27 years) |

Because the amortization period is constantly decreasing, the monthly payment will remain the same or increase – even as the loan balance decreases or if the interest rate remains the same. In cases of negative amortization, the loan promissory note will make arrangements for paying the additional balance during the latter years of the loan or as a balloon amount at the conclusion of the term.

Disadvantages of ARMs

The primary disadvantage of the ARM loan is the adjusting interest rate. The caps provide some degree of protection; however, any rate and payment adjustment could hurt. Also, if the ARM starts with a *teaser rate*, a lower-than-market introductory rate, then the new adjusted rate is bound to be higher – even if the market rate does not increase.

A second minor disadvantage of the ARM loan is that the mortgage insurance, if any, will be slightly higher than with a fixed-rate loan. The mortgage insurance premiums for ARM loans will normally be 10% to 20% higher than the mortgage insurance for comparable fixed-rate programs. This is because ARM loans do tend to carry more risk for the borrower. Remember that ARM loans allow the borrower to share more of the loan's risk with the lender. The mortgage insurance is merely a reflection of that increased borrower risk, which is borne out by higher default levels of ARM loans.

Home Equity Line of Credit

The Home Equity Line of Credit, sometimes referred to by its acronym HELOC, is a variation of the home equity loan. In most cases, both the HELOC and home equity loan typically are second mortgages. The line of credit is a cross between a mortgage loan and a credit card. Instead of providing the borrower with a check for the loan sum, the line of credit provides the borrower with a check book, which taps into a mortgage loan. This article explores the two opportunities that HELOCs offer to homeowners:

* Financial planning tool
* Investment tool

After the closing, the homeowner with a line of credit can write checks against the credit line established by this type of financing. The borrower usually faces no restrictions on the usage of the funds. As long as the borrower is not in default with his or her HELOC, the borrower will not have to obtain any lender approval before writing a check.

This credit line is still a legally recorded mortgage lien. However, the actual principal balance will increase or decrease according to how much the homeowner takes out or pays back.

Financial Planning Tool

The line of credit is an excellent safety net for the homeowner, as well as an unparalleled financing tool for investors. If the homeowner faces an emergency and needs funds, the line of credit can provide the needed money. If the investor or entrepreneur discovers an investment opportunity, the line of credit can provide quick capitalization.

By contrast, the unprepared homeowner would have to apply for a second mortgage, which could take 4-6 weeks to close. If the homeowner already is in an emergency situation, because of a job lay-off or sudden medical crisis, the lender may reject or severely restrict that borrower’s application.

Unlike home equity loans, the credit line borrower only pays interest on the current principal balance used. If the borrower maintains zero balance on the credit line, no interest payments are due. Homeowners who wish to have this home equity safety net can simply put aside their HELOC checkbook in a safety deposit box. If the homeowners never use it, they are never charged any interest. But if an emergency ever arises, they will be able to feel more secure.

As with home equity loans, the home equity credit line interest rates are lower than credit cards and are often tax-deductible.

Homeowners who wish to consider the HELOC should understand three important elements of the typical line of credit:

1. *Cost*. As mentioned above, the borrower only pays interest on the balance that the borrower maintains on their home equity credit line account. That interest usually is tax-deductible for most homeowners. The cost to obtain a home equity line of credit will be the same as the closing costs required to obtain a standard home equity loan. Most homeowners can expect a flat fee of $500-$800 dollars, some of which may be tax-deductible. Most lenders will charge an annual fee of $25-$50, especially if the borrower does not use the credit line. Some banks are willing to waive this fee for its favored borrowers. Also, this fee may be tax-deductible: please consult your tax preparer or accountant.

2. *Mechanics*. The home equity line of credit is similar to the home equity loan. The primary difference is that the line of credit provides the borrower with a checkbook, instead of one lump-sum check. The borrower can use the home equity credit line checkbook to withdraw funds for any purpose. Most home equity lines of credit will divide the credit line’s term into two phases:

* *Revolving*. During the revolving phase, borrowers can withdraw funds from their credit lines, until they reach their credit limits. Some lenders may extend this credit limit, especially as the property appreciates. This revolving stage usually lasts five to ten years, with seven years being the most common term. The minimum payment due each month usually is the interest due for that particular month. As such, the HELOC essentially is an interest-only balloon loan during the revolving state. If the borrower wishes to reduce the principal balance during this interest-only phase, the borrower simply increases the payments above the minimum.
* *Amortized*. When the revolving period is complete, the lender provides the borrower with an option to convert the current balance into a standard fully amortizing loan. During the amortized period, the lender essentially converts the home equity credit line into a home equity loan. These loans typically have 15-year terms, with the monthly payments paying down the principal balance, as well as paying the interest due. However, some lenders will allow their most credit-worthy borrowers to renew their home equity line of credit by simply refinancing it with a new credit line.

3. *Interest rate*. Although some credit lines are fixed-rate, most are adjustable-rate mortgage (ARM) financing. These ARM programs also tend to be tied to the Prime Rate (although see the discussion of ARM mortgages above for other indexes), which is the rate charged by commercial banks to their best customer. Note, however, that the borrower’s actual interest rate normally is higher than the prime rate, depending on the borrower’s available equity and credit grade.

For example, Charlie has good credit and plenty of equity. If his home equity credit line and his first mortgage account for only 80% of the property’s value (80% LTV), then the lender will probably set his interest rate at or close to the prime rate. On the other hand, if Charlie’s home equity line of credit takes up all of the property’s available equity, his interest rate will probably be two to three percentage points over the prime rate. If Charlie’s particular credit line stipulates an interest rate two percentage points over the prime rate index and if the prime rate is currently at 6.5%, his interest rate would be 8.5% (index 6.5% + constant 2%).

Investment Tool

For entrepreneurs and fledgling real estate investors, the home equity line of credit can be one of their best financing weapons. It provides them with liquidity, through a low-cost source of funds.

For example, Kathy is starting a Curves franchise – a workout center for women. She has found the perfect place to put her strong business plan and experience to good use. Kathy has already saved just about enough money to get this business started; but she is worried about how tight her finances will be and about weathering any possible adverse economic circumstances.

Kathy obtains a home equity line of credit of $100,000 against her home. She can use these funds for the actual capitalization or simply as a safety net to help her through the initially dry months she anticipates. She knows that this business venture will be a success, but she does not want to endanger her credit rating, home mortgage payments, and overall financial situation. This line of credit will provide Kathy with a sense of security that she can withstand a strenuous six-month to one-year starting period, if necessary.

Balloon Loans

The balloon mortgage loan is an installment note whose amortization is longer than its term. Simply, the payments are calculated for a long-term period, but the loan's actual life is relatively short-term – with the balloon mortgage balance due at the end of that short term. The balloon loan used to be one of the chief alternatives to the fixed-rate program, because it offered lower rates without the increased risk of the ARM loan. With the evolution of the 3/1, 5/1, and other Two-Step ARM programs, the balloon program is not popular with homebuyers and homeowners. However, it is still widely used for commercial and non-conforming loans. The most common types of residential balloon mortgage loans are the five-year and seven-year balloons for conforming loan programs. However, 10-year and 15-year balloons are also prevalent among non-conforming programs. The majority of commercial and apartment building loans today are balloon loans.

Advantages and Disadvantages of Balloons

Balloon mortgage loans have two important elements that provide a considerable advantage to the borrower: a shorter term and a longer amortization. The shorter term, as compared to a standard 30-year loan, means a relatively lower risk exposure for the lenders and so they can afford to offer a lower interest rate. The interest rate for a conforming five-year balloon, for example, is typically 0.500 to 1.000 percentage points less than conforming 30-year fixed-rate loans. At the same time, the balloon loan's longer amortization, usually 30 years, provides the borrower with lower monthly payments than short-term loans, such as a 15-year mortgage. Except for the short-term, the conforming (Fannie Mae or Freddie Mac) balloon loans are very similar to the 30-year fixed-rate program.

In many respects, a balloon mortgage loan is a compromise between the fixed-rate and the adjustable-rate mortgage (ARM) loans. The balloon loan's interest rate, for starters, usually is lower than comparable fixed-rate loans, though higher than comparable ARM programs. The balloon program also provides a middle ground between risk and stability. Whereas the ARM loan's fluctuation in interest rate and payments means more instability for the borrower, the conforming balloon loan is fixed rate. Therefore, the balloon loan can offer a bit of the best of both worlds: a lower rate than fixed-rate programs, but more stability than ARM loans. Homebuyers that anticipate staying in their home for no more than five to seven years may find the balloon loan an attractive alternative. It has all the stability of a 30-year fixed-rate loan, during that period, but at a lower interest rate and a correspondingly lower payment.

Even homebuyers who plan to stay longer than five to seven years in the property may still find a balloon mortgage loan a wise choice. The buyer can always refinance to a standard fixed-rate loan at the end of the balloon term and, in some cases, exercise a conversion option.

The main disadvantage of the balloon loan, as compared to the 30-year fixed-rate loan, is that conforming balloon loans typically require at least 10% down payment.

Balloon Mechanics

Although the monthly payments of a balloon loan are calculated with a long-term amortization of (usually) 30 years, the balloon has a relatively short life. At the end of the balloon's term the loan will have a large loan principal balance still remaining. The borrower must either pay off the loan in full or refinance the remaining balance. This final, very large balloon payment is the origin of this program's name.

1. *Amortization*. The most important aspect of the balloon program is how its amortization differs from its term. For example, the conforming five-year balloon has an amortization of 30 years and a term of five years. The monthly payments are calculated with a 30-year amortization; however, at the conclusion of the five-year term, the borrower must pay off, convert, or refinance the remaining loan balance. For example, a five-year balloon loan with a loan amount of $100,000, an interest rate of 7.5%, and an amortization period of 30 years has monthly payments of $699.21 – exactly the same as a 30-year fixed-rate mortgage. However, at the conclusion of the five-year term, the remaining loan balance will be $94,617. The loan balance does not decrease very quickly during the first years of a 30-year amortization. The borrower must pay off, refinance,or, if applicable, convert this balance at the end of the five-year term. The most common types of balloon mortgage loan programs are five-year and seven-year balloons, but lenders also offer three-year and ten-year programs. The three most common balloon loan variations include:

a) *Two-step balloons***.** The most typical conforming variations of balloon programs are the 5/25 and 7/23 two-step balloons. At the end of the balloon term, if the borrower meets certain conditions he may automatically convert the loan into a long-term loan. For example, the 5/25 balloon is initially a five-year loan. At the end of the fifth year, the borrower would have the option of converting the balance into a 25-year fixed-rate loan. To exercise this option, the borrower's account must not be delinquent and the borrower's payment history must be good. The interest rate of the 25-year loan would be based on the current rates at the end of the fifth year.

b) *Balloon ARMs*. Recently, the most popular variation of the balloon programs have been the 3/1, 5/1, and 7/1 balloon ARMs. These programs start with a fixed-rate balloon, but automatically convert to a long-term ARM loan. For example, the 7/1 ARM has a fixed interest rate during the first seven years of the loan. At the end of the seventh year, this loan converts into a one-year ARM loan with a 23-year initial amortization. This conforming program would have the adjustment caps of comparable ARM programs, except for the initial adjustment at the end of the seventh year. The first adjustment normally has either no cap or an extra-high cap.

c) *Interest-only balloons***.** Some home equity credit lines and other balloon loans are designed as interest-only balloon loans. During the balloon's term, the monthly payments are only for the interest due on the loan. Thus, the monthly payments are lower than standard balloons. At the balloon's maturity date, the borrower must repay or refinance the entire original loan balance. The interest-only balloon is also known as a term loan or as a straight mortgage note. The payments are lower than standard balloon loans; however, the principal never goes down. Given the financial troubles in the mortgage banking industry in the recent past, most lenders no longer offer interest-only balloon loans and those that do, will only do so for select and extremely credit-worthy customers.

2*. Conversion option***.** Most conforming and some non-conforming balloon programs offer the borrower a conversion option. This option allows the borrower to convert the balloon mortgage loan into a standard long-term loan, either fixed-rate or ARM, at the current rates at the time of conversion. Generally, the borrower may exercise the conversion option only after the one-year anniversary of the loan and before the end of the balloon term. Many lenders require that the borrower demonstrate a timely payment history with the balloon mortgage loan. The conversion loan will usually charge a small administrative fee, as well as any pertinent legal recording fees. The new term and amortization period of the loan is usually 30 years, less the age of the balloon loan. For example, if the balloon loan is converted after two years into a fixed-rate loan, the new loan will usually have a 28-year term with the interest rate fixed at the prevailing market rate at the time of conversion.

Buy-Down Programs

Buy-down programs involve a reduction of the interest rate through prepayment of the loan's interest. At the closing, the buyer, lender, seller or other related parties pay points in order to provide the borrower with a lower interest rate. There are two basic types of buy-down programs – permanent and temporary. With the permanent buy-down loan, the borrower usually pays the points to reduce the monthly payments on the loan. In the case of temporary buy-down loans, frequently the property seller or the lender will pay the prepaid interest points as an incentive to buyer/borrowers.

Permanent Buy-Downs

A permanent buy-down lowers the interest rate for the entire term of the loan. At the initiation of the loan, the borrower (or sometimes the seller or lender) pays discount points, which are interest charges paid in advance. This tactic can be advantageous for those borrowers who can afford it because of the long-term benefits, which include: (1) reduced interest payments long-term; (2) tax-deductible points; (3) lower monthly payments; and (4) qualification for a higher loan amount.

For example, consider a 30-year fixed-rate $100,000 loan with a current market interest rate of 8%. The monthly principal and interest (P & I) payment for this loan is about $733. However, suppose that by paying one discount point of prepaid interest (in this case, $1,000), the borrower can lower the interest rate to 7.75%. The monthly mortgage payment drops to about $716, or by $17 a month. The savings are $204 per year, or $6,120 throughout the entire 30-year term of the loan. Plus, the discount point/fee is normally tax-deductible.

The permanent buy-down program usually is not recommended for homebuyers who plan to stay in the new property for less than five years. Also, borrowers who think they may refinance their loan within the next three to five years generally should avoid paying any discount points. Of course, the break-even period until the borrower will recoup the prepaid interest points depends on the interest rate differential and may be shorter or longer than three to five years.

Temporary Buy-Downs

The temporary buy-down programs, often called teaser programs, reduce/ the interest rate for only a short period of time, usually two years. The most common temporary buy-downs are the 2-1 and 1-1 temporary buy-down programs. The 2-1 buy-down reduces the interest rate by two percentage points during the first year of the loan and by one percentage point during the second year of the loan. The loan returns to the note rate in the third and subsequent years. By comparison, the 1-1 buy-down program reduces the interest rate by one percentage point during the first two years of the loan and returns to the note rate in the third year.

The temporary buy-down program is advantageous for borrowers who wish to qualify for a larger loan amount than the amount for which their income would normally qualify them. By lowering the interest rate and, as a result, the monthly payments during the first years of the loan, the prospective borrower may qualify for a higher loan amount. Often, developers offer to subsidize such buy-downs to more quickly market their newly built homes. The temporary buy-down is normally applied only to conforming fixed-rate loans. However, some lenders allow this option on certain balloon and ARM programs as well.

The main disadvantage of the temporary buy-down program is that its note rate generally is higher than on a conventional loan. This high note rate is offset by the low start rate. However, once the buy-down period is complete, the loan's interest rate will be relatively higher than standard loan programs for the rest of its term. For example, if the current market rate for a 30-year fixed-rate loan is 7%, the note rate of the same program with a 2-1 buy-down would probably be about 8%. During the first year, the start rate will be 6% (8% note rate less 2-point first-year reduction). In the second year, the interest rate will increase to 7% (8% note rate less 1-point second-year reduction). In the third and subsequent years of the loan, the interest rate will return to the note rate of 8%. Fortunately, most buy-down programs do not have prepayment penalties; so the borrower can refinance to a lower rate, if currently available.

The temporary buy-down programs are options that the lender may offer on select programs. The restrictions of those specific programs guide the requirements imposed upon the borrower. However, many 2-1 temporary buy-down programs will require that the prospective borrower demonstrate potential for increased income. This is usually accomplished with a standard verification form completed by the employer or documentation of steadily increasing income.

Most temporary buy-downs establish an interest-subsidy escrow account for the period of the temporary buy-down. The funds in this escrow account are essentially prepayment of the interest during the first years of the loan. Either the lender or the seller/developer normally provides the funds for this interest-subsidy escrow account. A seller or developer may provide such buy-down funds as an incentive or assistance for buyers.

Construction Loans

For some homebuyers, the dream home is a truly custom-made, newly constructed home. For these construction purposes, a simple mortgage loan will not and cannot suffice – a construction loan is required. The typical construction loan will contain elements with different characteristics than found in a standard purchase or refinance loan. Four items are of particular importance: loan commitment, rate lock, method of disbursement, and lower LTV ratio limits.

Upon approval of the construction loan application, the borrower will receive a loan commitment from the lender. Most lenders do levy a loan commitment fee for construction loans. This loan commitment normally lasts for nine months, though lenders sometimes use longer or shorter commitments. The lender locks-in the interest rate for the entire term of the construction loan. The primary purpose of the rate lock is not related to the construction loan, per se, but rather to fix the rate for the permanent refinancing mortgage loan at the conclusion of the construction.

Keep in mind, when constructing a custom property, the borrower needs two distinct loans – a short-term construction loan during the actual construction period and a long-term permanent mortgage loan after the property is built. Large-scale tract developers usually do NOT require buyers to obtain construction financing. Instead, most developers will require that the borrowers be approved for purchase mortgage loans. The actual construction of the property is funded with the developer's own cash, assets, or loans. The buyer's mortgage loan commitment is simply a guarantee to the developer that the buyer is qualified and will be able to purchase the newly constructed property immediately after construction is completed. People who are building custom homes, however, need to secure a construction loan to pay the builder/general contractor.

Jumbo Loans

A jumbo loan is any loan whose amount exceeds conforming guidelines. Conforming loans, which typically have the best interest rates and loan terms in the market, are loans sold to federally chartered agencies such as Fannie Mae and Freddie Mac. Such loans must satisfy or conform to these agencies' guidelines in order for these agencies to purchase and package these mortgages into mortage-backed securities..

Conforming Loan Limits

The definition of jumbo loans depends on the current conforming loan limits. Fannie Mae and Freddie Mac adjust loan limits --usually in cooperation with each other – to reflect increases in average home prices and mortgage loan amounts. In addition, the limits vary according to the number of units in the subject property. Each unit refers to one legal apartment. For 2015, the Fannie Mae set the maximum loan amount limits for conforming loan programs as follows for first mortgages: single-unit or condominium loans: $417,000; two-unit residential loans: $533,850; three-unit residential loans: $645,300; four-unit residential loans: $801,950. Note: One- to four- family mortgages in Alaska, Hawaii, Guam, and the U.S. Virgin Islands are 50% higher than the limits for the rest of the country. For second mortgages, the loan limit is $208,500. In Alaska, Hawaii, Guam, and the U.S. Virgin Islands the limit is $312,750. The FHA sets lower loan amount limits than do Fannie Mae and Freddie Mac.

Because jumbo loans are non-conforming, they charge relatively higher interest rates than similar conforming programs.

Alternative Option: Jumbo Loans without Jumbo Pricing

There are ways to minimize the higher interest rates of jumbo loans. Obviously, the buyer can always make a larger down payment so that the loan amount finally required fits within the conforming limit. Depending on the sales price of the home, however, this can prove to be a very expensive approach.

A more advantageous approach is to purchase the property with two mortgages: a standard conforming first mortgage and a second mortgage loan. In this scenario, the first mortgage is a standard conforming program with a loan amount at the maximum limit. The second mortgage is for whatever amount the buyer needs to cover the difference required for financing.

*Example.* Chaka wants to buy a $700,000 property, and she only wants to make a down payment of 20%, or $140,000. She could obtain a jumbo loan for $560,000, but their interest rates are typically 0.25 to 1.00 percentage points higher than conforming loan programs. If the jumbo rate on that $560,000 loan were 7%, her monthly payment would be $3,725.69.

Instead, Chaka obtains a conforming 30-year first mortgage of $417,000. She then obtains a 30-year purchase second mortgage of $143,000; the two mortgages combine for the necessary $560,000 in mortgage financing. If the conforming rate were only 6.25%, the monthly payment would be $2,567.54. Even if the second mortgage’s rate were at 7% (the rate for the jumbo mortgage), that monthly payment would be $951.38. Thus, her total combined mortgage payment would be $3,518.92, or $206.77 less per month than with the jumbo mortgage. That savings is about a 5.55% of the jumbo’s monthly payment – enough to pay for most people’s monthly cable TV and internet service!

No Income Verification (NIV) Loans

Until the end of the last decade with the depression in the housing markets and the crisis in the mortgage lending business, one of the most common non-conforming loan programs was the no income verification (NIV) loan. NIV programs allowed borrowers to qualify for mortgage financing, regardless of the borrower’s income. Given the adverse real estate and mortgage lending industry history of the recent past, the future of NIV programs is difficult to predict. Not many lenders are willing to lend on this basis in the current environment. With time and recovery in the housing and lending industries, it is probable that these types of loans will become more available to certain borrowers in the future than they are currently. However, it is a good guess that the market for these types of loans is unlikely to ever reach the prior levels.

Given that certain borrowers will continue to be looking for NIV-type loan arrangements and some lenders will be willing to provide these types of loans to certain borrowers they consider to be good risks, the following paragraphs provide a review of the different types of NIV programs, as well as a discussion of costs and practical applications.

Various lenders have different interpretations and application of the NIV option. The basic element is that the borrower's income, as reflected on the application, does not require verification. The NIV loan merely accepts the applicant's stated claim about his or her income – within reason. Although the NIV program will not verify the applicant's income, it will require that the stated income makes sense: it is acceptable for a doctor, lawyer, or other professional to state that he or she makes $100,000 a year; however, it is not acceptable for a janitor or clerical employee to state the same thing.

Most NIV loans will still insist on verifying employment, especially if the borrower is not self-employed. If the borrower is self-employed, the self-employment must be documented with a business license, past receipts, and/or advertisements. Some lenders only offer NIV loans to self-employed borrowers. In fact, the NIV loan was initially developed primarily for self-employed borrowers, who had a difficult time documenting their income.

Until recently, practically all NIV programs were non-conforming loans. In recent years, however, some conforming programs started to offer a limited NIV option for borrowers with very good credit. The interest rates on such conforming NIV programs are much better than standard non-conforming NIV programs.

Applicable Situations

The no income verification loan is ideal for self-employed applicants and for borrowers who have unstable income, such as commissioned employees, recently employed borrowers, and applicants who receive a large amount of cash (undocumented) income. However, salaried borrowers who cannot otherwise qualify for a loan based on their documented income use the NIV program.

The NIV option has been available – at a cost (see below) – to borrowers with a wide range of credit and employment situations. Thus, applicants with D-credit in the middle of a bankruptcy or foreclosure could still qualify for a NIV loan. In current markets, the opportunity for such borrowers is very limited.

Cost of NIV Programs

A NIV loan is more risky for the lender than standard full documentation loans, because the income calculation provides the lender with a statistical analysis of the borrower's ability to repay the loan. Without the income qualification of full documentation loans, lenders are assuming a higher level of risk. To offset these risks, NIV loans charge higher prices (interest rates) and require larger down payments than comparable full documentation programs.

Most NIV programs have charged interest rates that are 1.50 to 4.00 percentage points higher than comparable full documentation loans. For example, if a conforming ARM loan was at 6%, an A-credit NIV ARM loan would probably be around 7.5% to 10%.

The most serious cost of the NIV option, however, is the down payment requirement. Most NIV programs have required at least 20%-25% down payment for A-credit borrowers; C-credit and D-credit borrowers could expect to make down payments equal to at least 30%-40% of purchase price.

OTHER MORTGAGE FINANCING ALTERNATIVES

Figure 18.1 briefly summarizes other mortgage financing options.

**Figure 18.1**

|  |
| --- |
| MORTGAGE FINANCING ALTERNATIVES |
| **Renegotiable Rate Mortgage (Rollover).** Interest rate and monthly payments are constant for several years; changes possible thereafter. Suitable for buyers with rising incomes. |
| **Seller Take-back.** Seller provides all or part of financing with a first or second mortgage. May offer a below market interest rate; may have a balloon payment requiring full payment in a few years or refinancing at market rates, which could sharply increase debt payments. |
| **Growing Equity Mortgage.** Fixed interest rate but monthly payments may vary according to agreed-upon schedule. |
| **Contract Sale.** Seller retains original mortgage. No transfer of title until loan is fully paid. Low down payment. Equal monthly payments with unpaid principal due at loan end. Contracts often made for 2 or 3 years, with balloon payment (balance due) at end. Buyer must refinance. Buyer has less protection than with mortgage financing. Legal advice strongly recommended. If buyer can’t refinance, may have to sell property to pay off contract. |
| **Rent with Option.** Renter pays option fee for right to purchase property at specified time and agreed upon price. Rent may or may not be applied to sales price. Enables renter to buy time to obtain down payment and decide whether to purchase. Locks in price during inflationary times. Failure to take option means loss of option fee and rental payments. |
| **Federal Housing Administration (FHA).** Insured by FHA, local lending institution provides money. Below-market interest rates. Loanlimits and down-payment requirements. Borrower pays for FHA mortgage insurance. Extra time needed for paper work. |
| **Veterans Administration (VA) Loan.** Guarantees payment to qualified veterans and surviving spouses. Below-market interest rates and down-payment requirements. Loan amount limited to repayment ability. Several mortgages available. Extra time needed for paper work. |
| **USDA Rural Housing Service Loan.** People in rural areas are eligible. Home must be of modest cost and design. Below market interest rates and down payment vary according to family income. Income and loan amount caps for this program. Contact local USDA Rural Development Office for information. |
| **Community Reinvestment Loan Programs.** Participating banks and savings and loans offer loans to low- and moderate-income consumers for purchase and remodeling. Lending requirements may be less restrictive. |
| **Federal Home Loan Bank Board.** Participating banks provide up to $8,000 to first-time home buyers whose incomes are below 80 percent of median county income. Money can be used to meet down payment requirement or to help pay closing costs. |
| **Fannie Mae.** Several programs created by Fannie Mae are offered by participating lenders. Low down payments are typical. Some have no income limitations. |
| **Home Affordable Refinance Program (HARP).** HARP was started in April 2009. It goes by several names. The government calls it HARP, as in Home Affordable Refinance Program. If a homeowner is underwater on in their conforming, conventional mortgage, the HARP program may help them refinance without paying down principal and without having to pay mortgage insurance. Here are the details of the government's new 2012 HARP refinance program (HARP 2.0): Eligibility rests on meeting two criteria (1.) current loan must be backed by Fannie Mae or Freddie Mac, and (2,) current mortgage must have a securitization date prior to June 1, 2009. |

REFINANCE LOANS

Mortgage refinancing occurs when a borrower pays and closes an old loanwith the proceeds of a new loan. Most borrowers refinance loans for at least one of the following four reasons:

1. *Better interest rates*. When current interest rates are much lower than the rate on the borrower's original mortgage loan, a refinance would be a wise financial investment for the borrower.

2. *Change of term*. The term is the life of the loan and relates to the amortization of the loan. The longer the term and amortization, the smaller are the monthly payments. However, shorter terms and amortization save money in the long run and build equity faster.

3. *Consolidation of debt*. Refinance loans are often used to consolidate several long-term liabilities. Credit cards charge exorbitant rates, and many installment loans are not much better. A consolidation refinance loan rolls these debts into one mortgage loan with lower and tax-deductible interest rates.

4. *Extra cash*. The mortgage refinance is also a good way to raise extra cash for special purposes, such as sending a child to college, financing a special vacation, or investing in a new business.

Cash-Out Refinance

Cash-out refinancing provides the borrower with additional cash from an increased loan amount. This privilege comes at a price. Conforming lenders set lower limits on cash-out loans, as compared to non-cash-out refinances. For conforming programs, the maximum total loan-to-value (LTV) ratios for cash-out refinances are usually as follows:

* Single-family, owner-occupied residential property: 80%
* Two-unit to four-unit, owner-occupied residential property: 75%
* All non-owner-occupied residential properties: 65%

Rate and term (no cash out) refinances, by comparison, regularly allow up to 90% of the property’s value. Some programs actually allow LTVs of 100% and 125%.

Strictly speaking, the cash-out refinance – and its lower loan limits – applies to the following three situations:

1. *Cash back to the borrowers***.** The borrower can receive surplus cash from applicable equity in the property. However, most conforming lenders limit the cash-out amount, after all other costs and pay-offs, to only $50,000. Non-conforming lenders also often set cash-out limits; but these limits usually are higher than those for conforming.

2. *Debt consolidation***.** Conforming lenders classify any refinance that consolidates non-mortgage debts, such as credit cards and other personal loans, as cash-out refinances. Those consolidation funds essentially are cash-out of the property’s established equity.

3. *Replace a first or second mortgage that is less than one year old*. If a borrower is refinancing a first or second mortgage loan that is less than one year old – regardless of whether the borrower is receiving cash back – conforming lenders classify the refinance as a cash-out.

Rate and Term (No Cash-Out) Refinance

The rate and term refinance, or no cash-out mortgage, deals with a straightforward refinance of an existing loan. The Loan-To-Value (LTV) ratios for non-cash-out refinances are higher than for cash-out, because cash-outs increase the lender’s risk exposure. Strictly speaking, lenders apply conforming rate and term (non-cash-out) refinances –and their higher loan-to-value (LTV) ratios – to the following situations:

1. *Refinance of a first mortgage that is at least one year old***.** Rate and term (non-cash-out) refinance may cover any loan that is paying off any first mortgage loan that is at least one year old. If the existing loan is less than one year old, many lenders consider this refinances a cash-out and apply a lower LTV ratio.

2. *Consolidation of multiple mortgages***.** Rate and term refinance may cover a consolidation of mortgage loans. However, the junior liens (second and third mortgages) must be at least one year old.

3. *Refinance that also pays closing costs and prepaid expenses*. The loan amount of a rate and term (non-cash-out) refinance mortgage may be increased to cover the closing costs, discount points, and pre-paid expenses of the refinance transaction.

4. *Limited cash back*. The borrower may receive a cash surplus with the rate-and-term refinance, but the cash-out may not exceed 1% of the mortgage amount. Because it is considered a rate and term refinance, the borrower can actually qualify for a higher loan amount.

Refinance Requirements

Mortgage refinances tend to be simpler than purchase loans. It has now become common practice among homebuyers to take future refinances into consideration when buying a home. During periods of relatively higher interest rates, homebuyers now often select ARM loans. ARMs have lower initial rates; and most homebuyers figure wisely that they can always refinance to a long-term fixed-rate loan when interest rates have cycled back down to more attractive levels.

As many homeowners have found, refinances have slightly differing requirements than do purchases for a few items.

1. *Investment consideration*. Although a refinance can lower your monthly payments, it may not always be a good idea. A homeowner who has already paid off ten (10) years of a 30-year loan would be unwise to refinance to another 30-year loan – even if the rate were lowered. It may even be unwise to refinance to a 20-year or 15-year loan.

2. *Appraisal value*. Most residential lenders require appraisal reports to be no more than three months old at the time of closing. Many will accept appraisals that are up to one year old; however, the appraiser will have to issue a recertification letter that confirms the applicability of the report's value estimate. Often, however, it is in the borrower's best interest to obtain a new appraisal. The new appraisal could include value appreciation to provide a higher appraisal value. A higher value could lower the LTV ratio, which can affect the mortgage insurance and available equity.

*Example.* Bill and Hillary bought a house for $300,000 three years ago with a $270,000 (90% LTV) loan. They have the property reappraised and the appraiser estimates their current value at $340,000. By this time, their loan balance is now $267,000. With this new appraisal, they can refinance their current loan at an LTV of 78.5%. This could eliminate their $107/month mortgage insurance payments. They could also opt to take out a home equity loan against their increased equity to consolidate debt or make improvements.

The loan underwriters automatically review all appraisals and, if there is a significant appreciation in value, the underwriters will have a third party review the new appraisal report. The appraisal review can reject or accept the appraisal, or require additional information or comparables (recent sale prices for comparable homes in the area) to support the valuation.

3. *Payoff statement***.** Refinances further require that the loan officer or processor acquire a payoff statement from all institutions and lenders who will be paid by the proceeds of the refinance loan. The payoff statement will indicate how much the borrower owes the creditor. In most situations, the most important payoff statement required will be from the current mortgage lender. If the new loan is a first mortgage, that new first mortgage lender wants to ensure that all current mortgages on the property are all paid off and removed.

Refinancing When There Are Two (or More) Current Mortgages

If the borrower in a refinance has at least two mortgages – both a first mortgage and a second mortgage – on the subject property, that borrower will have three refinancing options, each of which have different challenges.

1. *Consolidation*. The borrower may choose to pay off both loans with a new refinance loan. This refinance loan in effect consolidates the primary and junior mortgage loans. If the second mortgage is at least one year old, then this would be considered a rate and term (non-cash-out) refinance and have higher loan-to-value (LTV) ratios.

2. *Refinance the second mortgage only*. The borrower may choose to refinance only the junior mortgage and leave the primary mortgage as it is. The new loan will have to be a second mortgage loan.

3. *Refinance the first mortgage only***.** The borrower may elect to refinance only the primary mortgage and leave the junior mortgage as it is. However, this requires subordination of the existing second mortgage. Liens are recorded chronologically. The new first mortgage loan wants to have first lien. The lender on the second mortgage loan must agree in writing that the new first mortgage will assume priority lien over that existing second mortgage. The existing second mortgage “subordinates” itself to the new first mortgage.

MORTGAGE (LOAN) MATH

Amortization

Amortization is the process of apportioning interest and principal for each payment over the term of the loan. The interest portion of each payment is equal to the loan balance at the beginning of the period times the interest rate applicable for the period. The principal amount of each payment is then simply the payment amount less the interest paid.

For example, Figure 18.2 shows the first year amortization schedule for a $200,000 10-year mortgage with a stated interest rate of 7% and monthly payments of $2,322.17.

The interest due in the first month is computed by multiplying the beginning-of-period (BOP) balance of $200,000 in column 2 by 7% divided by 12 months to derive $1,166.67 in column 4. The principal due of $1,155.50 in the first month is equal to the payment amount of $2,322.17 in column 3 minus the interest due of $1,166.67 in column 4. The end-of-period (EOP) balance of $198,844.50 in column 6 at the end of the first year is equal to the beginning balance of $200,000 in column 1 minus the principal due of $1,155.50 in column 5. The ending balance in column 6 then becomes the beginning of period balance in column 2 in the following month and this process continues until the end of the term of the loan.

**Figure 18.2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **AMORTIZATION SCHEDULE** | | | | | |
| **Month  (1)** | **BOP Balance  (2)** | **Payment  (3)** | **Interest Due  (4)** | **Principal Due  (5)** | **EOP Balance (6)** |
| 1 | 200,000.00 | 2,322.17 | 1,166.67 | 1,155.50 | 198,844.50 |
| 2 | 198,844.50 | 2,322.17 | 1,159.93 | 1,162.24 | 197,682.25 |
| 3 | 197,682.25 | 2,322.17 | 1,153.15 | 1,169.02 | 196,513.23 |
| 4 | 196,513.23 | 2,322.17 | 1,146.33 | 1,175.84 | 195,337.39 |
| 5 | 195,337.39 | 2,322.17 | 1,139.47 | 1,182.70 | 194,154.69 |
| 6 | 194,154.69 | 2,322.17 | 1,132.57 | 1,189.60 | 192,965.09 |
| 7 | 192,965.09 | 2,322.17 | 1,125.63 | 1,196.54 | 191,768.55 |
| 8 | 191,768.55 | 2,322.17 | 1,118.65 | 1,203.52 | 190,565.03 |
| 9 | 190,565.03 | 2,322.17 | 1,111.63 | 1,210.54 | 189,354.49 |
| 10 | 189,354.49 | 2,322.17 | 1,104.57 | 1,217.60 | 188,136.88 |
| 11 | 188,136.88 | 2,322.17 | 1,097.47 | 1,224.70 | 186,912.18 |
| 12 | 186,912.18 | 2,322.17 | 1,090.32 | 1,231.85 | 185,680.33 |

Figure 18.3 shows how the portion of each payment attributable to interest and principal changes over the term of the loan. The original loan amount in Figure 18.3 is equal to $200,000 with a stated annual interest rate of 9% and monthly payments of $1,609.25 for 360 months (30 years). The figure also shows the declining balance of the loan over the 30-year term relative to the right-hand axis of the graph. As the figure shows, the largest portion of the early payments is allocated to interest and so the principal balance declines only slowly. Over time, however, the portion of each payment allocated to principal increases and the portion allocated to interest decreases at accelerating rates. Consequently, the principal balance of the loan declines at an accelerating rate as one moves further towards the end of the term of the loan.

**Figure 18.3**



Computing the Payment Amount

If one knows the mortgage balance, Bal0, and the interest rate, r, and the term, n, one can determine the required payment with the following formula:

|  |  |
| --- | --- |
| Pmt = Bal0 – | r |
| 1– (1 + r)-n |

*Example.* Assume borrower wants to determine the monthly payment on an auto loan of $25,000 at 6% (annual) for a period of 36 months. The monthly interest is 0.5% (6% / 12), so the payment is, $760.55, determined as follows:

|  |  |
| --- | --- |
| Pmt = 25,000 x | 0.005 |
| [ 1 – (1 + 0.005)-36 ] |

|  |  |  |
| --- | --- | --- |
| = 25,000 x | 0.005 | = 25,000 x 0.030422 = 760.55 |
| 0.164355 |

MORTGAGE AND LOAN FINANCIAL PLANNING APPLICATIONS

Basics of Loan Rates

The mathematics of loan finance are basically pure-vanilla time-value computations, but many borrowers may not fully understand certain concepts or may misunderstand these concepts.

For example, the stated annual rate (or contract rate) of a loan typically is not the borrower’s effective annual rate. There are three reasons for this.

First, because acquiring a mortgage or loan usually involves a host of up-front expenses and fees, the rate one pays on the net proceeds one actually borrows to buy or refinance a home is actually greater than the stated rate. Commercial lenders typically provide an annual percentage rate (APR) that takes into account most of these up-front expenses and reports the rate as if the stated rate were computed just on the net proceeds received.

Second, the lenders compute the APR based upon the assumption that the borrower will pay off the mortgage or loan over the stated term, say, 5, 10, 15, 20, or 30 years. Rarely does this actually happen. If the mortgage is paid off early, the APR for that shorter period generally will be considerably higher than the APR computed based upon the entire term of the mortgage.

Third, neither the stated rate nor the APR account for the compounding of interest over the year. For example, lenders typically determine the monthly interest by dividing the stated annual rate by 12. If the stated interest is 7%, then they would use a rate of 0.07/12, or 0.00583 for the monthly rate in computing the monthly payments on the mortgage. However, when the monthly payments are computed this way, the effective annual rate is actually 7.229%.[[3]](#endnote-3)

Effect of Points and Closing Costs on the APR

When borrowers are considering alternative mortgages or loans, they typically may select from an array of mortgages or loans with different combinations of interest rates and points.

Points are prepaid interest, typically quoted as some percentage of the loan amount. For instance, a lender may offer mortgages at 7.5% with no points, 7.25% with one point, 7% with two points, and 6.75% with three points.

In addition, securing a mortgage or loan typically involves various fees and other up-front closing costs. These closing costs include such things as application fees, broker’s fees or commissions, title insurance, appraisal fees, advance payments of real estate taxes and mortgage insurance, copying, filing, recording, and notarization fees, escrow fees, other miscellaneous fees, and sometimes, legal and/or accounting fees. These fees can typically range from about 1.5% up to perhaps 4% of the amount borrowed.

Usually,borrowers include most or all of these fees in the amount borrowed. Regardless of whether these up-front closing costs[[4]](#endnote-4) and points are financed or paid all or in part in cash, they affect the rate being paid for the net amount actually being borrowed.[[5]](#endnote-5) Consequently, the rate of interest the borrower effectively is paying over the term of the mortgage, called the annual percentage rate, is higher than the mortgage’s stated annual rate.

*Example 1.*Assume your client, Hausen Hunter, is purchasing a new home and needs net proceeds from the mortgage to be $200,000. The stated interest rate on a 30-year mortgage with two points is 7%. Additional closing costs total $3,637.83. What is the annual percentage rate if your client includes the closing costs in his amount borrowed?

If the net proceeds need to be $200,000, the total amount borrowed has to be grossed up for the closing costs of $3,637.83 plus the 2% points on the amount borrowed. But the 2% points increase the amount borrowed, so it is a circular calculation. You can determine the gross-up amount with the following formula:

|  |  |
| --- | --- |
| Amount Financed = | (Net Proceeds + Other Fees & Charges (excluding points) |
| (1 - points%) |

In this case, the amount financed would need to be:

|  |  |  |
| --- | --- | --- |
| Amount Financed = | ($200,000 + $3,637.83) |  |
| (1 - 0.02) |  |
|  |  |  |

|  |  |  |  |
| --- | --- | --- | --- |
| Amount Financed = | $203,637.83 | = | $207,794 |
| 0.98 |

One computes the real effective annual rate by first determining the monthly payment for the amount financed for the given term at the stated rate of interest using the standard time value formula for computing the level periodic payments of an annuity given the present value, or the amount financed. Next, one subtracts the closing costs from the amount financed to determine the real net proceeds. Then, one solves for the interest rate that would have to apply for the given level periodic payments to be consistent with the reduced net proceeds as the present value, rather than the actual amount financed.[[6]](#endnote-6)

Effectively, Hausen is paying almost 7.4%, rather than 7%, assuming he holds the mortgage to maturity because of the effects of points and other closing costs. Note that Hausen will reduce his monthly payments from $1,382.46 to $1,330.60, a decrease of $51.86 a month, if he pays the closing costs in cash rather than financing them. However, his effective annual rate actually increases, rather than decreases, because the no-point closing costs remain the same, regardless of whether or not he finances those costs. Because the total amount being financed is less, the total closing costs represent a greater percentage of the amount being financed, thus increasing the effective rate he actually pays.

Finally, the effective APR takes account of the fact that the loan charges interest monthly. The lender determines the interest rate charged each month by taking the annual rate and dividing by 12. If one compounds this monthly rate over the twelve months of a year, it gives one the effective annual rate. The effective annual APR is slightly greater than the nominal APR due to monthly compounding.

Effect of Early Payoff on the APR

It is the rare person indeed who buys a first home, acquires a mortgage, and then never moves from that home, who never considers refinancing in periods of lower interest rates, or who never considers refinancing to consolidate debts or to tap the equity in the home for business or personal purposes.

Our society is becoming more mobile all the time. Twenty years ago, the average homeowner lived in their home for an average of seven years. Today that average has fallen to under four years. So if your clients are about average, you can expect that about one in every four each year will be moving, selling their homes, buying new homes, and facing decisions regarding their new mortgage. Furthermore, with the advent of ever more creative and complex financing arrangements, the greater fluctuation of interest rates than in prior decades, the deductibility of mortgage interest, as compared to the nondeductibility of other personal interest, and the increasing use of home equity to finance lifestyles and expenses, such as children’s college educations, it is no surprise that the time until the average homeowner now sells his home or refinances is under four years.

Obviously, the pace accelerates in periods of lower interest rates, such as we generally have experienced in recent years. How long have you had your current mortgage? Are interest rates favorable enough to consider refinancing? How many of your clients have mortgages that are eight, 10, 15 years old or older with interest rates that are comparably high by today’s standards?

Keep in mind that the time a person realistically expects to keep a mortgage has a huge impact not only on the cost of any given mortgage, but also on the type of mortgage that is most suitable for his or her planning horizon.

As was discussed in the previous section, the true cost of a mortgage is reflected in the APR, or the effective, rather than the stated, annual rate. APRs are standard fare for virtually all commercial mortgages. However, those APRs are based upon the assumption that the borrower will pay off the mortgage over its stated term, typically 15, 20, 30, or even 40 years, in some cases. But the average homeowner either sells and buys a new home or refinances, for any number of reasons, at the rate of once every four years or so. How does the actual cost of borrowing change when one uses more realistic assumptions concerning when homeowners are most likely to pay off their mortgages, either because they will sell their houses and move or refinance their mortgages?

Assume a $200,000, 6.5% mortgage for 30 years has an APR of 7.075%. If the mortgage is paid off in five years and the borrower finances the closing costs, the APR rises to 7.928%.

One computesd the effective rate essentially in the same way as for the full term. First calculate the required monthly payment for the 30-year period based upon the stated rate and the amount financed. One uses that monthly payment amount in the analysis once again, only now for just a five-year (60-month) period. Because the period covers just five years, you must include the payment of the remaining balance of the loan at the end of the five-year period. One calculates the remaining balance simply by finding the present value of the remaining 300 monthly payments at the stated interest rate. This is computed just as if you were finding the original loan amount for a mortgage with the same annual payments as the existing loan and at the same interest rate, but for a period of 300 months, rather than 360 months.

One determines the effective annual interest rate by finding the interest rate that will equate the present value of this 60-month payment stream plus the present value of the principle balance at the end of the 60-month period with the net proceeds. One can use Excel’s RATE function to find the interest rate that equates the present value of this 60-month payment stream and the final remaining balance balloon payment to the net proceeds.

By projecting that the payoff will occur in five years rather than 30 years, the APR rises from just under 7.1% to over 7.9%. This is over a 12% increase in the effective rate of interest one would pay, if one were to pay off the mortgage in five years rather than 30 years.

Refinancing

New Loan

The original loan has a remaining term of 300 months, a stated annual rate of 8.5%, and payments of $1,576.27 per month. The prospective loan has a stated annual rate of 7.25%, assumed total refinancing fees of $6,750, a term of 360 months, and monthly payments of $1,381.44. Therefore, the new loan will reduce monthly payments by $194.83 per month. Of the total refinancing fees, we assume $2,025.05 to be amortizable prepaid interest points. We also assume the borrower is in a 30% combined state and federal marginal income-tax bracket.

An analysis might assess the feasibility of the new loan in the event the borrower refinances again, cashes out, or sells his home in 60 months (five years). To determine whether the refinancing option is advantageous, the analysis computes all the cash flows for each mortgage over the 60-month period. This includes the remaining balances at the end of the 60-month period as well as the different monthly payment streams in the intervening period.

Simply summing the differences in the total payments, including paying off the loan balances at 60 months, the borrower can expect to pay $2,203.29 less over the 60-month period if he refinances than if he stays with his existing mortgage. Although this simple summing procedure is commonly used and certainly suggests that the borrower should refinance in this case, it is not always a reliable method.

Simply summing the differences in the cash flow streams of the mortgages over the 60-month period does not properly account for potential differences in the timing of the payments. A dollar today is always worth more than a dollar tomorrow, so if one mortgage requires a lot more payments in the early years than the other one, it may not be the better alternative, even if the total payments are less.

In this particular case, the simple summing method actually understates the benefit of the refinancing alternative. To adjust for the differences in the timing of payments with the two loans, one must discount the payments to a present value.

There are different schools of thought on the matter of how to properly discount the cash flows, but the author feels strongly that one approach is superior to the others when comparing refinancing alternatives.

The analysis here discounts the payments in the following manner. All payments that would be made on the new loan are discounted at the original mortgage’s interest rate. The rationale for this approach is straight forward. The borrower is either going to keep his existing mortgage, or he is going to refinance it with another mortgage. In either case, he is still going to owe a certain amount of money. He does not have the option of investing this money elsewhere, so what rate of return he could earn on investments elsewhere is immaterial. However, by discounting the cash flows of the prospective mortgage at the original mortgage’s interest rate, the prospective mortgage’s payments are evaluated as if they were a restructuring of the original mortgage at the original mortgage’s interest rate. If the present value of the payments on the prospective mortgage is less than the balance currently remaining on the original mortgage, refinancing is essentially equivalent to having the original lender agree to reduce the current balance of the original loan. If the present value of these payments on the new mortgage is greater than the current balance on the original mortgage, then refinancing is essentially equivalent to a restructuring where the mortgage lender increases the current balance of the original mortgage.

Obviously, if the present value of the difference in payment streams is negative, the new loan is clearly superior to the old mortgage. It essentially is the same as having the original mortgage lender forgive a part of the current debt.

In this case, the difference in the present values of the two mortgages’ cash flows is -$3,284.96, so the new loan is the better deal. The new loan is financially equivalent to the original mortgage lender immediately writing down the current balance of the loan by $3,284.96. In fact, when properly accounting for the differences in the timing of cash flows, refinancing appears to be even a better deal than was suggested when using the simple summing method.

One can also express the advantage of the new loan in terms of the monthly payment on the original mortgage. If $3,284.96 of the original mortgage’s current balance were immediately forgiven by the lender, the borrower’s monthly payments would fall by $26.45 per month, or $317.42 per year, over the remaining full term of the original mortgage.

But What About Taxes?

Many refinancing analyses stop here, but tax effects are also important. The tax code permits taxpayers to deduct the interest payments on home mortgages and home equity loans up to their qualified loan limit. The interest payments on original acquisition debt (up to $1 million) and up to an additional $100,000 of home equity debt generally are tax deductible.[[7]](#endnote-7) For most taxpayers a significant portion, if not all, of their home mortgage interest payments are tax deductible.

Because refinancing can involve significantly different terms, interest rates, and allocations of points, the amounts and timing of deductible interest expense can vary greatly between a prospective refinancing loan and the original loan, and between refinancing alternatives. For instance, if a taxpayer refinances a loan with five years remaining until it is paid off with a new 30-year mortgage, interest expense will constitute a significantly larger portion of each payment on the new loan than on the old loan. But also, almost certainly, the payments on the new loan will be smaller than on the old loan. So the deductible interest expense may be greater than, close to equal to, or less than what is being deducted now on the old loan. These differences in the timing and amounts of tax savings are just as important as differences in the payment cash flows.

In the following discussion, the taxpayer’s qualified loan limit is set high enough so that all interest payments are fully tax deductible. We also assume that there are no amortizable points on the original mortgage, but that the new mortgage has prepaid interest points equal to about 1% of the loan amount. Because this is a refinancing, the deduction of the points generally must be allocated to the entire term of the loan, rather than written off immediately in the year the loan is acquired.[[8]](#endnote-8)

We assume that the taxpayer is in a 30% marginal combined state, local and federal income-tax bracket and itemizes his deductions. Therefore, each dollar of deductible interest expense represents a $0.30 income-tax savings.

In this case, the borrower will pay $6,928.24 less in interest (including points) on the new mortgage than he would have on the original mortgage over the 60-month period until it is assumed either loan will be paid off. Note that only $5.63 of points can be amortized for tax purposes each month. Therefore, the taxpayer will not be able to deduct $1,687.54 of his amortizable points until the loan is paid off in 60 months. Consequently, if he refinances, he not only has less deductible interest and, therefore, less tax savings, over the 60-month period, but the interest he does get to deduct is somewhat more back-ended. Therefore, over the 60-month period he can expect to have $2,078.47 more tax savings with the original mortgage than with the new mortgage. When discounted using the interest rate of the original mortgage, the present value of the tax savings favors the original loan by $1,784.10.

Therefore, when the analysis incorporates the tax effects of interest deductibility, the advantage still goes to the refinance loan, but not by as much as was originally thought when this tax factor was ignored. The net benefit in present value terms after tax is just $1,784.10, not $3,284.96.

However, assuming that the borrower does not expect to sell his home, or pay off or refinance his home within five years, the new loan is the better deal, to the tune of $1,172.74, the present value of all differences after tax, at five years.

Effect of Biweekly Payments

By paying half the regular monthly payment on a mortgage biweekly, borrowers can significantly reduce the remaining term of a mortgage. For most borrowers, splitting the monthly payment in half and paying it once every two weeks (26 payments a year), rather than the full amount monthly (12 payments a year), is not an undue hardship. In fact, for most borrowers, the difference is hardly noticeable, but the benefits are sizeable.

To illustrate, assume that the current balance on the mortgage is $150,000, the remaining term is 240 months, and the stated annual interest rate is 7.25%. For this mortgage, the monthly payment would be $1,185.56. If the borrower pays half this amount, $592.78, every two weeks instead of the monthly payment, the mortgage will be paid off 37 months sooner and the borrower will save about $24,219 in interest payments over the term until the mortgage is entirely paid off.

DETERMINING HOW MUCH HOME ONE CAN AFFORD

People’s debt-to-income ratios (DTI) are the principal indicators of their true fiscal health. It is definitely the lending industry's leading measure of borrowing capacity.

Front-End Ratio

Mortgage lenders tend to look at two debt ratios when determining whether to grant a home mortgage or home equity line of credit. One is the ratio of the monthly housing expense to the borrower's gross (pre-tax) monthly income. This is called the front-end ratio.

The monthly housing expense is made up of principal, interest, property taxes, and insurance – otherwise known as the PITI. Homeowner's association dues and a mortgage insurance premium are added to the PITI for qualifying borrowers, if applicable. Let us assume a couple’s gross annual income is $96,000, which gives them a gross monthly income of $8,000 ($96,000 divided by 12 months). If the lender says that the front-end ratio cannot exceed 32%, this means that the couple’s PITI divided by their gross monthly income must equal 32% or less.

To calculate the front-end ratio amount, one multiplies the gross monthly income by 0.32. The result, $2,560 ($8,000 x 0.32, in this example), is the maximum monthly housing PITI payment the family’s income can reasonably support according to the lender’s criteria.

Determining the Maximum Mortgage Amount

How much house the family can afford now depends on how much the family can put down on the home as well as on the terms of the mortgage financing. The total amount the family can afford to pay for a home is equal to the amount they can afford to put down plus their maximum qualifying mortgage amount less mortgage closing costs and points on financing.

For example, assume the family is interested in a home that they think someone could buy for $325,000. Can they afford that much house?

Assume the property taxes and insurance estimates for the home are $6,000 and $1,800 per year, respectively or about $650 per month together. Based upon the lender’s criteria, the family can afford to pay about $1,910 ($2,560 - $650) in monthly mortgage payments (principal and interest). To determine the qualifying mortgage amount, one has to calculate what mortgage amount generates monthly payments of $1,910 per month. The factors in this calculation are the monthly payment ($1,910 in this case), the term of the loan in months, the stated annual interest rate, then converted to the monthly rate, the estimated closing costs, and the prepaid interest points, if any.

Assume the annual interest rate is six percent (monthly rate (r) = 6%/12 = 0.5%), the term (n) is 360 months (30 years), estimated closing costs (cc) are $3,200, and the lender is charging one interest point (p). The maximum monthly payment for principal and interest (pmt) is $1,910. The formula for computing the maximum qualifying mortgage amount (MQMA) is simply the present value of an immediate annuity formula:

|  |  |
| --- | --- |
| MQMA = pmt x | [ 1 – (1 + r )-n ] |
| r |

Substituting the appropriate values into the formula, the result is:

|  |  |  |
| --- | --- | --- |
| MQMA | = $1,910 x | [ 1 – (1 + 0.005)-360 ] |
|  |  | 0.005 |
|  |  |  |
|  | = $1,910 x | (1 – 0.166042) |
|  |  | 0.005 |
|  |  |  |
|  | = $1,910 x | 0.833958 |
|  |  | 0.005 |
|  |  |  |
|  | = $1,910 x 166.7916 = **$318,572** | |

Therefore, the maximum qualifying mortgage amount is about $318,600. To compute the portion of that amount that is available for the purchase price of the house, subtract out the closing costs and prepaid interest or points. Out of the total $318,200, $3,200 is going to pay closing costs and 1% of the total, or about $3,186, is going to cover the one point prepaid interest, for a total of about $6,400. Therefore, the portion of the total qualifying amount actually available to pay for the price of the home is about $312,200.

Assuming the family has, say, $35,000 to put down on the home, they could afford a home with a price tag as high as about $350,000 ($312,200 + $35,000 = $347,200 ≈ $350,000). At least according to the lender’s criteria, the family can afford to buy their dream home for $325,000 with almost $25,000 of borrowing capacity to spare.

Back-End Ratio

A second ratio used by mortgage lenders is called the back-end ratio. This ratio helps lenders determine the mortgage payment people can afford given both their level of income and their other minimum required monthly debt payments. The back-end ratio is the ratio of the borrower's total debt (PITI plus other minimum monthly debt payments) to the gross monthly income. If the lender says that the back-end ratio cannot exceed 38%, this means that the total monthly debt, including the PITI, must be no more than 38% of the gross monthly income. The acceptable ratio varies by lenders and circumstances, but typically ranges from about 36% to 42%.

For instance, multiplying a person’s gross monthly income of $8,000 by 38% results in a back-end ratio amount of $3,040. Assume a person with an $8,000 monthly income has $1,000 of total required monthly minimum car, student loan, credit card, and other consumer or installment debt payments that will not be paid off within the next few months. These payments represent 12.5% of monthly income. This means that this person can qualify for a mortgage with monthly payments (PITI) totaling no more than 25.5% of monthly income, or $2,040.

If a lender says the ratios are 33/39, this means that the front-end ratio is 33% and the back-end ratio is 39%. Basically, most mortgage lenders use the front-end ratio to determine the absolute maximum they would be willing to lend to a given borrower. They use the back-end ratio to adjust their maximum lending limit downward in light of the borrower’s other required debt payments. While most lenders take both ratios into consideration, some lenders make exceptions. The Federal Housing Administration (FHA) qualifies borrowers based on their back-end ratio alone for FHA loans (currently using a maximum ratio of 41%). This means that home mortgage borrowers with relatively little other debt may qualify for larger FHA-sponsored mortgages than for other commercial mortgages.

REVERSE MORTGAGES

The previous analyses have discussed how to finance the purchase of a home. However, as people who purchased homes years ago approach retirement, in many cases their problem is not the financing of home purchases, but rather, how they can effectively tap into the equity they have built up over the years without jeopardizing the security of the roof over their heads. In some cases, what are called reverse mortgages may provide the answer.

What is a reverse mortgage? It is a loan against the borrower’s home that requires no repayment for as long as the borrower lives there.

How is it different than a traditional mortgage? To qualify for most loans, the lender checks the applicant’s income to see how much the applicant can afford to pay back each month. But with a reverse mortgage, the borrower does not have to make monthly repayments. So income generally has nothing to do with getting the loan or the amount of the loan.

With most home loans, if the borrower fails to make monthly repayments, the borrower could lose the home. But with a reverse mortgage, the borrower does not have any monthly repayments to make. So the borrower cannot lose the home by failing to make the payments.

Who qualifies for reverse mortgages? Qualifying persons include those persons who own their homes and, generally, owners must be at least 62 years old. The home generally must be the owners’ principal residence, which means the owners must live in it more than half the year.

For the federally insured Home-Equity Conversion Mortgage (HECM), the home must be a single-family property, a 2-4 unit building, or a federally approved condominium or planned unit development (PUD). For Fannie Mae’s HomeKeeper mortgage, the dwelling must be a single family home or condominium.

Reverse mortgage programs generally do not lend on mobile homes, although some manufactured homes may qualify if they are built on a permanent foundation, classed and taxed as real estate, and meet other requirements.

If the owner has any debt against the home, the owner generally must either pay it off before getting a reverse mortgage or – as most borrowers do – use an immediate cash advance from the reverse mortgage to pay off the existing mortgage. If the owner does not pay off the debt or does not qualify for a large enough immediate cash advance to do so, the owner generally cannot get a reverse mortgage.

How much cash can an owner get from a reverse mortgage? The amount of cash owners can get from a reverse mortgage depends on the program selected and, within each program, the owner’s age, home value, and interest rates. It can vary by a large amount from one program to another. A typical consumer might get $30,000 more from one program than from another. But no single program works best for everyone. For all but the most expensive homes, the federally insured Home-Equity Conversion Mortgage (HECM) or Fannie Mae’s HomeKeeper mortgage generally provides the most cash. They are also the most widely available reverse mortgage programs. In general, the most cash goes to the oldest borrowers living in the homes of greatest value at a time when interest rates are low. On the other hand, the least cash generally goes to the youngest borrowers living in the homes of lowest value at a time when interest rates are high.

But remember, the total amount of cash an owner will actually end up getting from a reverse mortgage will depend on how it is paid to the owner, in addition to other factors.

How is the money paid? That is up to the borrower. The borrower could take it:

* as an immediate cash advance at closing, that is, a lump sum of cash paid to the owner on the first day of the loan;
* as a credit line account that lets owners take cash advances whenever they choose during the life of the loan – until it is all used up; or
* in some form of a monthly cash advance, that is, as an annuity.

If the owner takes the annuity option, the payments can be arranged:

* for a specific number of years;
* for as long as the owner lives in the home; or
* for the rest of the owner’s life or for the rest of owner’s life and the spouse’s life until the second death, no matter where the couple lives.

Finally, the borrower can usually arrange to take payments as any combination of immediate cash advance, credit line account, and monthly cash advances.

If owners take a credit line account, the total amount of cash they actually get will depend on two things: how much of their credit line they use, and whether the credit line is flat or growing.

With a flat credit line, the amount of remaining available credit at any time only changes if they take a cash advance, at which point it decreases by the amount of the advance. For example, if a borrower has a flat $50,000 credit line and takes out $10,000, there will be $40,000 left whenever the borrower decides to take more.

With a growing credit line, the remaining available credit grows larger by a given rate. For example, if a borrower takes $10,000 from a $50,000 credit line that grows by eight percent each year, and then comes back for more three years later, there will be over $50,000 left to use because the remaining $40,000 growing at eight percent per year will become $50,388 after three years.

Therefore, a growing credit line can give the borrower more cash over time than a flat one. That is why borrowers need to look at more than the size of a credit line when a reverse mortgage starts. They also should consider how much available credit will be left in the future. The amount remaining in future years will also depend, of course, on how much money they take out over time and when they take it.

The credit line in the Home-Equity Conversion Mortgage (HECM) program grows larger each month by the same rate as the rate charged on the loan balance. It keeps growing for as long as there is any credit left, that is, until all of the remaining credit is withdrawn.

Fannie Mae’s HomeKeeper credit line is flat. The remaining available credit does not increase.

One might wonder why anyone would opt for the flat plan when they could get a growing plan. The plans with growing credit lines inevitably start with a lower initial balance than flat plans. If borrowers need or want to use the money right away for some large expenditure, the flat plan will give them a much larger initial balance to draw upon. If they plan to withdraw the cash in relatively small amounts over time, the growing plan will start with a smaller balance than the flat plan but still permit greater total withdrawals over the years.

If borrowers elect to take monthly loan advances, the total amount of cash they actually get will depend on whether they select a plan that sends the payments to them for a specific number of years, or for as long as they live in their homes. It will also depend how long they actually live in their homes.

If borrowers elect to use a reverse mortgage to buy an annuity, the total amount of cash they actually get will depend on how long they live, no matter where they live. The net value of the cash they will receive over time, however, may depend on other factors.

What happens to the debt? The debt grows larger and larger as the borrower keeps getting cash advances, makes no repayments, and interest is added to the amount owed (the loan balance). That is why reverse mortgages are called rising debt, falling equity loans. As the amount owed grows larger, the owner’s equity in the home declines.

Why it is called reverse? In a forward mortgage—the kind normally used to buy a home—the borrower’s regular monthly repayments make the debt go down over time until it is entirely paid off. Meanwhile, the borrower’s equity in the home is rising as the debt declines, and as the property value grows (appreciates). Therefore, forward mortgages are falling debt, rising equity loans, just the opposite of reverse mortgages.

In other words, in a forward mortgage, you use debt to turn income into equity. In a reverse mortgage, you use debt to turn equity into income. With a reverse mortgage, the borrowers are reversing the deal they used to buy their homes. When the home was initially purchased, the purchaser had income and wanted equity. Now, the owner has equity and wants income. In both cases debt is used to turn what the person has into what he wants.

When is the debt repaid? The reverse mortgage debt is repaid when the last surviving borrower dies, sells the home, or permanently moves away. “Permanently” generally means the borrower has lived in a new (different) home for at least 12 months in a row. Borrowers might also be required to pay back the loan if they fail to pay property taxes, fail to keep up their homeowner’s insurance, or fail to maintain the home. But if borrowers fail to do any of these things, the lender may be able to make extra cash advances to cover these expenses. Just remember, reverse mortgage borrowers are still homeowners and therefore are still responsible for taxes, insurance, and upkeep.

How much will the borrower owe? The total amount borrowers will owe at the end of the loan, or the loan balance equals all the cash advances they have received, including any that were used to pay loan fees or costs, plus all the interest on the loan up to the loan’s nonrecourse limit (described below).

Interest rates can change based on changes in published indexes similar to regular adjustable rate mortgages. But the more adjustable the rates are, the lower they are to start with. Therefore, if the rates are more adjustable, initially borrowers can receive larger cash advances. More adjustable rates will always continue to be lower than less adjustable rates until such time as index rate changes push the rates up to and over the caps on the less adjustable rates. For example, a borrower might be able to choose between an initial adjustable rate of six percent, with a cap of 10 percent and an initial adjustable rate of seven percent with a cap of nine percent. As long as the underlying index used to compute the adjustable rates remains under nine percent, the rate the borrower will pay on the six-percent/10-percent reverse mortgage will always be less than the rate he would pay on the seven-percent/nine-percent reverse mortgage.

What is the most a borrower can owe? Borrowers can never owe more than the value of their homes at the time the loan is repaid. Reverse mortgages are nonrecourse loans, which means that in seeking repayment the lender does not have recourse to anything other than the value of the home. If the value of the home is insufficient to repay the loan entirely, the lender may not go after the borrower’s income or other assets, or the borrower’s heirs’ income or assets.

So even if a borrower receives monthly loan advances until age 115, and/or the home declines in value between closing and the time the loan comes due, and the total of monthly advances becomes greater than the home’s value, the borrower can still never owe more than the value of the home. If the home is sold in order to pay off the loan, the debt is generally limited by the net proceeds from the sale of the home.

How is the loan repaid? If a borrower sells the home and moves, the borrower would most likely pay back the loan from the money he gets from selling the home. But borrowers may repay the loan from other funds, if they have them.

If the loan ends due to the death of the last surviving borrower, the loan must be repaid before the home’s title can be transferred to the borrower’s heirs. The heirs could repay the loan by selling the home, using other funds from the borrower’s estate or their own funds, or by taking out a new forward mortgage against the home.

Not all reverse mortgage borrowers end up living in their homes for the rest of their lives. Some who expect to remain living there change their minds. Others sometimes face later health problems that require a move. It therefore makes sense to plan for borrowers to consider the possibility that they may sell and move some day. If, at the end of the loan, the loan balance is less than the value of the home, or the net sale proceeds if the house is sold, then the borrower or the heirs keep the difference. The lender does not get the house. The lender gets paid the amount owed and the borrower or the heirs keep the rest.

***Note:*** If a borrower takes the loan as a credit-line account, the borrower should be sure to withdraw all remaining available credit before the loan ends. The borrower will have the money sooner that way, and it could be more than otherwise might be left. For example, a growing credit line could become greater than the leftover equity in some cases.

If a borrower has purchased an annuity and then sold the home, the borrower could continue receiving monthly annuity advances for the rest of the borrower’s life. If the loan ends due to the death of the last surviving borrower and if the annuity purchased by the borrower includes a death benefit or period certain payments, then the annuity’s beneficiaries would receive additional cash.

What is the out-of-pocket cost? The out-of-pocket cash cost most often is limited to an application fee that covers a property appraisal, to see how much the home is worth, and a minimal credit check, to see if the borrower is delinquent on any federally-insured loans. Homeowners can finance most of the other costs with the loan. This means that borrowers can use reverse mortgage funds advanced to them at closing to pay the costs due at that time, and later advances to pay any ongoing costs. The lender adds the advances to the loan balance, and they become part of what the homeowners owe and on which they pay interest. If a lender charges an origination fee that is greater than the amount that can be financed with the loan, borrowers have to pay the difference in cash at closing.

What are the other costs? The specific cost items vary from one program to another. Many of them are of the same type found on forward mortgages: interest charges, origination fees, and whatever third-party closing costs (title search and insurance, surveys, inspections, recording fees, mortgage taxes) are required in the borrower’s area. Other types of costs can be more exotic, and unique to reverse mortgages: monthly servicing fees, equity-sharing fees, shared appreciation fees, maturity fees.

Although total loan costs between the HECM and HomeKeeper programs can vary enormously, many of the individual cost items within each program do not vary from one lender to another. Within each program, the costs that may be different from one lender to another generally are the origination fee and the servicing fee.

The largest total cost differences one will find are those between different programs, for example, between the HECM and HomeKeeper programs. But it is virtually impossible to evaluate or compare the true, total cost of reverse mortgages unless the borrower considers his Total Annual Loan Cost (TALC) rates.

What is the total annual loan cost? Federal Truth-in-Lending law requires reverse mortgage lenders to disclose the projected annual average cost of these loans in a way that includes ALL of the costs and benefits, and also takes into account the nonrecourse limits. This Total Annual Loan Cost (TALC) disclosure shows borrowers what the single all-inclusive interest rate would be if the lender could only charge interest and not charge any other fees. Specifically, it tells borrowers the annual average rate that would produce the total amount owed at various future points if only that rate were charged on all the cash advances they get that are not used to pay loan costs. In other words, it shows them what they are paying in total for the money they get to spend.

How does the total annual loan cost (TALC) vary? On any given loan, TALC rates depend on two major factors: time and appreciation. TALC rates generally are greatest in the early years of the loan and decrease over time, for two reasons. First, the initial fees and costs become a smaller part of the total amount owed. Second, over time it becomes increasingly likely that the rising loan balance will catch up to, and then be limited by, the nonrecourse limit.

A major exception to this general rule is the cost bubble created by Fannie Mae’s equity-sharing fee on HomeKeeper loans. In this arrangement, the equity-sharing provision kicks in two years after the loan is in place with the effect that the TALC jumps drastically at that time.

The less the home appreciates, the greater is the possibility that a rising loan balance will equal or exceed the home’s value. On the other hand, when a home appreciates at a robust rate, the loan balance may never catch up to (and be limited by) the home’s value. Consequently, if a borrower ends up living in the home well past life expectancy or the home appreciates at a low rate, the borrower might get a true bargain. But if the borrower dies, sells, or moves within just a few years or the home appreciates a lot, the true cost could be very high.

There is no way of avoiding this fundamental risk. Borrowers just need to understand it in general, assess the potential range of TALC rates on a specific loan, and decide if it is worth the benefits they expect they will get from the loan.

Just remember, TALC rates are not really comparable to the Annual Percentage Rates (APRs) quoted on forward mortgages. Unlike APRs, TALC rates include all the costs. Also, unlike APRs, TALC rates do not assume the borrower will take the entire loan on the first day, if they did, TALC rates would be much closer to APRs.

Also, remember that borrowers get benefits from reverse mortgages that they do not get from forward mortgages. Borrowers make no monthly repayments and no repayments of any kind for as long as they live in their home. They get an open-ended monthly income guarantee, or a guaranteed credit line, which may grow larger until they use it all. The total debt limit cannot exceed the net value of the home, the nonrecourse limit. This limit applies even if it is less than what the loan balance would otherwise have been based on the amounts the borrower has received; no matter how long the borrower lives, and no matter what happens to the value of the home.

So borrowers may pay more for a reverse mortgage than they would with a traditional mortgage. But the benefits are not available on any other type of debt. And if the borrowers live long, or if the property value does not grow much, they can end up with a lower than expected cost.

If borrowers are considering a credit line, however, the official TALC disclosures do not account for the added value of growing credit lines. Also, the official TALC disclosures are all based on the life expectancy of single owners. Therefore, if the reverse mortgage is based upon the joint lives of a husband and wife, for instance, the TALC figures will not entirely reflect the costs over the joint life expectancy.

What is it worth? Only borrowers can decide what a reverse mortgage is worth to them. It probably depends most on what they plan to use the proceeds for. Reverse mortgages are typically used to:

* increase monthly income;
* create a cash reserve (credit line account) for irregular or unexpected expenses;
* pay off debt that currently requires monthly repayments;
* repair or improve a home;
* pay for personal services needed to remain independent; or
* generally improve the quality of one’s life.

It may be helpful in evaluating the worth of a reverse mortgage to consider the principal alternative – selling the home and moving. Does the borrower have any idea how much money could be made by selling the home or what it would cost to buy and maintain or rent a new one?

If borrowers look into purchasing new homes, they may find a different home, neighborhood, or community with an array of services or amenities that is much more attractive than they had expected to find. Otherwise, they may simply confirm that where they live now is the best place for them to be. Either way, looking carefully at the possibility of selling and moving will give borrowers a much better idea of the overall costs and benefits of staying versus moving.

Also potential borrowers should take a look at other financial and services options that they may prefer to or wish to combine with a reverse mortgage.

How do reverse mortgages affect public benefits? Social Security and Medicare benefits are not affected by reverse mortgages. But Supplemental Security Income (SSI) and Medicaid are different. In general, these programs count loan advances differently than annuity advances.

Loan advances generally do not affect benefits if they are spent during the calendar month in which they are received. But if a borrower keeps an advance past the end of the calendar month, in a checking or savings account, for example, then it will count as a liquid asset. If total liquid assets at the end of any month are greater than $2,000 for a single person or $3,000 for a couple, borrowers could lose their eligibility.

Annuity advances reduce SSI benefits dollar-for-dollar, and can make a borrower ineligible for Medicaid. Therefore, if borrowers are considering an annuity, and if they are now receiving, or expect someday they may qualify for, SSI or Medicaid, check with the SSI, Medicaid, and other program offices in the community. Get specific details on how annuity income would affect these benefits.

What are the tax consequences of a reverse annuity? An American Bar Association guide to reverse mortgages advises that generally the IRS does not consider loan advances to be income. Annuity advances generally will be partially taxable, just as any commercial annuity is taxed under the rules of Internal Revenue Code Section 72. Interest charged on the loan is not generally deductible until it is actually paid, that is, at the end of the loan.

What about borrowing? Many people have been well served by these borrowing cautions:

* Do not borrow in general; and
* Do not borrow against your home in particular.

Borrowing usually means using money one has not earned yet. One borrows today in the hope of earning enough in the future to repay it. Therefore, people typically are borrowing against their uncertain future earnings. This sounds much like “counting your chickens before they hatch.” That is generally not a good idea without a steady job and good earning prospects.

But this caution does not really apply to reverse mortgages because borrowers are not really borrowing against future income. In fact, they are borrowing against home equity that they have already earned. So they are not counting their chickens before they hatch. They are hatching the nest egg they have already accumulated.

Traditional borrowing against a home usually means paying back a loan every month. But if borrowers lose their jobs or their income drops, they could miss some payments and lose their home to foreclosure. That is why generally it is not a good idea to borrow against one’s home unless it is for a very basic purpose.

But this caution does not apply to reverse mortgages. Reverse mortgges require no monthly repayments. Borrowers cannot lose their homes by missing a payment on a reverse mortgage because there are no payments to make.

What about spending? Many people also have been well served by these spending cautions: “You do not know how much you will need and how long you will live. So do not spend your savings. Wait until you really need them.”

This makes a lot of sense. But, if everyone literally followed these cautions forever, they would never use any of the money they spent a lifetime building up. That does not make much sense. Why go to the trouble of earning the money and saving it if they are never going to use any of it? Therefore, in retirement, people shoud revise this spending caution to a related question: when should people consider using their savings and how much of their savings should they use? The follow-up question is: which savings (for example, home equity) should one use first?

As amended, this caution clearly does apply to reverse mortgages. Because the more home equity savings people use now, the less they will have later. So the question now becomes: if people ever do take a reverse mortgage, should they do it now or wait until later to decide? In the future, they may be eligible for more cash because they will be older and their home may be worth more. On the other hand, interest rates may be higher, and that would decrease the amount otherwise available. Furthermore, if they take a reverse annuity now, how should they take it: credit line, monthly, or a combination? If they take a credit line, how much of it should they use now versus later? If they take a monthly advance, should they select a specific number of years, for as long as they live in their home, or should they buy an annuity providing lifetime advances no matter where they live?

What about investing? Should borrowers consider taking a lump sum of cash from a reverse mortgage and investing it someplace? Except for purchasing a sound annuity, that is generally a risky idea, unless, of course, they can afford to lose money. Remember, to come out ahead on any investment, a person must earn a greater rate of return on the investment than the TALC rate they are paying on the reverse mortgage. And the odds against doing that safely are very long. A much better alternative is to take a HECM credit line. Interest is only charged on the cash advances actually taken, and the remaining available credit grows larger every month. Furthermore, this growth is not an interest earning, so borrowers are not taxed on it.

LEASING

Types of Leases

Basically, a lease is a contractual agreement between a lessee and lessor. The lessor owns the asset and for a fee allows the lessee to use the asset. From an economic standpoint, there are two basic types of leases: operating leases and financial leases.

1. *Operating leases***.** Operating leases usually are not fully amortized. That is, the lessee does not “pay” for the asset in its entirety over the term of the lease. The lease usually requires the lessor to maintain and insure the asset and the lessee typically enjoys an option to cancel the lease before the end of the term of the lease, perhaps with prepayment penalties. As the name implies, the lessor is the economic owner and the lessee rents the asset from the lessor.

2. *Financial Leases*. Financial leases are exactly the opposite of an operating lease. Generally, the lessor does not provide for maintenance or service of the asset. The financial leases are fully amortized. The lessee usually has a right to renew the lease at expiry. Finally, generally, the lessee cannot cancel a financial lease. Although termed leases, from an economic standpoint the lessee is essentially buying the asset and the lease is effectively a form of owner/seller financing – hence the term financial lease. There are common variations on the financing lease model, including sale and lease-backs and leverage leases.

a) *Sale and lease-back*. The sale and lease-back is a particular type of financial lease. It occurs when a company sells an asset it already owns to another firm and immediately leases it from them. Two sets of cash flows occur: the lessee receives cash today from the sale and the lessee agrees to make periodic lease payments, thereby retaining the use of the asset.

b) *Leveraged lease*. A leveraged lease is another type of financial lease. It is a three-sided arrangement between the lessee, the lessor, and a third-party lender. The lessor owns the asset and for a fee allows the lessee to use the asset. The lessor borrows to partially finance the asset, typically using a nonrecourse loan. This means that the lessor is not obligated to the lender in case of a default by the lessee.

Lease Accounting

In the past, leases led to off-balance-sheet financing. Today that is not necessarily the case. It depends on how the lease is classified. If a lease is classified as an operating lease, the lease does not appear on the balance sheet. If is classified as a capital lease, it does appear on the balance sheet – the present value of the lease payments appears on both sides.

For example, assume a company has land worth $100,000 and wants to acquire equipment worth $100,000. The tables below show how the balance sheet would appear if the company buys the equipment with 100% loan financing, acquires the use of the equipment through an operating lease, or acquires the use of the equipment with a capital lease.

|  |  |  |  |
| --- | --- | --- | --- |
| Balance Sheet | | | |
| Equipment is purchased with debt | | | |
| Equipment | $100,000 | Debt | $100,000 |
| Land | $100,000 | Equity | $100,000 |
| Total Assets | $200,000 | Total Debt & Equity | $200,000 |
|  |  |  |  |
| Operating Lease | | | |
| Equipment | $0 | Debt | $0 |
| Land | $100,000 | Equity | $100,000 |
| Total Assets | $100,000 | Total Debt & Equity | $100,000 |
|  |  |  |  |
| Capital Lease | | | |
| Leased Assets | $100,000 | Obligations Under Capital Lease | $100,000 |
| Land | $100,000 | Equity | $100,000 |
| Total Assets | $200,000 | Total Debt & Equity | $200,000 |

When Is a Lease a Capital Lease?

In 1976, The Financial Accounting Standards Board (FASB) issued Standard No. 13 which required lessees to capitalize certain types of leases. The lessee must capitalize a lease if any one of the following criteria is met:

* The present value of the lease payments is at least 90% of the fair market value of the asset at the start of the lease.
* The lease transfers ownership of the property to the lessee by the end of the term of the lease.
* The lease term is 75% or more of the estimated economic life of the asset.
* The lessee can buy the asset at a bargain price at the expiration of the term of the lease.

Taxes

The principal benefit of long-term leasing is tax reduction. Leasing allows the transfer of tax benefits from those who need equipment but cannot take full advantage of the tax benefits of ownership to a party who can. Not surprisingly, the IRS seeks to limit this type of tax transfer, especially if the lease appears to be set up solely to avoid taxes without any real economic transfer of risk. The lessee can deduct lease payments if the lease is qualified by the IRS. To be qualified:

* the term must be less than 30 years;
* there can be no bargain purchase option;
* the lease should not have a schedule of payments that is very high at the start of the lease and low thereafter;
* the lease payments must provide the lessor with a fair market rate of return;
* the lease should not limit the lessee’s right to issue debt or pay dividends;
* renewal options must be reasonable and reflect fair market value of the asset.

Reasons for Leasing

Leasing often may be more costly than purchasing. However, even in such circumstances, one may still prefer leasing for several reasons:

* Taxes may be reduced by leasing.
* The lease contract may reduce certain types of uncertainty. For instance, with most operational leases, the lessee may cancel the lease if the asset is no longer needed or becomes technologically obsolete.
* Transactions costs can be higher for buying an asset and financing it with debt or equity than for leasing the asset.

CHAPTER ENDNOTES

1. . Conventional mortgages that are not eligible for sale to either the FNMA, GNMA, or FHLMC. Nonconforming loans (which generally are more expensive) are an alternative to the highly selective and restrictive conforming loans acceptable to Freddie Mac and Fannie Mae. Nonconforming loans are still sold on the secondary market – just not to Fannie Mae and Freddie Mac. [↑](#endnote-ref-1)
2. . Conforming programs can be fixed-rate, ARMs, balloons, or temporary buy-downs. The term “conforming” essentially applies to those conventional mortgage loans that conform to the guidelines established by Fannie Mae (FNMA, or the Federal National Mortgage Corporation), Freddie Mac (FHLMC, the Federal Home Loan Mortgage Corporation) and Ginnie Mae (GNMA, the Government National Mortgage Association).

   Conforming programs carry lower risk for the lender and investors. Consequently, conforming programs have lower interest rates than comparable loan programs. These lower risk levels and interest rates are due to explicit or implied government backing of the mortgage-backed securities formed by conforming loan programs. [↑](#endnote-ref-2)
3. . This amount is computed by taking one plus the monthly rate and compounding it for 12 months, then subtracting one. Specifically, (1.00583)12 – 1 = 7.229%. [↑](#endnote-ref-3)
4. . Generally, points are deductible in the year paid when they are incurred to secure financing for the purchase or improvement of a principal residence. Borrowers typically must amortize points paid on home mortgage refinancings over the life of the loan. IRC Sec. 461. [↑](#endnote-ref-4)
5. . If the borrower finances these costs by increasing the loan amount, the costs will be directly reflected in the loan repayment amount. If the borrowers pay them in cash, the loan repayment amount will be lower, but these up-front cash payments should still be treated as a cost or payout of borrowing and included in the calculation of the APR, as will be shown below. [↑](#endnote-ref-5)
6. . This is, in effect, a type of internal rate of return calculation. The analysis here uses Excel’s RATE function to compute the interest rate value. [↑](#endnote-ref-6)
7. . Also, home mortgage debt acquired before 1987 is grandfathered and may increase a taxpayer’s qualified loan limit. See IRS Publication 936, *Home Mortgage Interest Deduction*, and Publication 535, *Business Expenses*, Part 5, “Interest,” for a discussion of the qualified loan limit, allocation rules, points, and computational rules. [↑](#endnote-ref-7)
8. . In certain circumstances, borrowers may deduct in the year paid points that they pay on a mortgage acquired to buy or improve a primary residence or one second home . In most refinancing cases or in the case of a home equity loan or a home equity line of credit, the points must be allocated to the entire term of the loan. Once again, see IRS Publications 936 and 535 for more information. [↑](#endnote-ref-8)