

*A promise made is a debt unpaid.
Robert William Service*

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2.1 The Investment Motive

In Chap. 1, two of the market participants that were introduced were investors and lenders. In this chapter, these two market participants come to the forefront. When structuring loan documentation and amortizations for investment property indebtedness, the types of arrangements provided often depend on the motivation for investment by the investor, and as we will discuss in a subsequent section, the objectives of the lender.

As noted in Chap. 1, some investors are motivated to purchase investment property based on the hope that the value of the asset will appreciate over time. When making an investment decision, prospective owners determine how much to buy a property for relative to the projected income stream of the subject property.

The ratio of projected net income relative to sales price is referred to as the capitalization (or cap) rate. During the “yes era”, cap rates fell to historical lows in many markets. Given the numerous years of solid economic performance in many markets worldwide, the perceived low risk associated with investment property helped to drive down cap rates. Additionally, the prevalence of low interest rates and the increased number of investors in the market also contributed to lower cap rates.

The prevalence of low interest rates in the market also helped to motivate buyers as the rate of return on an investment property was improved as the cost of debt decreased. The high level of liquidity in the markets also helped to increase financial institutions’ risk tolerance, which led to longer amortization schedules for investment property than previously seen.

Amortization periods for residential (i.e. primary residence) properties have been offered at 30 years in length for many years, but only during the “Yes era” did investment property amortizations approach this level. Given the motivations of future sale at a higher price, longer loan amortization schedules, and low interest rates, the result was lower payments for the investors, which *ceteris paribus* increased their returns. If we revisit Table 1.1 from Chap. 1, and consider that the numbers in the table represent equity cash flows to the investor, then lower rates, longer amortizations, and lower payments would increase positive cash flows to the investor over the holding period of the investment.

As we are discussing interest rates, the fact that interest rate expense is a tax deductible expense in most developed countries serves to increase the motivation for investors, regardless of the level of interest rates in the marketplace (Economist 2010).

A final motivation for investing which will be discussed here is the diversification motive. Given how erratic the stock market has become over the last decade, real estate increasingly has become viewed as a means to reduce volatility in investment portfolios. In the aftermath of the financial crisis of 2008, many investors would more than likely question whether real estate was a help or a hindrance in this regard, although “after the fall” property valuations will hopefully be more predictable and in accordance with historical real estate property valuation increases.

Figure 2.1 exhibits the 1, 3, and 5 year returns as of 12/31/2009 for common stock, bond, and CPI benchmarks (Vanguard, 2009). As you can see from Fig. 2.1, there has been quite a bit of variance in the returns for the US REIT index when seen from the 1, 3, and 5 year return viewpoints. The MSCI US REIT Index was up 97% as of February 28, 2010, and was down 57% at the same time of the year for 2009. The large positive movement during 2009 for the REIT index increased the 5 year returns into positive territory by June 30, 2010. Given that the levels of returns seen in 2008 and 2009 are not sustainable, it would appear that real estate as an investment alternative will experience returns in the future more in line with historical averages that traditionally place real estate above bonds, but lower than growth oriented stocks from a return perspective. In Chap. 3, we will update this table to validate whether subsequent returns are more in line with historical averages.

Stocks	1 Year	3 Years	5 Years
Russell 1000 Index (Large Caps)	-28.43%	-5.36%	0.79%
Russell 2000 Index (Small Caps)	27.17%	-6.07%	0.51%
Dow Jones Wilshire 5000 Index (Entire Market)	29.35%	-5.01%	1.09%
MSCI All Country World Index ex USA (International)	42.14%	-3.04%	6.30%
Bonds			
Barclays Aggregate Bond Index (Broad Taxable Market)	5.93%	6.04%	4.97%
Barclays Mutual Bond Index	12.91%	4.41%	4.32%
Citigroup 3 -Month Treasury Bill Index	0.16%	2.22%	2.88%
CPI			
Consumer Price Index	2.72%	2.28%	2.56%
Real Estate Investment Trusts			
Vanguard REIT Index Fund (as of 06/30/2010)	54.95%	-8.41%	0.47%
MSCI US REIT Index (as of 06/30/2010)	55.23%	-8.54%	0.43%

Fig. 2.1 Comparative investment returns (Vanguard 2009, 2010)

2.2 Documentation of Real Estate Conveyance and Indebtedness

When a real estate investor has found the appropriate property for purchase, there is often a need for partnering with a financial institution in order to secure the funds required in order to purchase the investment property. Investors will seek lenders at competing financial institutions to bridge the gap between the cash going into the purchase by the investor and the purchase price of the subject property. There are three primary documents that we will discuss in this section:

- Mortgage
- Note
- Guaranty Agreement

2.2.1 Mortgage

The first primary document between a lender and an investor is the mortgage. The purpose of this document is to provide evidence that the investor (borrower) has pledged real property (the investment being purchased) to another party (the lender) as security for the loan. The mortgage document will describe the mortgagor (borrower) and the mortgagee (lender) and will also provide a legal description of the property being pledged as security for the loan. The mortgage document will provide evidence to the covenants of seisin and warranty, which validates that the owner of the property does in fact own the title conveyed, and that there are no significant issues concerning the title of the property as was discussed in Chap. 1.

If a property is owned jointly by individuals, the mortgage will also provide for a provision between spouses (or partners) such that the interest of one spouse is transferred to the other at death. This is known as dower rights, when the husband is the first to pass away, and curtesy rights when the wife is the first to pass away. It should be noted that the mortgage provides security only for the real property and does not document pledging of chattel, which is defined as personal property or trade fixtures installed by the tenant.

The mortgage instrument also contains a list of covenants, clauses, and other contractual arrangements between the borrower and the lender. Many of the clauses elaborate on things that the mortgagor must do in order to maintain the property to the satisfaction of the lender and various governmental authorities. For example, the mortgage will specify that the taxes and insurance for the property must be paid on time, that the condition of the property must be maintained, and that the property must be kept free from liens and other encumbrances. The mortgage may in fact specify that the borrower may not obtain a second lien of indebtedness on the property. This junior mortgage would be subordinate to the first lien on the property, but in the aftermath of the financial crisis, lenders have learned that second liens can cause trouble in a foreclosure situation. If junior mortgages are allowed, the mortgage document could contain a subordination clause, whereby any seller financed or other bank financed loan will become secondary to the mortgagee's loan.

Another typical clause in a mortgage document is the due on sale clause. If the property is sold during the term of the loan, this clause specifies that the loan must be paid out. Since the bank has credit qualified (hopefully!) the borrower, but has not done the same amount of due diligence on the eventual purchaser of the property, the due on sale clause does not allow for the loan to be assumed by a third party. The bank may very well qualify the purchaser for a loan to buy the property, but the pricing and other loan terms will need to be renegotiated based on the strength of the individual, the strength of the income stream from the subject property, and various other considerations.

Sometimes the purpose of the loan dictates that an open ended mortgage be provided in the mortgage document. If the underlying loan is for construction or is a revolving line of credit, there is a need for the borrower to be able to advance funds at a future date from when the loan is closed. For example, if a client is approved for construction financing for a loan up to \$3 million, there may not be a need for all of the funds at loan closing. In fact, only a small amount may be needed upfront in order to purchase the land or to begin site work. Over the term of the construction period, the borrower will need to access the funds as the project moves to completion.

It should be noted that the mortgage document only includes land, any buildings on site, easements, natural resources, rents from real estate, and personal fixtures (not including fixtures owned by tenants as was mentioned earlier). Thus, a mortgage will typically contain an after acquired property clause. This provides that anything after the documents are executed that becomes part of the real estate is included in the collateral securing the bank loan.

In some states in the United States, a deed of trust document is used in lieu of a mortgage. In this case, the property is transferred to a trustee (neutral party) by a borrower (trustor) in favor of a lender (beneficiary) and is re-conveyed upon payment in full. At loan closing, the seller conveys the subject property to the buyer, who simultaneously conveys the property to the trustee selected by the lender, which is usually a title insurance company. The trustees hold this legal title until the loan is paid in full, or when the loan goes into default. Thus, the deed of trust is a document that gives the lender the right to sell the property if the borrower cannot repay the loan. The deed of trust document allows for a cleaner foreclosure proceeding given the trustee intermediary. Currently deeds of trust are utilized in Alaska, Arizona, California, Mississippi, Missouri, Nevada, North Carolina, Virginia, and Washington DC. Approximately 15 states use both the deed of trust and the mortgage. The remaining states use the mortgage document.

Some readers may wonder why there is such a discrepancy between which states use one document versus another, and would certainly question the origins of the states who use both documents. In the aftermath of the “yes era”, when regulation in financial markets is on the rise, it may be easier to recall that the banking industry in the United States has historically been highly regulated. During the antebellum period, before the United States had a single currency, some states were subject to different operating environments even within the same state. The ties of tradition are often quite difficult to overcome, which may shed some light on the regional differences in loan documentation to this day.

Whether the chosen method of documentation is a mortgage or a deed of trust, once a mortgage is recorded at the public place of record, it serves as notice to all that a lien has been recorded on the property. The effective date of the recording sets the placement of mortgage liens as first, second, or third.

2.2.2 Note

A second important document used in securing a loan against an investment property is the note. The note is a document which serves as evidence of debt between a borrower and the lender. Taken together with the mortgage document, the note and mortgage are evidence of an obligation to repay a loan and to pledge property as security for a loan. Should the borrower default on the loan, the typical course of action is to sue on the note, and to foreclose on the mortgage or deed of trust.

In order to illustrate the difference between a note and a mortgage, the following paragraphs will itemize common items that are included in a note. Since the note is evidence of indebtedness between a borrower and a lender, one of the first things included in a note is the amount borrowed. As mentioned in the discussion of future advance clauses in mortgages, the amount borrowed does not have to be advanced upfront. The more complicated the loan structure, the more likely that the note will be accompanied by a loan agreement, which memorializes all terms and agreements between borrower and lender. The note will also disclose the amount of interest

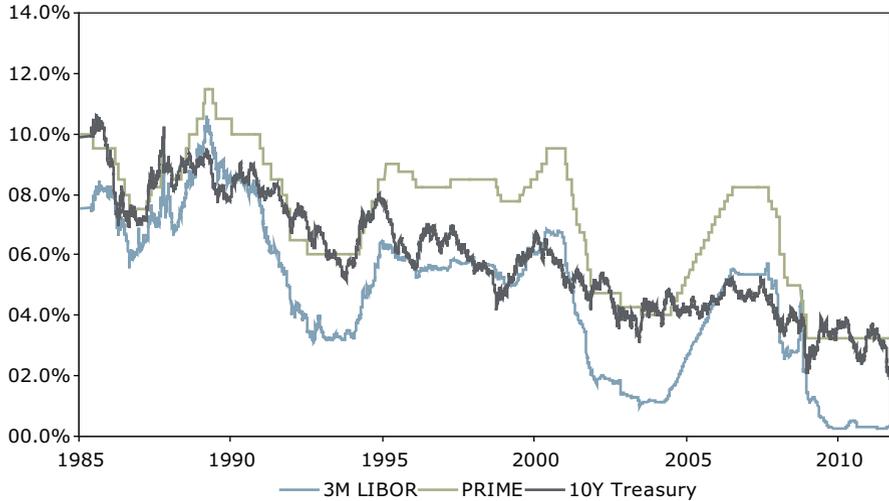


Fig. 2.2 The Long View of Variability: LIBOR, US Prime, and 10 Year US Treasuries (Bloomberg via Wells Fargo Securities 2011)

paid, the index for the variable rate, and whether an interest rate swap exists for the loan. The index for the variable rate could be based on the bank's prime rate, but more probably for investment real estate loans from a bank the index will be tied to US Treasuries or the LIBOR. What is important to the investor regarding the variable rate index chosen is its variability over time, and whether the index is seen as being influenced by the lender. For this second reason, variable rate indexes may more likely be tied to the US Treasury rates or LIBOR rather than prime as is shown in Figure 2.2.

As can be seen from the charts above, if the movement of the LIBOR and Prime rates are viewed in the long term context, LIBOR has experienced more variability than has prime. From an investor's perspective, the increased variability of the LIBOR lays evidence that the rate is not manipulated by financial institutions or government entities, or that it is not manipulated as much as the prime rate which is seen more like an orchestrated staircase in the figure above. The lack of manipulation implies that the lender does not have as much control of the rate, at least in the eyes of many investors.

The note will describe the amount of the monthly payment, the due date for the payments, and when the term of the loan matures. The loan term for typical investment real estate (or otherwise commercial) loans is typically not equal to the amortization of the loan. For example, if an individual obtains a personal mortgage for their primary residence, it is very likely that the term of the loan and the amortization of the loan are equal (i.e. both from 15 to 30 years). This is not the case for most commercial mortgage loans. If an investor receives a commercial loan based on a 20 year amortization, the term of the loan may only be 5 years. Thus, the bank is only committing to funding the loan for 5 years, and after 5 years a balloon payment occurs. This will require the customer to be re-qualified for the

loan, and for the pricing to be updated to reflect the current market conditions and to reflect how well the borrower honored their loan commitment over the loan term.

The note will also itemize the calculation of any late fees or prepayment penalties. Typically, if a borrower fails to pay the loan payments for a sufficient period of time (say 3 months), the note will specify that the interest rate will increase by a significant pre-determined level (say 300 basis points) until the customer returns the loan to current status, or cures other noted deficiencies.

The note will also itemize any default provisions. A default provision is defined as any particular event that can trigger the balance of the loan to be due to the lender in its entirety prior to the stated maturity date. Common default provisions are failure to adequately maintain the condition of the property, the sale of the property securing the loan, any material changes to the management structure of the borrowing entity (if other than an individual), and any material changes in the financial condition of any person or entity associated with the loan (as borrower or as guarantor).

A primary default provision in a note for commercial real estate is the annual debt coverage ratio covenant. The note may specify that the borrower or subject collateral must produce an annual debt service coverage ratio of at least 1.25. In other words, the annual net operating income of the property must exceed the annual debt service on the loan by 25%. Net operating income is defined as the residual income before tax for the property after any operating expenses have been deducted. In order to calculate compliance with the debt service coverage ratio, the investor must supply annual financial statements to the bank. It is recommended that an investor also supply a current property rent roll which lists all of the current tenants in the subject property, the amount of square footage for each tenant, the annual lease rate paid per square foot for each tenant, and the expiration dates of the current leases. The rent roll can be utilized in conjunction with either a historical profit and loss statement or a pro-forma statement which projects the income and expense statement for the property for the current year. These statements can be used to project the probability that the property will meet the minimum debt service coverage for the current year, and is seen as a forward looking view of whether a default is imminent for the property. As will be discussed in mini-case one at the end of Chap. 3, the rent roll can tell the lender and the investor much about the future viability of the investment property.

Should the property fail to meet the minimum debt coverage ratio (DCR) provision, the bank may declare the loan to be in default, which means that the loan balance is due in full. Typically, a single missed DCR covenant will not result in this action, but it depends on the severity of the missed covenant. For example, if the calculated DCR is 1.20 relative to the required minimum of 1.25, the lender may simply waive the covenant violation. What is important in determining the proper course of action is viewing the property in forward-looking terms. If the DCR covenant is projected, based on current occupancy, to meet the minimum hurdle rate for the next fiscal year, covenant waiver may be the appropriate action. If the current year DCR is projected at far less than 1.25, a principle curtailment may be necessary in order to return the property to a

performing asset on the books of the lender. If the DCR is projected at less than 1.00, then the customer may have difficulty in repaying the loan in the coming months. In situations such as these, more drastic action may prove necessary. The investor will be given a period of time to cure the default via additional collateral, refinance, or principal curtailment (also known as a capital call for the investors). If a suitable solution is not provided within the prescribed forbearance period, foreclosure may be imminent.

The concept of being in default has to do with the borrower failing to fulfill their contractual obligations, agreements, or duties. These duties could involve the property owner failing to pay the property taxes or insurance premiums for the subject property. Technical default can arise if the borrower fails to adequately maintain the condition of the property.

An area of particular interest in the aftermath of the recent financial crisis is the calculation of prepayment penalties. Prepayment penalty calculations range in complexity from a simple percentage of the loan balance to a more complicated calculation used to determine the breakage fee given the prepayment of the loan by a specific amount at a particular point in the amortization of the balance. How a prepayment penalty is calculated should be specified in the note or the swap agreement if an interest rate swap is arranged.

Let's assume that an investor has obtained a loan for \$3 million secured with two commercial buildings. At the time the loan was made, the client locked into a fixed rate of 6% (through an interest rate swap or otherwise). Since the client locked in at 6%, they were forecasting that rates were to rise over the loan term, thus wanting to lock in their fixed rate prior to any increases. One of the side effects of government intervention in financial markets is that lowering interest rates is used as a tool for increasing aggregate demand in an economy following a recession. In the wake of "the Yes Era", it is therefore probable that interest rates became lower than the 6% fixed rate obtained by the client in this example.

If interest rates in the current market are less than the fixed rate obtained and the client wishes to break the rate commitment, a penalty will be assessed. This is a distinction of commercial mortgages relative to residential mortgages, as the primary costs associated with refinancing a residential mortgage are typically the closing costs associated with the refinance. In the absence of prepayment penalties for a fixed rate commitment, the client's willingness to refinance their loan as rates drop would only be hindered by the costs of the refinance compared with the benefits of the lower rate. Prepayment penalties offer the lender a chance to recoup a portion of the interest which is lost over the loan term should a customer prepay the note. Thus, fixed rates offered by a bank without prepayment penalties are typically at higher interest rates than those offered with a prepayment penalty of some sort.

The motivation for a lower rate may not be the only trigger for a prepayment penalty. In our example, the loan was secured with two properties. What if a prospective buyer gave our client an offer that he simply could not refuse to

purchase one of the properties? In order to facilitate the sale, the collateral would need to be released by the lender, which would presumably come with a curtailment of outstanding principal of some amount. The prepayment of principal would trigger the prepayment penalty.

Another trigger for a prepayment may be the performance of the property. If occupancy rates in either of the properties securing the bank loan suffered relative to prior years, the lender may deem that the current value of the property has fallen to a point that requires the client to pay down the loan balance. This situation has unfortunately become all too common in the aftermath of the recent financial crisis. Those investors who did not keep an adequate amount of cash reserves on hand have had a harder time dealing with the decline in property values. One alternative to principal reduction in this case would be the pledging of additional unencumbered property as collateral for the bank loan.

The preceding discussion helps clarify the benefits of interest rate swaps. An interest rate swap allows the bank to remove interest rate risk from the balance sheet, and allows the client to obtain the fixed rate that they desire. Interest rate swaps introduce a third party as the bank acts like a middle man between the customer with the bank loan desiring a fixed rate and a counter party. The counter party is the party who is making the opposite bet on interest rate movements than the client who is borrowing the money from the bank. In the scenario outlined earlier, the counter party would benefit from market conditions with interest rates lower than 6%. If rates were to increase above the 6% level, the original bank client would be “in the money” and would receive an interest payment from the counterparty (via the bank’s derivatives area) for any month where rates were above 6%. In the event that the original bank client wished to terminate an “in the money” interest rate swap, they would receive a breakage fee from the bank. An interesting observation has been that clients are often very astute when calculating breakage fees owed to them, but often claim ignorance as to the same breakage calculations when they have to pay the penalty!

Regardless of the type of prepayment penalty calculation in effect, having an interest rate swap allows the client who owns the property to benefit financially if their interest rate assumption is correct and rates rise after they lock in the fixed rate. In many cases, swaps are portable, so if a client wants to sell a property, they can move the swap to another property rather than pay the prepayment penalty. The bank is able to profit from facilitating the derivatives trade, with the down side coming when a loan balance is fully hedged (i.e. 100% of the loan balance is swapped) and the bank demands to be paid out on the loan. In situations such as these, where deterioration in the financial performance of the property has facilitated the bank’s desire to have the loan paid out, the bank customer has to pay out the loan balance along with any breakage fee on the swap should no other alternatives exist.

During the “Yes Era”, more banks moved from the concept of “hedging” of loans to matching the amount of the swap and the amount of the loan. In the aftermath of the crisis, many financial institutions (as well as many investors)

may return to the traditional idea of hedging their bets and only swapping a portion of the loan balance.

2.2.3 Guaranty Agreement

The final area of loan documentation that we will discuss is the guaranty agreement. For most loans under \$5 million, commercial lenders will typically require the personal endorsements of the principals involved. The purpose of the guaranty agreement is to document what is expected of the guarantors over the term of the loan. A guarantor is typically not the primary source of repayment for a commercial mortgage. The primary source of repayment is typically the net operating income from the subject property. The guarantors may have outside sources of income, personal liquidity, and net worth to serve as a secondary source of repayment in the event that the subject property does not produce enough net operating income to service the loan payment each month. A tertiary source of repayment for a lender is often the liquidation of the collateral in a foreclosure situation. The guaranty agreement is the agreement between the lender and those individuals or entities that are guaranteeing the loan.

Many real estate investors often form holding companies for investment real estate. Holding companies make it easier to separate the profits and associated tax liabilities for investment properties that are owned by different individuals. In situations where numerous owners are involved, pro-rata guarantees may be the preferred method of personal guarantee for the investors. This form of guarantee is considered a conditional guarantee as the individual is only obligated on the loan balance up to the percentage of ownership. Banks will often increase the guaranty to something similar to “125% pro-rata” as the financial strength of the various guarantors is seldom the same, and if the loan moves into a foreclosure situation early in the loan term, the legal fees associated with the liquidation of the property may exceed the amount of the loan balance that has been curtailed to that point.

Sometimes conditional (or limited) guarantors are not actively involved in the daily operations of the subject property. Limited guarantors are often participating in a real estate investment for the purposes of diversifying their investment portfolio, thus the lack of daily involvement in the management of the property. Given the various actors who may be guaranteeing loan exposure, an important feature of any guarantee agreement is the concept of consideration. Consideration of guaranty is a legal classification, and it involves something of value being exchanged by parties to an agreement, thus making the agreement legally binding (Fitch 1993). If a guarantor is not deemed to have received consideration (or benefit) from a transaction, it may be difficult to enforce that individual's guaranty in a foreclosure or collection scenario. The guaranty agreement declares that each individual guaranteeing the loan has received consideration for their guarantee.

The guaranty agreement further declares the individual's responsibility to provide the bank with annual financial statements and personal (or corporate) tax returns. The lender will receive and analyze the continued financial strength of the individuals typically on an annual basis. The guaranty agreement also provides

declaration that the individual is not behind on their payment of taxes and that they are not party to any ongoing legal issues.

The guaranty agreement will disclose any specific covenants that the individual is expected to achieve during the term of the loan. For example, the lender may deem it necessary for the guarantor to maintain a certain minimum in terms of personal liquidity and net worth. As mentioned in the discussion on prepayment penalties, customers with low personal liquidity have trouble when the bank demands a curtailment of principal. If a guarantor is pledging collateral to the loan, it is listed in the guaranty agreement and the security pledge agreement if the collateral consists of marketable securities.

Similar to the note, the guaranty agreement lists default provisions specific to the guarantors on the loan. Should the guarantor fail to provide the lender with annual financial information in a timely manner, or should the credit reports deteriorate due to the failure of the guarantor to pay their creditors or tax authorities in a timely manner, the bank could declare the borrower's loan in default.

2.3 The Various Forms of Mortgage Amortizations

Now that we have introduced the various forms of documentation associated with commercial mortgages, we will elaborate on the various forms of mortgage amortizations. As mentioned in the discussion on notes, an investor's loan structure will be specified during the loan closing process. As alluded to in the beginning of this chapter, how the specific repayment on the loan is structured will depend on both the objectives of the lender and the investor. We will first discuss the various objectives and then will discuss some common forms of mortgage amortizations.

Sometimes lenders will prefer a quicker amortization of the principal balance on the loan. This can be achieved in numerous ways. The lender may offer a reduced loan amount, a shorter amortization schedule, or a repayment structure which recaptures principal quicker than a typical amortization. Sometimes the investor as borrower will also desire a quicker loan repayment. Some borrowers are debt averse or are simply averse to paying interest to the lender. This may prove to be a more typical scenario in the aftermath of the financial crisis. While interest rates are near historical lows when borrowing money, the rates achieved on savings accounts and certificates of deposit are even lower. A rational investor may compare the interest rate achieved on an investment product with that paid on the loan and decide that a quicker repayment is the preferred option.

Alternatively, some investors desire to lower their monthly debt obligations regardless of the implications for interest paid to the lender. The desire for a lower payment could be related to the planned resale of the property. This could involve a speculative investment as was discussed in Chap. 1, or it could involve a cash flow positive investment where the desired holding period for the investor is less than the amortization of the loan. In the second situation, a speculative resale plan also exists, but the investment is not purely speculative as compared with those plans where the holding period is very short and the property is not currently

producing income sufficient to pay the monthly debt obligations. In cases of longer payback of principal, the lender may be agreeable to the structure if their yield is sufficient to compensate them for the risk.

A final determinant for loan structures involves underperforming properties. If the occupancy rate for a property has materially declined, or if there are other material changes in the property's operating performance, a lender may desire a repayment structure which increases the probability that the borrower can continue to pay the monthly loan payments, but does not reward a client for an underperforming property. For example, in a workout situation, the lender may be agreeable to providing some payment relief, but this would not involve the lowering of the contract interest rate per the note. The borrower's loan may be modified toward a longer amortization period, or perhaps to provide a few months of payments without reduction of principal, but this is typically achieved via the borrower agreeing to improve the bank's collateral position in some way.

As in most business situations, the payment structure agreed to by the borrower and lender reflect the economic circumstances at the time that the loan is closing, as well as the objectives of the parties involved.

2.3.1 Types of Repayment Structures

The development of fixed rate mortgage loans in the US began in a slow fashion. During the years prior to World War II, banks considered loans to be very risky. The terms on offer were very conservative, often requiring 50% equity and full loan repayment within 5 years (Brueggeman and Fisher 2010). In those days, only the very wealthy could afford loans, and the banks loaned the funds based on the outside sources of income, liquidity, and net worth of the borrower, as opposed to basing the loan on the income and value of the property. Over the years, given the vast expansion of the US economy, banks began to offer longer amortizations, require less equity, and generally opened up the credit markets to the average citizen. During the late 1990s and early twenty-first century, some banks may have taken the liberalization of lending terms too far, given the subprime mortgage crisis.

In the following section the following types of commercial mortgage repayment structures will be reviewed:

- Constant Payment Mortgage (CPM)
- Constant Amortization Mortgage (CAM)
- Graduated Payment Mortgage (GPM)
- Adjustable Rate Mortgage (ARM)
- Zero Amortization Mortgage (ZAM)

Payment Number	Payment Amount	Interest	Principal Reduction	Balance
				\$1,000,000.00
1	6443.01	5,000.00	1443.01	\$998,556.99
2	6443.01	4,992.78	1450.23	\$997,106.76
3	6443.01	4,985.53	1457.48	\$995,649.29
4	6443.01	4,978.25	1464.76	\$994,184.53
5	6443.01	4,970.92	1472.09	\$992,712.44
6	6443.01	4,963.56	1479.45	\$991,232.99
7	6443.01	4,956.16	1486.85	\$989,746.14
8	6443.01	4,948.73	1494.28	\$988,251.87
9	6443.01	4,941.26	1501.75	\$986,750.12
10	6443.01	4,933.75	1509.26	\$985,240.86
11	6443.01	4,926.20	1516.81	\$983,724.05
12	6443.01	4,918.62	1524.39	\$982,199.66

Fig. 2.3 \$1 million CPM loan payments for the first 12 months

2.3.2 Fixed Rate Repayment Structures

A constant payment mortgage (CPM) consists of a level principal and interest payment based on a fixed rate. This is the most common form of mortgage for investment real estate. It is known as a CPM, as the customer is paying the same, fixed, principal and interest payment each month for the term of the loan. For example, assume that a customer has obtained a loan for \$1 million at a rate of 6% fixed, based on a 25 year amortization and a 3 year term. The term is less than the amortization as the bank will want to review the financial condition of the property, borrower, and guarantor at the end of the 3 year term in order to decide if they want to continue with the loan. The customer also has the ability to renegotiate the rate and terms at the end of the initial term. The CPM payment is based on the loan of \$1 million being paid at a rate of 6% based on a 25 year amortization as is shown in Figure 2.3.

Assume that the loan was originated on January 15, 2012 and the first payment is due the following month. Each month the customer is responsible for paying \$6,443.01 in principal and interest. After the first year, the loan balance has amortized down to \$982,199.66.

The interest due in the first payment is \$5,000. This is calculated based on the original loan amount of \$1 million at a rate of 6% due in monthly installments. As you can see, the principal due is the remaining payment amount to equal the CPM of \$6,443.01 for the month. While the composition of interest and principal changes each month based on the outstanding loan balance at the end of the prior month, the client must pay the same total payment amount each month under this repayment structure. This mortgage style is popular as the borrower has a set, certain payment for the length of the loan. Any amount of loan payment above the required \$6,443.01 will reduce the outstanding principal balance on the loan.

The loan constant is a helpful tool regarding CPM payments. This is the interest factor that can be multiplied by the beginning loan amount to obtain the payment

required to fully pay out the loan by the maturity date. In the example above, the loan constant can be found utilizing a financial calculator by inputting the following:

$$N = 300, I = 6\%, PV = -\$1, FV = \$0, \text{ and solving for } PMT = 0.006443$$

When the loan constant is multiplied by the original loan amount, the monthly payment is obtained. Additionally, if the full loan amount was input as the PV instead of the \$-1 as shown above, then the loan payment of \$6,443.01 would be calculated. A financial calculator can also be used to determine the outstanding loan balance after the first year by changing N to reflect 1 year being completed on the CPM. An illustration of the calculator inputs is shown below:

$$N = 300, I = 6\%, PV = \$1,000,000, FV = \$0, \text{ and solving for } PMT \\ = (\$6,443.01)$$

Then change N to 288, and solve for PV = \$982,199.61

A constant amortization mortgage (CAM) is another common form of commercial mortgage. This payment structure is also known as “straight line” repayment as the client is paying the same amount of principal each month, with interest varying depending on the outstanding balance. By the payment structure varying the interest expense paid each month but keeping the principal constant, the loan balance pays down quicker as compared to the CPM.

For example, the same \$1 million loan at 6% interest is based on a 25 year amortization as it was previously. This time the payment structure is a CAM. Figure 2.4 shows the composition of principal and interest payments for the first year.

With the CAM, the monthly principal payment remains constant, and the amount of interest depends on the outstanding principal balance for the prior month. If you

	Beginning	Monthly	Monthly	Monthly	New
	Principal	Principal	Interest	Total	Principal
Month	Balance	Payment	Payment	Payment	Balance
1	\$1,000,000.00	3,333.33	5,000.00	8,333.33	\$996,666.67
2	\$ 996,666.67	3,333.33	4,983.33	8,316.67	\$993,333.33
3	\$ 993,333.33	3,333.33	4,966.67	8,300.00	\$990,000.00
4	\$ 990,000.00	3,333.33	4,950.00	8,283.33	\$986,666.67
5	\$ 986,666.67	3,333.33	4,933.33	8,266.67	\$983,333.33
6	\$ 983,333.33	3,333.33	4,916.67	8,250.00	\$980,000.00
7	\$ 980,000.00	3,333.33	4,900.00	8,233.33	\$976,666.67
8	\$ 976,666.67	3,333.33	4,883.33	8,216.67	\$973,333.33
9	\$ 973,333.33	3,333.33	4,866.67	8,200.00	\$970,000.00
10	\$ 970,000.00	3,333.33	4,850.00	8,183.33	\$966,666.67
11	\$ 966,666.67	3,333.33	4,833.33	8,166.67	\$963,333.33
12	\$ 963,333.33	3,333.33	4,816.67	8,150.00	\$960,000.00

Fig. 2.4 \$1 million CAM loan payments for the first 12 months

Fig. 2.5 Payments at various interest rates

Year	Payment	Implied Interest
1	\$5,500.00	4.40%
2	\$5,775.00	4.88%
3	\$6,063.75	5.37%
4	\$6,366.94	5.88%
5	\$6,685.28	6.39%

compare the remaining balance after 1 year for the CAM (\$960M) with that of the CPM (\$982M), you will see that the CAM method provides for a quicker reduction in the outstanding loan balance.

Borrowers who are debt averse may prefer the CAM given the quicker reduction in the loan balance. Lending institutions may also favor the CAM for situations where the recapture of principal more quickly is the preferred repayment structure.

Another common repayment structure is the graduated payment mortgage (GPM). While these types of mortgages are more common in residential real estate, the repayment structure can be applied in a commercial situation. The concept with a GPM is that lower payments relative to a CPM will be made earlier in the loan, and then payments rise in a stair-like fashion throughout the loan term. Assume for example that a college senior applies for a residential mortgage loan. Based on the low interest rates in the market, perhaps the student wishes to obtain a loan for a property in the town where their job will start after graduation. In this case, there is a significant difference between the borrower's income today and what is expected in the next year. A GPM would allow the student to pay a lower payment during their senior year, and then to have the payment step up once they begin working. This has particular significance for young professionals as well. As a newly employed person in a well-compensated profession such as the law or medical fields (or perhaps financial services!), even with a current job there is a distinct possibility that income will rise in the future, thus making the GPM a good prospect.

In commercial situations, a GPM could be favorable in situations where the leases for a given property increase over time at a rate higher than inflation. In cases where the income from a subject property has a step-up effect, a GPM could allow the bank to recapture principal in a similar manner to how the leases are structured.

The first step in creating a GPM is to start with what the loan payment would be under a CPM scenario. As in our example earlier, a \$1 million loan for 25 years at 6% would produce a monthly payment under a CPM of \$6,443.01. The lender and the customer could agree that this payment level at the present time is not possible, and they could instead require a payment of \$5,500 monthly for the first year, with increases of 5% each year. This is shown in Fig. 2.5.

An issue with the GPM involves negative amortization. In situations when the pay rate on the loan is less than the contract rate of interest on the loan, the additional interest which is accruing but is not being paid will be added to principal. In other words, if a GPM is structured without a clean-up payment at the end of the year where the client pays all accrued interest for the year, the loan balance will

increase during the years where the monthly payment is less than what is accruing on the loan balance. In Figure 2.5, the implied interest rate shows what the interest rate would be for a \$1 million loan for 25 years at the GPM payment for a given year. Until the implied interest rate equals the contract rate of 6%, negative amortization will occur.

While the GPM can be a favorable structure when income levels of the borrower or the subject property are expected to increase over time, there is risk to the lender. If the projected increase in income does not occur (i.e. the individual loses job or the property loses tenants), then the payment will increase at a level higher than the increase in corresponding income. Additionally, if a final clean-up payment is not included in the GPM, the balance of the loan will increase for each of the first 4 years in our example.

2.3.3 Variable Rate Repayment Structures

Until now, we have dealt with fixed rate mortgage repayment structures. Obviously a borrower may prefer to have a variable rate on the mortgage. Sometimes the desired structure involves principal reduction over the loan term, and sometimes it does not. Some variable rate mortgages are similar to the CAM structure discussed previously, only the rate is not fixed. The concept for this type of structure is the same as for the CAM. The loan amount is divided by the number of months in the amortization, and the result is the monthly principal curtailment. The monthly interest payment would depend on the outstanding loan balance relative to the variable rate for the given month.

Earlier in this chapter we viewed some historical charts for typical variable rate indexes over the last 40 years (i.e. 1-month contract LIBOR and the US prime rate). A variable rate loan would be priced based on a spread over the index being employed. For example, assume that the investor obtained the same \$1 million loan on a 25 year amortization. This time the rate was variable and the loan was priced at LIBOR + 300 basis points. If the 1-month contract LIBOR rate was 0.25% in a given month, then the variable rate would be 3.25% for that month. If LIBOR increased to 0.40% the next month, the rate on the loan would also increase to 3.40%.

Sometimes, variable rate loans maintain a fixed spread for a period of time, but then increase in subsequent years during the term. These mortgage payment structures are known as adjustable rate mortgages (ARM). ARMs were a contributing factor in the sub-prime mortgage crisis, as borrowers capitalized on historically low interest rates in order to obtain a larger mortgage than would have been possible if the loan payments had been fixed. The rates offered these clients were often lower (or teaser) rates early in the loan term, with payments increasing over time.

For example, assume that a borrower obtained the same \$1 million loan for 25 years, this time opting for the ARM repayment structure. If the variable rate was based on 1-month contract LIBOR with a 300 basis point spread over the index, it is very possible that during 2004 the interest rate on the loan would have been near 4%. The ARM calls for the rate to reset at the beginning of each year over the

Fig. 2.6 Possible ARM movements

Amort.	ARM		
Left	Year	Rate	Payment
25	1	4%	\$5,278.37
24	2	5%	\$5,827.07
23	3	7%	\$6,969.97
22	4	8%	\$7,556.15
21	5	9%	\$8,147.01

loan term. Over the next 4 years, the variable rates could have increased as shown is in Fig. 2.6.

Based on the scenario outlined above, the borrower’s monthly payment increased by over 50%. The probability of a similar increase in borrower income over this period was low, thus the ability to pay back the loan was hindered based on the repayment structure of the loan.

Since the onset of the recent financial crisis, this particular loan structure has become less popular. This is attributable to the bad press that this repayment structured received and also due to the historically low interest rates providing incentive for borrowers to seek fixed rate mortgages in recent years. The variable rate mortgage will not go away entirely but it is expected that the level of disclosure on the part of the lender will increase in the coming years.

A final repayment structure that we will discuss is the zero amortization mortgage (ZAM). As the name implies, this repayment structure does not reduce the principal on the loan during the loan term. This is also known as an interest only loan. Repayment structures of this type are typically associated with speculative loans, as the borrower does not desire to reduce the loan balance over the loan term as another source of repayment is planned. In situations where an investor has purchased a property with the aim of a quick resale (typically after improvements to the property have been made), the investor is essentially utilizing the bank loan to purchase the property, with the hope that the eventual resale of the property will be at a level to compensate the investor for the interest paid, for any improvements made to the property, and for a profit of some sort for the investor. In terms of financial calculator inputs, the ZAM repayment structure has the PV and FV as the same, as the loan balance has not decreased.

In the aftermath of the financial crisis, many lending institutions have made the attempt at reducing their exposure to loans structured in this manner. When borrowers have not had the ability to repay the loan in full, the next best option is to begin amortizing the loan balance utilizing one of the other repayment structures that we have covered in this section.

2.4 Pretend and Extend or Bankruptcy?

Sometimes borrowers find themselves in situations that cannot be remedied via typical mortgage structures. If a subject property has experienced a significant drop in occupancy rates or otherwise a decrease in net operating income, the commercial

lender may ask the borrower to curtail the principal balance by an amount that is outside of the capability of the principals guaranteeing the loan (and outside of the normal loan amortization schedule). When the customer informs the bank of their inability to adhere to the wishes of the lender, two scenarios can unfold. The bank could inform the borrower that the loan should be paid out by a specified date. If the client is given 6 months to find an alternative lender, the client will then attempt to refinance the balance elsewhere. If at the end of this forbearance period, the loan is still in place, the lender can either commence foreclosure proceedings or can simply extend the loan for a longer period of time. The second option has been called “pretend and extend”, as the lender is in effect pushing the loan maturity out into the future in the hopes that the situation improves. This approach is less likely to be practiced by internationally active banks, as they are subject to the Basel Accord, as administered by the Bank for International Settlements (BIS) in Basel Switzerland. This agreement, which has gone through numerous revisions, was enacted in the aftermath of the Asian Financial Crisis. Under this agreement, banks must hold capital in reserve in proportion to the overall level of risk in their loan portfolios. Given the desire to accurately reflect the current risk in a particular loan, “pretend and extend” may prove to be a thing of the past in coming years. Unfortunately, the riskiest of commercial real estate was approved during the “Yes Era”, and many of these loans have yet to mature. As these loans mature in the coming years, foreclosure and bankruptcy may be the primary method of addressing the drop in property values.

2.4.1 Foreclosure and Bottom Fishing

If an investor cannot keep current on their loan payments with their lender, or if they cannot sell the property in its current state, there are numerous options available. The borrower may decide to transfer the equity in the mortgage to the mortgagee (lender). Under this scenario, title is transferred via a quit claim or warranty in a process known as voluntary conveyance. In this case, the borrower is freed from the obligation and the lender must then make arrangements with any other creditors that might have a claim on the subject property.

Another option is known as friendly foreclosure. In this case the borrower agrees to cooperate with the lender to achieve a quick foreclosure. This is similar to a prepackaged bankruptcy where the borrower agrees to terms with their creditors on the method and means of turning over their assets.

Once all other workout scenarios have been considered, the next option is to seek foreclosure against the mortgage. The foreclosure is a judicial process as the lender will sue on the debt, attach a judgment against the subject property (and anything else that they have legal claim against), and then facilitate the sale of the property.

In Chap. 3 we will discuss investment strategies in commercial real estate. One such strategy that bears mention here involves investors who seek properties in foreclosure. By honoring the desire to “buy low and sell high”, investors who purchase distressed properties are akin to bottom fishers. The key is finding

a property that is in good enough condition to allow for a return to profitability after purchase. Sometimes the property in foreclosure is cash flow positive. In situations like this, there are other factors that led to the problem situation.

The “Yes Era” saw a wave of foreclosures for various reasons. All had the underlying cause of negative cash flow, only the symptoms were different. The first form of foreclosure in an investment real estate perspective consists of properties that were “too speculative”. These are indebted properties with raw land as collateral, or properties that had low occupancies at loan origination. Unless a “bottom fisher” has a realistic plan for improving the raw land, or unless they have interested tenants for the low occupancy properties, this type of foreclosed property may not prove out the “sell high” part of the investment plan.

The second form of investment property foreclosure is categorized as “over leveraged”. These are properties with decent occupancy levels where the amount of bank financing was too high at loan origination, reflective of a more aggressive lending environment. Properties in this classification can realize profitable returns if they are purchased out of foreclosure at a reasonable price relative to the net operating income.

The third form of investment property foreclosure is categorized as “global concerns”. These properties have arrived in foreclosure not owing to underlying cash flow weaknesses for the subject property, but due to larger issues associated with the ownership. The owners may have other properties which are causing the inability to meet their payments. For example, if an investor owns three properties of equal value and two of them are performing at a debt coverage ratio (DCR) of 1.20x, while the third has experienced vacancy issues and is only achieving a DCR of 0.50x, there could result the inability of the investor to make payments for the two otherwise performing properties. Additionally, the real estate asset could be performing well, but the investor’s operating business (or source of wage income) could have decreased or been entirely eliminated, thus making foreclosure a likely event.

What should be evident from this discussion is that depending on the circumstances of the buyer and the seller, foreclosure properties can offer the potential to buy low and sell high. What is less evident is in which category a given property in foreclosure happens to be, as the circumstances of the seller are seldom known at a foreclosure sale or auction. Similar to commercial fishing on the high seas, the bottom fishers in real estate have been very busy of late, with overfishing of the prized assets almost assured (OECD 2010). The ability to find good deals in bad circumstances in the future will require a bit of luck, but also much skill.

2.4.2 Bankruptcy

Along with the possibility of foreclosure, the possibility of bankruptcy also awaits the speculative investor. In the United States, there are four primary types of bankruptcy. Since we just discussed fishing, one form of bankruptcy (Chap. 12) is for fisherman and farmers. The other three forms of bankruptcy will be briefly discussed as this chapter concludes.

Chapter 7 bankruptcy is known as straight bankruptcy. This is where all assets of the principal are liquidated to pay outstanding debts. Each creditor must petition the court in this proceeding in order to obtain funds to repay their obligations. This form of bankruptcy may not have anything to do with the investment property as it may just be that the principal in question was over leveraged. For this form of bankruptcy, if the debtor is not behind on their personal residence payments, the personal mortgage debt could be reaffirmed so that the individual does not lose their home. This is the worst form of bankruptcy as far as lenders are concerned. The appearance here is that the individual did not attempt to work out their debts and preferred to liquidate the assets in question. In this scenario, lenders are more likely to lose the principal that they have invested.

Chapter 11 bankruptcy is reserved for business owners. This form of bankruptcy involves reorganization with a plan to repay the debts. In this scenario, there is a court supervised plan for at least two-thirds of the debts which is endorsed by the majority of the creditors. Thus, there is some effort made to reach an agreeable repayment solution with the creditors. This form of bankruptcy, along with Chap. 7, can be filed only once every 6 years.

The final form of bankruptcy that we will briefly discuss is Chap. 13. This is the individual reorganization plan that is approved by the court. In Chap. 13 bankruptcy, the primary residence is protected. This is also known as a wage earner proceeding. This plan is available to individuals as long as they have approximately \$1 million in secured debt and under approximately \$350,000 in unsecured debt. For commercial real estate investors, if properties are held in the personal name these limits will soon be breached. Interestingly, there is only a 6 month waiting period for this form of bankruptcy. During the “Yes Era”, some individuals may have filed numerous bankruptcies, as liberal lending policies encouraged banks to lend to individuals with bankruptcy in their past in an effort to make everyone a winner and to not discriminate against individuals who had filed bankruptcy in the past.

Questions for Discussion

1. Explain in your own words the difference between a note and a mortgage.
2. Describe how the debt coverage ratio is utilized by lenders to differentiate loans based on risk.
3. Describe how an adjustable rate mortgage could prove harmful to both a borrower and a lender in an increasing interest rate environment.
4. Differentiate between the various forms of bankruptcy. Which form of bankruptcy is most problematic from the perspective of the lender?
5. Elaborate on different situations when the CPM, CAM, and GPM would be the most preferred method of repayment structure for a loan. Be sure to include a discussion of the borrower’s risk tolerance and lender’s return in your answers.

Problems

1. A borrower has a choice between a fully amortizing CPM mortgage loan for \$475,000 at 6% interest over 25 years versus the same loan amortized over 15 years.
 - (a) What would be the monthly payment for each loan alternative?
 - (b) What would be the initial six payments with a CAM assuming a 20 year amortization?
2. A fully amortizing loan is made for \$620,000 at 5% interest for 25 years. Payments are made monthly. Calculate the following:
 - (a) Monthly payment.
 - (b) Interest and principle payment during month 1.
 - (c) Total interest and principle paid over 25 years.
 - (d) The outstanding balance if the loan is repaid at the end of year 12.
 - (e) Total monthly interest and principle payments through year 12.
 - (f) What is the breakdown of interest and principle during month 55?
3. A 30 year fully amortizing mortgage loan was made 10 years ago for \$350,000 at 7% interest. The borrower would like to prepay the mortgage by \$25,000.
 - (a) Assuming no prepayment penalties, what would the new mortgage payment be?
 - (b) Assuming that the loan maturity is shortened rather than lowering the payment, what would the new mortgage maturity be (in months remaining)?
4. A partially amortizing mortgage is made for \$500,000 for a term of 10 years. The borrower and lender agree that a balance of \$275,000 will remain and be repaid as a lump sum at that time.
 - (a) If the interest rate is 6%, what are the monthly payments over the 10 year period?
 - (b) If the borrower chooses to repay the balance at the end of year 5, what would the balance be at that time?
 - (c) What would the balance of the loan be after 10 years if the loan payments had originally been based on a 20 year amortization?
5. A borrower and lender agree on a \$2,000,000 loan at 6.5% interest. An amortization schedule of 20 years has been set, but the lender has scheduled the loan to mature after 5 years.
 - (a) What will the balance be at the loan maturity in 5 years?
 - (b) Why would the lender structure a loan in this manner?
6. An investor has agreed to a loan of \$3.5 million on an office building at an interest rate of 8% with payments calculated using a 5.5% pay rate and a 25 year amortization. After the first 5 years, the payments are to be adjusted so that the loan can be amortized over the remaining 20 years.
 - (a) What is the initial payment?
 - (b) How much interest will accrue during the first year?
 - (c) What will be the balance on the loan after 5 years?
 - (d) What will be the monthly payments starting in year 6?

Mini-Case: Workout Loan Scenario

It is 6 o'clock in the evening on Friday of a very tough week. You are in the process of packing up your things to head out of the office when the phone rings. Hesitantly, you answer the phone. On the other line is a client of your bank in an area that you do not support. Your name was provided to him as a backup for a teammate who has already left the office for the day. The customer is in a panic as they have two loans with your bank which are going to mature on Monday. He has previously arranged for refinance for both loans with your bank, but now has a counter-proposal for you to consider.

The customer is located in Greenville, South Carolina, and his firm has two loans with your bank which are up for renewal currently. Both are secured with a medical office building located in Greenville. The first mortgage consists of a term loan with a current balance of \$3,821,435, while the second mortgage consists of a line of credit. The line of credit has a total commitment of \$1 million, with a current balance today of \$974,000.

The client informs you that his current refinance offer from your bank requires him to pay down the balance on the line of credit to \$800,000. The line of credit will then be renewed for 1 year on an interest only, variable rate basis. The line will be priced at 1 month contract LIBOR plus 300. The loan is to be renewed on a 3 year term based on a 15 year amortization. The rate is 6% fixed. The customer would like to instead pay down the term loan by \$250,000, and keep the line of credit at \$1 million for the next year.

The client says that he can save over \$2,100 per month in loan payments on the first mortgage, and says that this would be a "win-win situation" as he would be saving money on his payments, and the bank would have less total outstanding exposure than under the current arrangement.

You inform the client that you will have to further research this issue, and promise to give him a call in the next hour with an answer to his question. Once you hang up with the client, your mind quickly thinks of how a timeline might materialize in order for this loan to close on Monday should you agree to the changes that the customer proposes. "If I agree to this, then I would have to inform the documentation preparation department of the changes before I leave the office today, so that the documents can be redrawn and provided to the client for the Monday closing."

As you are mentally going through the feasibility of this timeline, you are also researching the client's relationship with your bank. Upon reading the underwriting analysis for the client in the bank's customer database, you see that your teammate who had left for the day had the primary aim of getting the line of credit balance paid down when they structured the current refinance proposal. The line of credit balance has been frozen for the last 8 months, thus you doubt that the client has a lump sum source of repayment to pay the line balance down over the next year.

As you read through the information in the customer database, you see that the client who called you is the sole owner of the borrowing entity for both loans. He is also the sole guarantor for both loans. As you review his personal financial position, you see that he has \$100,000 in personal liquidity, and a personal net worth of \$2.5 million, not including assets held in the borrowing entity. The individual is contingently liable for total indebtedness of just under \$6 million, including the two loans under consideration here.

The subject property which secures both loans consists of a single tenant medical office building. The local hospital has leased out the entire building with a lease which runs for 15 years. At the current level of indebtedness (i.e. before any principal curtailment) the property supports the debt on the 15 year amortization proposed for the term loan at a debt coverage ratio of 1.26x. The loan to value is also reasonable, coming in at 71%. You conclude that the property is self-supporting, but the issues of concern are the fact that a portion of the debt is floating, and the low level of personal liquidity for the guarantor.

Quickly, you jot down the following table in order to collect your thoughts:

	Current proposal	Counter proposal
Term loan	\$ 3,821,435	\$ 3,571,435
Line of credit	\$ 800,000	\$ 1,000,000
Total	\$ 4,621,435	\$ 4,571,435
Exposure reduction	\$ 200,000	\$ 250,000

As you ponder your decision, you consider the competing aims of this situation. The client would like to lower his monthly principal payment on the term loan, but apparently has no ability to decrease the line of credit over the next year. The bank would like for the line of credit to be paid out in the next year, and this represents the first opportunity to curtail some of that exposure. Given the level of personal liquidity, the bank's desire would be to curtail the total indebtedness to the borrower, something which the customer's counter-offer does provide. Lastly, you think about the fact that the lower payments on the term loan based on the customer's counter-offer will make it easier for the client to pay the loan, but will also make the client less motivated to find an alternative lender over the next year.

Having completed your research, it is now time to call back the client and let him know your intentions.

Questions for Discussion

1. Show whether the client's claim that he can save over \$2,100 per month under the reduced term loan is accurate.
2. Which is the best alternative in this case: lowering the overall exposure to the client, or lowering the commitment on the line of credit?
3. What specific recommendations would you provide to this client other than what he has proposed (consider the various types of repayment structures covered in Chap. 2)?

4. Research what 1 month contract LIBOR is today to determine what the variable interest rate would be at the spread noted in the case.
5. Define the terms “guarantor” and “contingent liability”.

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