

# **Real Estate Transactions**

Professor Tracht  
Summer 2006

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The text for this course is Berger & Johnstone, LAND TRANSFER AND FINANCE (4th ed. 1993) (referred to as "B&J"). This handout provides additional materials that are required reading. In the syllabus, I also list a number of other sources that are not required, but that you might want to look at if an area particularly interests or puzzles you. They are drawn primarily from Alvin Arnold, THE REAL ESTATE INVESTOR'S DESKBOOK ("REID"), Nelson and Whitman, REAL ESTATE FINANCE LAW ("N&W"), and various law reviews.

**SOME BASIC RESOURCES ON REAL ESTATE FINANCE AND LAW.** When you want additional guidance, you might consider the following materials:

1. A basic reference on the law of real estate finance: Nelson & Whitman, REAL ESTATE FINANCE LAW (3d ed. 1994).
2. An outstanding source for plain-English explanations of how the legal and business concerns dovetail: Alvin Arnold, REAL ESTATE INVESTOR'S DESKBOOK (3d ed. 1994).
3. Excellent hornbook on basic property law concepts: Stoebeck and Whitman, PROPERTY (3d ed. 2000).
4. Brief definitions and explanations of basic concepts: Alvin Arnold, THE ARNOLD ENCYCLOPEDIA OF REAL ESTATE (2d ed., 1993).

5. Of the commercial study aids, I would suggest D. Barlow Burke, Jr., REAL ESTATE TRANSACTIONS: EXAMPLES AND EXPLANATION (3d ed. 2003).

6. The text has a glossary of real estate terms, starting on page 1313.

**Attendance and participation.** I will be taking attendance, and I will expect you to be prepared on the assigned material and to participate in class discussions. I will reduce the grades of students who cannot respond intelligently to basic questions about the reading, because any student's failure to be prepared reduces the quality of the class for his or her classmates.

Also, students are required to be in "good and regular" attendance at their law school classes. Absent truly extraordinary circumstances, **any student who has missed more than 20% of the class hours (12 hours or more) for any reason (however good or bad) will be deemed not to have been in good and regular attendance, and will not be permitted to take the exam or receive credit for the course.**

**Examination and Grading:** This course will be graded on the basis of a closed book final examination. I may also choose to give one or more quizzes during the semester.

## READING ASSIGNMENTS

Here are the reading assignments for the semester. I have tried to assign dates, although they may vary with class discussion. Moreover, I generally do not teach this class through case parsing. Rather, I tend to use lectures and hypotheticals to develop the material, and my class sessions do not always correspond to a precise section of the syllabus. You are welcome to ask where you should be in the reading, but in general take your guidance from our class progress, and try to stay one or two sections ahead.

References to “SM” means this packet of supplementary materials. The materials marked as “Other Sources” are not required. Some of them are more advanced readings on the subject, others are simply a good reference or another explanation of the material. If you find yourself confused in an area and looking for help, these should be good places to start.

## MORTGAGE LENDERS AND MORTGAGE LOANS

### Week 1:

#### A. Introductory Material

"The Role of the Lawyer", B&J, pp. 81-89

#### B. Introduction to the Mortgage Market

B&J 131-155; Secondary Mortgage Markets, SM A1-A6

#### Other Sources:

REID, 4-88 to 4-91 (Mortgage Banking and Mortgage Brokers)  
N&W, § 11.3 (Government Sponsored Entities)  
Malloy, The Secondary Mortgage Market: A Catalyst For Change in Real Estate Transactions, 39 Sw. L.J. 991 (1986).  
Gambro and Carroll, What You Need to Know About Real Estate Securitization, 14 Prac. R.E. Law. 9 (1998).  
Seneker, How to Document Securitized Commercial Real Estate Mortgage Loans, 15 Prac. R.E. Law. 41 (1999).

### C. Thrifts and Commercial Banks

B&J 155-171

Primary Mortgage Markets, SMA7-A12

### Week 2: Valuing a Mortgage

How Much Is That Mortgage Worth, Anyway? SM A13-A19

Multistate Fixed Rate Note, B&J 1347-50

Down Payment and LTV, B&J 177-181

Amortization, B&J 226-228

#### Other Sources:

REID, 4-3 to 4-16 (Risks and Underwriting)  
REID, 4-75 to 4-81 (Residential Underwriting)  
REID, 4-19 to 4-24 (amortization)  
REID, 4-25 to 4-30 (LTV)

### **Week 3:**

#### **A. Length of Mortgage**

B&J 181-200

Note ¶ 6(c), B&J 1348-49

Mortgage ¶¶ 17, 18 and 21, B&J 1359-60

Acceleration and Prepayment, SM A20-A22

#### Other Sources:

Alexander, Mortgage Prepayment: The Trial of Common Sense, 72 Cornell L. Rev. 288 (1987).

Stark, Enforcing Prepayment Charges: Case Law and Drafting Suggestions, 22 R. P. P. & Tr. J 549 (1987).

#### **B. Rate of Interest, B&J 200-226**

## **THE BASICS OF MORTGAGE FINANCE**

### **1. Secondary Mortgage Markets**

The secondary mortgage markets are the driving force behind the structure and functioning of modern residential, and to an increasing degree commercial, mortgage transactions. The secondary mortgage markets are engaged in the purchasing and selling of existing mortgages, and a mortgage that is not structured to be readily saleable will necessarily carry a higher interest rate. Mortgages are typically sold as part of a pool of similar mortgages, through a process known as “securitization.” On the residential side of the secondary mortgage market, the dominant players at the three government-sponsored-enterprises (“GSEs”): GNMA, FNMA and FHLMC. The securitization of commercial mortgages is carried out by private entities, such as investment banks. The following readings provide an introduction to the secondary mortgage markets.

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This first reading is something of a “puff piece”, presenting FNMA and FHLMC in their best possible lights, almost as if they were written by the GSEs’ public relation staffs. However, they do provide a useful basic introduction to these institutions and to the process of residential mortgage securitization.

#### **Who Are Fannie Mae and Freddie Mac?**

Real Estate News and Advice

November 16, 1998

Among the first names rookie home buyers run across in their search for loans, homes, and agents are Fannie Mae® and Freddie Mac®. What they may not know is that these two corporations make it possible for many to buy housing that wouldn't otherwise have the opportunity. Fannie Mae and Freddie Mac operate independently each with a preferred lender base, but both are in the business to make sure that as many

consumers become homeowners as possible. They are the two largest companies in the United States that purchase almost all of the loans under [\$417,000\*]. Loans purchased by Freddie and Fannie are "securitized" by these corporations. That means that they package together loans of similar term and interest rate into marketable securities known as mortgage backed bonds, which are then sold and traded on the open market. With the average home coming in at about \$136,000, and homes for first time homebuyers ranging about \$110,000 or less, you can see that Fannie Mae and Freddie Mac are the most important loan underwriters in the nation.

Underwriters are the institutions that guarantee that when a mortgage lender makes a loan that the loan is of favorable enough terms that the terms of the loan can be met by the borrower, and that the loan can be funded. When a loan is originated, the mortgage lender will pass the information along to Fannie Mae or Freddie Mac to see if the companies would be willing to purchase the loan. An underwriter will not guarantee a loan that is too expensive for the home buyer to make the payments or on a home that is significantly overpriced, unsafe, or otherwise unmarketable.

And that is where Fannie Mae and Freddie Mac are at their most helpful. Both companies are dedicated to making home ownership possible for as many people as possible, and both actively work to make home loans possible by working to improve borrowers' abilities to qualify, incentivizing borrowers, and instituting programs that enable families to find and purchase lower cost housing.

### **Who Are These Guys?**

Fannie Mae is a public shareholder-owned company that works to make sure mortgage money is available for people in communities all across America. The company does not lend money directly to home buyers, but instead works with lenders to make sure they don't run out of mortgage funds.

Created by Congress in 1938 to bolster the housing industry during

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\* The limit on the size of loans that Fannie Mae and Freddie Mac will purchase changes each year, due to inflation in housing prices. For 2006, the limit has been set at \$417,000. — Prof. Tracht

the Great Depression, Fannie Mae began as part of the Federal Housing Administration (FHA) and was authorized to buy only FHA-insured loans to replenish lenders' supply of money. Then it was known as the Federal National Mortgage Association (FNMA) until it became better known as Fannie Mae. . . .

By buying single-family home loans from mortgage bankers, savings and loan associations, commercial banks, credit unions, state and local housing finance agencies (HFAs), and other financial institutions, Fannie Mae and Freddie Mac both provide a steady stream of mortgage funds available for lending to America's homebuyers. . . .

### **Affordable Housing**

Both Fannie Mae and Freddie Mac work behind the scenes of the loan industry, but they also help consumers directly. HomePath.com is Fannie Mae's consumer site, a home page devoted to educating the consumer about the home buying process. A terrific project preparation device, HomePath.com covers three basic areas:

HomeStarterPath allows consumers to compare renting with owning, study various mortgages, see how much house you can afford, and other helpful topics.

Step two is HomePurchasePath which helps you begin the process of buying a home, or assists you if you are already on the way with information on how to shop for a lender, steps in the mortgage application process, loan closing activities, and more.

If you are already a homeowner and want to refinance your current mortgage, you will enjoy clicking on the HomeRefinancePath which is designed to help you decide when to refinance, steps in the refinance process, how much refinancing may cost, and other considerations.

One way Freddie Mac helps consumers is in the marketing of foreclosed homes, an opportunity for many home buyers to find a bargain and get loan approval in a pleasant one-stop shop atmosphere.

Freddie Mac's consumer site is HomeSteps.com, and you will hardly be able to tell it has anything at all to do with the mortgage underwriter. Deliberately distancing itself from the "F" word - foreclosures - the site offers a direct route to consumers to search for and finance

"affordable" housing. Although affordable housing may be a euphemism for foreclosed homes, in reality, they have the presentation of any other Realtor listing right out of the local MLS. . . .

### **Friendly competition**

Both Fannie Mae and Freddie Mac sponsor foundations that perform outreaches to communities in the realm of housing and community development through housing programs, grants and home buying information and facilitation. Their web sites are an extension of these services.

Although Freddie Mac and Fannie Mae have the same charters, Congressional mandates and regulatory structures, the two companies enjoy a friendly competition that ensures that the benefits of the secondary market are passed on to homebuyers.

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### **Understanding Fannie Mae MBS** (From the Fannie Mae website, July 9, 2003)

The growth of the mortgage-backed securities (MBS) market has been explosive. Since 1981 the total MBS market has grown from less than \$25 billion outstanding to over \$3.46 trillion.

The growth of Fannie Mae's MBS business is equally impressive. After passing the \$100 billion milestone in less than five years -- the fastest start-up in history of any mortgage security -- Fannie Mae MBS outstanding reached nearly \$1.3 trillion at the end of 2001. Fannie Mae has played a vital role in the growth and development of today's expanding secondary mortgage market by introducing major, innovative products.

Money managers, thrift institutions, commercial banks, trust departments, insurance companies, pension funds, securities dealers, other major corporations, and private investors are all players in this market.

Fannie Mae MBS offer investors high quality investments with attractive yields to fit their portfolio needs or investment strategies. This publication will introduce the reader to Fannie Mae, the MBS we issue and the array of investor support services we offer. This is a good starting point; however, investors should exercise care to understand fully the value of any mortgage investment. They should have the capability to evaluate the investment, to understand the tax issues involved and to appreciate, and be able to bear, all the risks involved in a particular security. Investors interested in MBS should always carefully read the applicable disclosure documents and discuss the potential risks versus rewards with their investment advisors.

### **Fannie Mae MBS Simply Explained**

Mortgage-backed securities are sometimes called "mortgage pass-through certificates." This is because the security passes through to investors, at a specific coupon, the principal and interest scheduled for payment each month from mortgagors on the outstanding balance of the loans backing the security, and any unscheduled prepayments.

An investor in an MBS owns an undivided interest in a pool of mortgages that serves as the underlying asset for the security. As an MBS holder, this investor receives a pro-rata share of the cash flows from the pool of mortgages.

A nationwide network of lenders such as mortgage bankers, savings and loan associations, and commercial banks originates the loans backing the MBS. Lenders submit groups of similar mortgage loans to us for securitization. Fannie Mae first ensures that the loans meet its credit quality guidelines and then securitizes the pool of mortgages. The loans are converted -- or securitized -- into liquid, very flexible instruments. The resulting MBS carries a guarantee of timely payment of principal and interest to the investor, whether or not there is sufficient cash flow from the underlying group of mortgages. Fannie Mae's obligation under this guarantee is solely Fannie Mae's and is not backed by the full faith and credit of the United States government.

Each pool of fixed-rate, single-family mortgages has a pass-through rate, or coupon, which is the interest rate passed on to the investor, usually on the 25th day after the end of the accrual period. The pass-through rate is lower than the interest rate on the underlying mortgages in the pool. This interest differential covers the guaranty fee paid to Fannie Mae, and the fee paid to the servicing institution for collecting payments from homeowners and performing other servicing functions. The lender that delivers the mortgages for securitization or sold to another institution can retain servicing of the loans.

When fixed-rate mortgages are pooled together, Fannie Mae allows the interest rates on the underlying mortgages to fall within a 250 basis point range. The weighted-average coupon (WAC) of each security is the weighted average of the mortgage note rates and is provided to the investor to help evaluate the cash flows of the pool. Further, the weighted-average maturity (WAM) is available as an indicator of the remaining terms (in months) of the mortgages underlying the MBS as of the issue date. The weighted-average loan age (WALA) and the weighted average loan term at origination (WALT) are also available to help analyze the potential cash flows of the pool.

Securities dealers sell Fannie Mae MBS to investors. Certificates issued in book-entry form initially will represent at least \$1,000 of the unpaid principal amount of the mortgage loans in the pool.

Fannie Mae MBS issued in book-entry form are paid by wire transfer, which is both convenient and safe. Fannie Mae's central paying agent, the Federal Reserve Bank of New York, wires monthly payments to depository institutions on behalf of registered security holders on the 25th of each month, or the first business day after that if the 25th of a month is not a business day. This central paying agent concept simplifies accounting procedures because investors can receive just one payment monthly for all their book-entry MBS.

### **Fannie Mae, a Leader in the MBS Market**

Congress originally created Fannie Mae as a government agency in 1938 to establish a national secondary market for government-insured mortgages. Since then, the company has evolved to become a shareholder-owned, privately managed corporation supporting the secondary market for conventional loans. We continue to operate under a congressional charter with oversight from the U.S. Department of Housing and Urban Development and the U.S. Treasury.

Fannie Mae has two primary lines of business: Portfolio Investment, in which the company buys mortgages and mortgage securities as investments and funds those purchases with debt, and Credit Guaranty, which involves guaranteeing the credit performance of single-family and multifamily loans for a fee.

Our Portfolio Investment business includes mortgage loans purchased throughout the United States from approved mortgage lending institutions. We also purchase MBS, structured mortgage products and other assets in the open market. The corporation derives income from the difference between the yield on these investments and the costs to fund these investments, usually from issuing debt in the domestic and international markets.

Our Credit Guaranty business includes fees we charge to provide a 100% guarantee of timely payment of interest and principal to the

purchasers of our MBS. The Credit Guaranty business also includes income from temporary investment of principal and interest payments on guaranteed mortgages before remittance to investors, net of certain amounts.

Fannie Mae also earns income from other fee-based services such as technology services for originating and underwriting loans, delivery of information about our securities, facilitating securities transactions through the Fannie Mae Trading Desk as well as fees associated with the issuance of structured mortgage investments such as Real Estate Mortgage Investment Conduits (REMICs) and Stripped MBS.

### **A Closer Look at the MBS Structure**

The Fannie Mae MBS' superior quality is enhanced by unique structural features that have made our MBS the conventional mortgage security of choice. These features and the liquidity of the instrument add up to an investment flexible enough to fit into any portfolio strategy. . . .

### **Geographic Diversity**

Fannie Mae MBS are issued with mortgages acquired from the company's nationwide network of mortgage lenders. Because MBS backed by single-family loans often are from several states, Fannie Mae's MBS can provide investors with an important degree of geographic diversity that can have a favorable impact on prepayment risk.

Fannie Mae provides geographic disclosure on all loans in a pool. Investors have access to current, accurate information, including a listing of states represented in each pool and the percentage of loans for each state.

### **MBS Liquidity**

Fannie Mae MBS are widely recognized as the most liquid MBS in the market. Today's \$3.46 trillion mortgage-backed securities outstanding stood at less than \$100 billion outstanding in 1985. Fannie Mae's business has experienced similar robust growth, passing the \$100 billion issuance milestone in less than five years and exceeding \$2.85

trillion issued by the end of 2001.

By bringing to market several major new products over the years, Fannie Mae has helped to increase the liquidity of the MBS market. Fannie Mae innovations include Fannie Majors®, Stripped Mortgage-Backed Securities (SMBS), Multifamily MBS, Real Estate Mortgage Investment Conduits (REMICs), ARM Flex®, Balloon MBS, and Fannie Megas®. We will continue to bring new products to the market to meet the demands of investors in the future.

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## **WHY CONGRESS SHOULD PRIVATIZE FANNIE MAE AND FREDDIE MAC**

John S. Barry, Policy Analyst, The Heritage Foundation  
July 24, 1996

A Special Report to the House Banking and Financial Services Committee

### **INTRODUCTION**

The Federal Housing Enterprises Financial Safety and Soundness Act of 1992 requires a number of government agencies--the Congressional Budget Office (CBO), the General Accounting Office (GAO), the Department of the Treasury, and the Department of Housing and Urban Development (HUD)--to report on the feasibility and effects of privatizing the two largest housing-related government sponsored enterprises (GSEs): the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac).

. . . Several of the academic studies and the Congressional Budget Office report indicate that federal sponsorship of Fannie Mae and Freddie Mac provides stockholders with a significant subsidy that may indicate government sponsorship is unnecessary. On the other hand, the

Department of the Treasury and the Department of Housing and Urban Development both conclude that government sponsorship of Fannie Mae and Freddie Mac continues to be necessary to preserve the mission and ensure the success of these GSEs. . . .

### **Privatizing Fannie Mae and Freddie Mac**

Privatization of Fannie Mae and Freddie Mac would have a number of important economic benefits. In the short-term, the loss of an implicit government guarantee would increase the cost of business for GSEs, and it is likely that part of this increase would be passed on to consumers in the form of higher mortgage interest costs. In the long-run, however, the end of Fannie Mae's and Freddie Mac's implicit government guarantee would create a more competitive secondary mortgage market. Increased competition would counter the loss of federal subsidies and help to keep mortgage costs down. Competition also would lead to greater innovation and hence more consumer choice. In addition, privatization would mean an end to taxpayer support and the mandate to achieve certain public policy objectives. Thus, the federal government's oversight role would end, and the GSEs would be free to exit existing lines of business and enter more profitable ones.

Several important factors make privatization a viable and attractive option. These include:

¶Fannie Mae and Freddie Mac have fulfilled their original mission; secondary mortgage markets are established and fluid. There is a consensus that the secondary mortgage market in America is well established and fluid. In fact, each of the four studies mandated by the Federal Housing Enterprises Financial Safety and Soundness Act of 1992 concludes that an efficient secondary mortgage market exists today. Along with other private firms, they would be able to take advantage of the established market without posing a threat to taxpayers.

¶There is no rationale for further government intervention in the

mortgage credit markets. Fannie Mae was created in 1938 in an attempt to increase the availability of affordable home mortgages. . . . After having met their original goals, however, these GSEs are now involved in activities that relate only tangentially to their original missions. . . .

¶The tremendous size of the housing GSEs, which is made possible only by implicit federal guarantee, presents a dangerous presence in the capital markets. Fannie Mae and Freddie Mac together have more than \$1.4 trillion in debt and mortgage-backed securities. This is equivalent to nearly two-fifths of the publicly held federal government debt. Together the two housing GSEs purchase more than 50 percent of all conforming mortgages.\* By any measure, then, Fannie Mae and Freddie Mac are "800-pound gorillas" in the capital markets. This tremendous size is made possible only by the distinct advantages enjoyed by the organizations as government sponsored enterprises.

The advantages enjoyed by Fannie Mae and Freddie Mac and their enormous size present several dangers to the credit markets in general and the mortgage markets specifically. Private firms cannot compete with Fannie Mae and Freddie Mac. The federal government, in essence, has created a duopoly that hinders innovation and prevents consumers from obtaining the most efficient delivery of home mortgages. Moreover, in the case of a GSE failure, the mortgage credit market would be severely crippled because of the lack of participants able to fill the void left by such a primary participant. . . .

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\* 10.A "conforming" mortgage is one with a principal below an amount set by statute and based on the median value of owner-occupied homes. Fannie Mae and Freddie Mac are only able to purchase conforming mortgages. Mortgages above the conforming limit are known as jumbo mortgages and are securitized only by completely private firms.

The mixed private/public nature of Fannie Mae and Freddie Mac constitutes a conflict of interest. Fannie Mae and Freddie Mac are stockholder-owned companies. . . . Fannie Mae and Freddie Mac are accountable for meeting several public goals that may conflict with their private incentive to earn a maximum profit. If Fannie Mae and Freddie Mac vigorously pursue their private goals, then the public mission is lost and taxpayers are placed in jeopardy. On the other hand, stockholders are denied a maximum rate of return if Fannie Mae and Freddie Mac pursue their public missions too vigorously. This conflict between public and private interests will continue as long as Fannie Mae and Freddie Mac remain government sponsored, but structurally private, enterprises.

## CONCLUSION

. . .With their original goal of a comprehensive and fluid secondary mortgage market fulfilled, . . . Fannie Mae and Freddie Mac no longer require government support. Increasingly, housing GSEs are venturing into new areas of operation that pose a significant threat to taxpayers. With the job done, Congress should break the links between Fannie Mae, Freddie Mac and the federal government and completely turn these profitable operations over to the private sector.

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## 2. PRIMARY MORTGAGE MARKETS

With this understanding of secondary market, we can now begin to see how the need to create mortgage-backed securities drives the process of loan origination and the cost and terms of mortgage loans that are made. The following materials address these topics.

### Investor Demand Drives Mortgage Prices

By Michael D. Larson  
bankrate.com

Just what exactly goes into a mortgage rate? Chances are most people don't really know or care -- as long as the price is right.

With the old days of mortgage banking gone, however, it's more important than ever for people to understand that rates no longer move according to the whims of some loan officer upstairs. The so-called "secondary market" -- where mortgages are bundled together and traded as single securities -- rules in the 1990s, and it is the ultimate force that guides rates up or down. Here, in a nutshell, is how it works:

### Investors call the shots

"Right now, we're lending a 30-year fixed at around 6.75 [percent]," says Jeff Rousseau, senior vice president for mortgage banking at Hibernia Corp. of New Orleans. "In determining those rates, I have a screen from Wall Street that shows me what securities would trade for. It's based upon what the investor requires." The key to understanding the process lies in understanding the way a mortgage dollar makes its way through the system.

### Banks do the numbers

For starters, consider how a bank gets its money. There are plenty of avenues, including [deposits from customers], overnight loans from

Federal Reserve banks and fees charged to depositors. The price of those sources determines the bank's "cost of funds." From that base, a bank will extend loans at various rates that allow for a reasonable "spread," or profit margin.

When it comes to mortgages, however, lenders typically sell the loans that they make into the secondary market. That means they don't calculate borrowers' rates by simply adding a margin to their costs. Instead, they look at what secondary buyers are willing to pay, and set rates that are high enough to provide a profit for both lender and secondary buyer.

### **The secondary market**

The secondary market works in the following way: Individual investors want to own mutual funds that earn them a decent amount of money. They buy these funds from companies that want to balance the stock portion of their portfolios with bonds, which are generally lower risk. Those companies turn to sellers of such securities, including Wall Street investment firms like Merrill Lynch & Co., in order to beef up their holdings.

Merrill Lynch and the others, in turn, want to offer something that promises higher yields than Treasuries but provides steady income. As a result, many turn to "mortgage-backed securities" -- debt instruments that consist of several loans bundled together and that are designed to yield income for years in the form of monthly mortgage payments.

In order to make the process work, however, fund managers and the like require some sort of guarantee that the loans are up to proper credit standards and other underwriting guidelines. For that assurance, they often require that lenders deal with the Federal Home Loan Mortgage Corp. or the Federal National Mortgage Association, commonly referred to as Freddie Mac and Fannie Mae. These quasi-governmental corporations will either buy a lender's loan and bundle it with others, or review the loan to make sure it conforms with their standards, and give it a passing grade.

"What's so cool about it -- the role of Fannie and Freddie -- is they've taken that mortgage from all these different little cities, and once they've put that stamp of approval on it, then they've made that where any

investor in the country can buy a mortgage-backed security backed by any loan in the country," says Denis St. Marie, president of KeyCorp.'s mortgage services unit. "The whole role of Fannie and Freddie is to spread out the money."

### **Profits divided**

Each party profits by taking a cut along the way. Say a 30-year-fixed mortgage was issued to a borrower at 7 percent. The lender would either sell the loan to Fannie Mae or Freddie Mac at 6.75 percent, or obtain one of the agency's guarantees. The 0.25 percent difference would be the lender's fee for collecting payments and otherwise "servicing" the loan.

Fannie Mae or Freddie Mac, meanwhile, would take 0.25 percent for guaranteeing the loan, or for packaging it with others and selling it to an investment company. That would leave the investor with a security that returns 6.50 percent.

### **Estimating your cost**

So how does a borrower get an accurate estimate of what the mortgage will cost? Most experts say that mortgage rates follow Treasury yields, and they do tend to move in tandem. But those yields have no direct impact on mortgage rates. Instead, people should look at the 30-day and 60-day commitment rates found in the money rates section of a newspaper's financial pages.

Without getting too technical, those rates are the net yields required by Fannie Mae and Freddie Mac. That means lenders must deliver loans to the agencies at those rates in order to be fully reimbursed, says Dorian Bomberger, a trader in Freddie Mac's mortgage finance department. The time frame is the number of days the lender has to finish the transaction.

By adding 0.25 percent for the lender's servicing fee to these commitment rates, customers arrive at a much more accurate retail rate forecast than they would get by scanning Treasury yields.

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## How the Commercial Mortgage Market Works: A Tutorial

By Paul Muolo

Executive Editor/Associate Publisher, National Mortgage News  
Director, Mortgagestats.com

To understand the commercial loan market, you first have to start at the beginning and ask the basic question: "Well, what is a commercial loan, anyway?"

Here's the simple answer: A commercial loan is any mortgage backed by real estate where the underlying property (a.k.a. collateral) is backed by a commercial project/property. Commercial real estate projects come in several different types. Here are the main ones:

- Office
- Hotel/Motel
- Retail/Strip
- Multifamily (also known as "apartment" lending -- rental properties of five units or more)
- Mixed-Use (could be a mix of some of the above)
- Industrial/Warehouse

There are others as well. In general, a commercial loan is "non-residential" in type -- except for loans made on apartment buildings. A pure residential loan is any mortgage on a house -- be it a one-unit home, or a building with two, three, for four dwelling units. (Five units or more, in which rents are being collected, fall under multifamily/apartment, which *is* a commercial loan type.)

### How Does a Commercial Mortgage Differ From a Commercial Business Loan?

This is a good and obvious question and beginners will sometimes confuse the two.

Suffice it to say that a commercial mortgage *must* be backed ("collateralized") by a piece of property -- real estate. It must be backed by an office building, a mall, an apartment building, etc. A commercial business loan is a loan that a bank or some other type of lender makes to an operating business -- to operate that business. An example of this would be a business loan that Citibank might make to a merchant who is opening a chain of clothing stores, or to a company producing computer chips, or to a restaurant chain. These loans often are not backed by real estate. It is the business they are lending against, not real estate.

### What Types of Companies Make Commercial Real Estate Mortgages?

A diverse field of lenders originate commercial mortgages. Because the loan amounts on a commercial project can be so large -- in the millions of dollars for each loan, compared with hundreds of thousands of dollars for a residential home loan -- it can be a very complicated matter with tons of paperwork and consultants, managers, and attorneys involved.

Often one large commercial mortgage loan is made and then broken up into pieces and "participated out" to other lenders, or what we call "investors." Types of companies making/originating commercial mortgages include:

**Commercial banks:** These are insured by the FDIC and take deposits from the public. Commercial banks dominate this financial service landscape and are allowed to make many different types of loans -- unlike savings and loans.

**Insurance companies:** These are large insurance firms like Prudential, Travelers, New York Life, and so on. They like to hold large commercial loans as an investment. They often hold these loans for a long time. (What do you think your insurance premiums are used

for?)

**Commercial mortgage banking firms:** Some of these are "non-depositories" (they do not take deposits from the public) and some are owned by commercial banks. A good example of a non-depository commercial mortgage banker is GMAC Mortgage of Pennsylvania, which is ultimately owned by General Motors, the auto company.

**Savings and loans (S&Ls):** These institutions make mostly residential (home) loans but they also, increasingly, fund and hold in portfolio apartment/multifamily loans. (By regulation, S&Ls must have 65% of their assets in home-related loans.) But S&Ls also originate small, non-apartment commercial real estate loans. They often sell the loans into the secondary market (see next bit). S&Ls, like banks, are insured by the FDIC and take deposits from the public.

**Mortgage brokers:** a mortgage broker is a middleman who acts as an intermediary between a funder (a commercial bank, for example) and a buyer of a commercial property. They *do not* use their own money to fund the loan but receive "points" for bringing the loan to the funder.

There are other lenders/agents involved in the loan process, but these are the main ones you need to be concerned with.

Commercial mortgages are made in what is called the primary market. This is where the actual loan happens -- where the money is exchanged between a buyer and seller of a property. After the loan is originated the lender has one of two choices -- either hold it in portfolio (on its balance sheet) or sell it or part of it to other lenders or investors. The sale of a loan after it has been originated is referred to as a transaction

that occurs in the secondary market.

The lenders (primary market)

- commercial banks
- savings & loans
- commercial mortgage companies
- life insurance companies
- non-depository mortgage companies
- loan brokers

The investor/buyers of commercial loans (secondary market)

- commercial banks
- Fannie Mae/Freddie Mac
- pension funds
- Wall Street firms
- private investment companies/partnerships

Lenders in the primary market sometimes hold the loans themselves (after the loans are made). But sometimes they sell them to others. The above is a sample of some of the key players in the primary and secondary commercial loan market.

### **How Large Are These Loans?/What Is the Average Life of These Loans?**

A typical residential loan has a [term] of 30 years. By this, we mean that the borrower has roughly 30 years to pay back the loan. The principal and interest are "amortized" (spread-out) into a payment schedule that lasts 30 years. . . .

Commercial mortgages, though, can have a very short life span. Some commercial mortgages have a life span of just five to 10 years. These often are called "bullet loans." Bullets loans usually are "interest-only" loans, meaning that the borrower is not paying off any of the "principal" that he/she has borrowed. So then what happens at the end of five or 10 years? Good question. The answer: the lender usually "rolls

over" the loan into a new loan, or the borrower goes out and borrows again from a different lender.

For the borrower -- and the lender -- the key is the cash flow on the commercial property. The rent "rolls" (total rents) must cover the loan amount -- at least. Keep in mind there is more to operating a commercial project than just paying the bank every month.

The "debt-service coverage" is what lenders look at in judging commercial deals. They want the rent rolls to generate more cash than what the loan payment is. Most require a debt-service ratio of 1.2 times or higher, meaning that they want \$120 in rent for every \$100 in loan payments. . . .

### **What Is Commercial Mortgage Servicing?**

There are two sides to the business of making loans. One side -- which is what we have talked about so far in this tutorial -- is the business of originating or funding (making) loans. The other side of commercial mortgage banking is the "servicing" of these loans.

Servicing entails the handling of the monthly paperwork on each and every loan. This includes the monthly collection of principal (if there is principal being collected), interest, taxes and other payments which might include escrow, hazard and casualty insurance on the property, mortgage insurance to cover loan defaults, or something related to these items.

What does the servicer of commercial mortgages get for doing this paperwork? Typically they receive a fee which is like the fee collected for doing residential servicing. The fee often is in the form of basis points, or an interest percentage in the note amount of the loan. For example: The interest rate on a five-year commercial mortgage might be 8.00%. The "servicing fee" on that loan might be 0.5%, or what we call 50 basis points (8.00%, expressed in terms of basis points, is 800 basis points). If the servicer is getting 0.5% then the investor/holder of the loan is getting 7.5% (8.0 - 0.5 = 7.5). The servicing fee can vary from loan to loan, depending on the size of the loan and how complicated the loan might be in terms of cash flow collection (cash flow is generated by rents received) and other factors. GMAC Mortgage, the largest commercial mortgage servicer in the

nation, services something like \$60 billion in commercial loans. This is a balance. This is what it collects on each month. This number does not represent how much in new loans it is making. It is a "receivable," and as a balance it can go up or down depending on how many new commercial loans GMAC makes.

To keep this in perspective: think of your credit card statement. Let's say you don't pay off your credit card each month. The new amount you charge that month is the new loan amount. How much you owe overall (from several months) is the receivable or servicing balance. The higher that balance is, the more money you pay in interest payments -- and the more money the servicer makes off of you.

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### **Supervisory Loan-to-Value Limits**

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On December 31, 1992, the Federal Reserve Board, the Office of the Comptroller of the Currency, the Office of Thrift Supervision, and the Federal Deposit Insurance Corporation published in the Federal Register, 57 Fed. Reg. 62890, the final uniform rule on real estate lending by federally insured depository institutions. The final rule prescribes real estate lending standards as required by section 304 of the FDIC Improvement Act of 1991 (FDICIA). Appendix C to the regulation requires institutions to establish internal loan-to-value limits which should not exceed the supervisory limits stated in the Appendix without special justification. 12 C.F.R. Part 208, Appendix C, reads, in part, as follows:

#### **Supervisory Loan-to-Value Limits**

Institutions should establish their own internal loan-to-value limits for real estate loans. These internal limits should not exceed the following supervisory limits:

Loan Category	Loan-to-Value Limit
Raw Land . . . . .	65%
Land Development . . . . .	75%
Construction:	
Commercial, Multifamily,* and other Nonresidential . . .	80%
1- to 4-Family Residential . . . . .	85%
Improved Property. . . . .	85%
Owner-occupied 1- to 4-family and home equity **	

\* Multifamily construction includes condominiums and cooperatives.

\*\* A loan-to-value limit has not been established for permanent mortgage or home equity loans on owner-occupied, 1- to 4-family residential property. However, for any such loan with a loan-to-value ratio that equals or exceeds 90 percent at origination, an institution should require appropriate credit enhancement in the form of either mortgage insurance or readily marketable collateral.

The supervisory loan-to-value limits should be applied to the underlying property that collateralizes the loan. For loans that fund multiple phases of the same real estate project (e.g., a loan for both land development and construction of an office building), the appropriate loan-to-value limit is the limit applicable to the final phase of the project funded by the loan; however, loan disbursements should not exceed actual development or construction outlays. In situations where a loan is fully cross-collateralized by two or more properties or is secured by a collateral pool of two or more properties, the appropriate maximum loan amount under supervisory loan-to-value limits is the sum of the value of each property, less senior liens, multiplied by the appropriate loan-to-value limit for each property. To ensure that collateral margins remain within the supervisory limits, lenders should redetermine conformity whenever collateral substitutions are made to the collateral pool. \* \* \* \*

**Loans in Excess of the Supervisory Loan-to-Value Limits**

The agencies recognize that appropriate loan-to-value limits vary not only among categories of real estate loans but also among individual loans. Therefore, it may be appropriate in individual cases to originate or purchase loans with loan-to-value ratios in excess of the supervisory loan-to-value limits, based on the support provided by other credit factors. Such loans should be identified in the institution's records, and their aggregate amount reported at least quarterly to the institution's board of directors. (See additional reporting requirements described under "Exceptions to the General Policy.")

The aggregate amount of all loans in excess of the supervisory loan-to-value limits should not exceed 100 percent of total capital.<sup>11</sup> Moreover, within the aggregate limit, total loans for all commercial, agricultural, multifamily or other non-1-to-4-family residential properties should not exceed 30 percent of total capital. An institution will come under increased supervisory scrutiny as the total of such loans approaches these levels. \* \* \* \*

**Excluded Transactions**

The agencies also recognize that there are a number of lending situations in which other factors significantly outweigh the need to apply the supervisory loan-to-value limits. These include:

- Loans guaranteed or insured by the U.S. government or its agencies, provided that the amount of the guaranty or insurance is at least equal to the portion of the loan that exceeds the supervisory loan-to-value limit.
- Loans backed by the full faith and credit of a state government . . .
- Loans guaranteed or insured by a state, municipal or local government, or an agency thereof . . .
- Loans that are to be sold promptly after origination, without recourse, to a financially responsible third party.
- Loans that are renewed, refinanced, or restructured without the advancement of new funds or an increase in the line of credit

(except for reasonable closing costs), or loans that are renewed, refinanced, or restructured in connection with a workout situation, either with or without the advancement of new funds, where consistent with safe and sound banking practices and part of a clearly defined and well-documented program to achieve orderly liquidation of the debt, reduce risk of loss, or maximize recovery on the loan.

Loans that facilitate the sale of real estate acquired by the lender in the ordinary course of collecting a debt previously contracted in good faith.

Loans for which a lien on or interest in real property is taken as additional collateral through an abundance of caution by the lender (e.g., the institution takes a blanket lien on all or substantially all of the assets of the borrower . . .).

Loans, such as working capital loans, where the lender does not rely principally on real estate as security and the extension of credit is not used to acquire, develop, or construct permanent improvements on real property.

Loans for the purpose of financing permanent improvements to real property, but not secured by the property, if such security interest is not required by prudent underwriting practice.

### **HOW MUCH IS THAT MORTGAGE WORTH, ANYWAY?**

If mortgages are routinely bought and sold in the secondary marketplace, then parties must have some means of pricing those mortgages. The central underlying concept in pricing a mortgage, as in almost all business and financial analysis, is present value analysis.

A mortgage loan is a promise of stream of future payments. The value today of that stream of future payments depends on

three things: the amounts of those payments, the timing of those payments, and the risk that the payments will not actually be made. These factors are brought together through present value analysis.

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### **PRESENT VALUE ANALYSIS**

The concept of present value (also known as the “time value of money”) is central to all financial analysis, business and tax planning. Some basic examples:

- \* Present value is needed in all sorts of business calculations. Consider which is better: an investment that will return \$800 in three years, or one that will return \$1,200 in four years. Answering a question like this requires present value analysis.
- \* Tax lawyers use present value analysis constantly: Suppose as part of her tax planning, a woman places assets in trust, retaining an interest for herself for life then to go to her grandchildren. What is the value of the gift today, on which gift tax must be paid? The answer is found using present value analysis.
- \* In many divorce settlements, one of the most valuable assets is pension rights; but what is the value today of the right to receive \$40,000 per year for the remainder of your life, starting 22 years from now? This is a present value problem.
- \* In a wrongful death suit, how much should the jury award to compensate for the earnings that the decedent would have earned in the future? The answer is determined by present value analysis, and millions of dollars can depend on the lawyer’s ability to convince the jury that her expert has offered a better analysis than the other side’s expert.

### The Basics of Present Value

The present value of a payment or object to be received in the future is the value today of the right to receive that payment or object in the future. Obviously, it is worth more to you to receive \$100 today than to get that same \$100 a year from now.

How much more? Well, assume an interest rate of 10%. If you had \$100 today, how much would you have a year from now?

$\$100 + 10\% \text{ of } \$100 = \$110$ , which is the same as

$$\$100 * (1 + 10\%) = \$110.$$

So, the formula is that \$X today is worth  $\$X * (1 + r)$  next year, where "r" is the annual interest rate.

How much is \$100 today worth TWO years from now? Well, take the amount it is worth in one year and add in another year's interest:

$\$100 * (1 + 10\%) * (1 + 10\%) = \$100 (1 + 10\%)^2 = \$121.00$ ; or in other words:

\$X today is worth  $\$X * (1 + r)^2$  two years from now.

**In general: if PV is the amount today,  $FV_1$  is the amount one year from today, and  $FV_n$  is the amount n years from today, then:**

**$PV * (1 + r)^n = FV_n$ , which we can rearrange to be:**

$$PV = FV_n / (1 + r)^n.$$

### Choosing an Interest Rate

The interest rate that is used to "discount" future dollars into present dollars should reflect the risk of the investment. That is, if the future

income is certain to be paid, then a lower discount is appropriate (called the "risk-free rate"). If the future income is not certain to be paid, a higher discount rate must be used – the riskier, the higher the interest rate.

This should make some intuitive sense: Discounting by a higher interest rate results in a lower present value, and obviously the possibility of receiving \$1000 one year from today is worth less than the certainty of receiving \$1000 one year from today!

In general, the discount rate is the rate that an investor today would demand as the return on an investment with a risk that is the same as the risk of the future cash flow you are valuing.

Some Examples:

1. Your aunt has promised to give you a Volkswagen convertible upon graduation from law school. The car is worth \$18,000, and you have one year until graduation. Assuming a 9% discount rate, what is value today of your aunt's promised graduation gift?

**Answer: You are looking for the present value of \$18,000 to be received on year from today, at a 9% discount rate.**

$$PV = FV / (1 + r)^n = \$18,000 / (1 + .09)^1 = \$16,514$$

Suppose instead that you had two years until graduation. What would the present value be?

**Answer: You are now looking for the present value of \$18,000 to be received TWO years from today, at a 9% discount rate:**

$$PV = FV / (1 + r)^n \\ = \$18,000 / (1 + .09)^2$$

$$= \$18,000 / 1.1881 = \$15,150$$

**Another way to see this: If you had \$15,150 today, and invested it for one year at 9%, at the end of the year you would have  $\$15,150 * 1.09 = \$16,513$ . Investing that for another year at 9%, you have  $\$16,513 * 1.09 = \$18,000$ . So, if you had \$15,150 today, you could invest it to have exactly \$18,000 in two years: In other words, \$15,150 today is worth the same as \$18,000 in two years.**

2. A friend of your who is planning to go to law school tells you that her fairy godmother has agreed to pay her tuition, \$24,000, each year for the next three years. The first payment is due today. What is the value of the payments her fairy godmother has promised to make, assuming a 6% discount rate (a low rate, since fairy godmothers are very reliable!)?

**Answer:**

$$\begin{aligned} PV &= \frac{FV_0}{(1+r)^0} + \frac{FV_1}{(1+r)^1} + \frac{FV_2}{(1+r)^2} \\ &= \frac{\$24,000}{1} + \frac{\$24,000}{1.06} + \frac{\$24,000}{1.1236} \\ &= \$24,000 + \$22,641.51 + \$21,359.91 \\ &= \$68,001.42 \end{aligned}$$

**To put it another way, if the fairy godmother were to set aside \$68,001.42, and can invest it in CDs yielding 6%, it will be enough to cover the tuition for all three**

**years.**

### **Applying Present Value in the Mortgage Context**

The payments to be made on a mortgage loan are determined by the present value formula. That is, if you borrow \$100,000 at 8%, repayable in equal monthly installments over 30 years, the payment this is required is the amount which, discounted at 8%, will yield a present value of \$100,000.

$$\begin{aligned} \$100,000 &= \frac{\text{Payment}}{(1 + R_m)^1} + \frac{\text{Payment}}{(1 + R_m)^2} + \dots + \frac{\text{Payment}}{(1 + R_m)^{359}} + \frac{\text{Payment}}{(1 + R_m)^{360}} \end{aligned}$$

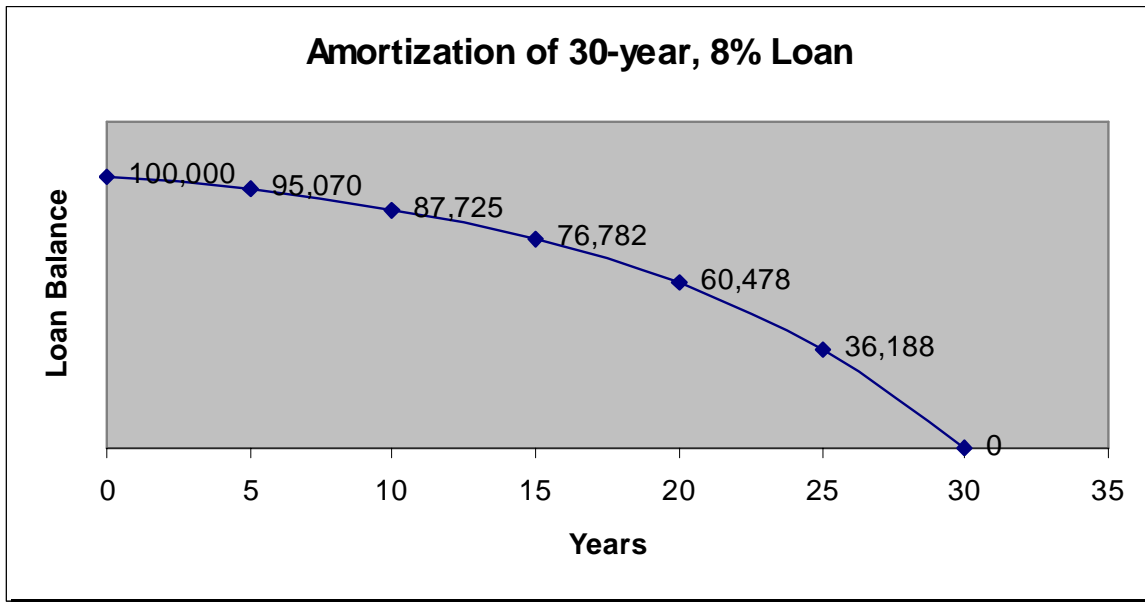
Where  $R_m$  is the interest rate per month.

Now, it obviously would be a time consuming chore to actually calculate and add up these numbers. Instead, there are equations that can be used to figure out these amounts, and financial calculators include present value calculations in their programming. The easiest way to work with these ideas, however, without laborious math, is to use financial tables where the values have already been calculated. So, that is what we will be doing.

**Amortization of a 30-year, 8.0% \$100,000 Mortgage**

YEAR 1					YEAR 30				
Month	Balance	Interest	Payment	Amortization	Month	Balance	Interest	Payment	Amortization
1	\$100,000.00	\$666.67	\$733.76	\$67.10	349	\$8,435.20	\$56.23	\$733.76	\$677.53
2	\$99,932.90	\$666.22	\$733.76	\$67.55	350	\$7,757.67	\$51.72	\$733.76	\$682.05
3	\$99,865.36	\$665.77	\$733.76	\$68.00	351	\$7,075.62	\$47.17	\$733.76	\$686.59
4	\$99,797.36	\$665.32	\$733.76	\$68.45	352	\$6,389.03	\$42.59	\$733.76	\$691.17
5	\$99,728.91	\$664.86	\$733.76	\$68.91	353	\$5,697.86	\$37.99	\$733.76	\$695.78
6	\$99,660.01	\$664.40	\$733.76	\$69.36	354	\$5,002.08	\$33.35	\$733.76	\$700.42
7	\$99,590.64	\$663.94	\$733.76	\$69.83	355	\$4,301.66	\$28.68	\$733.76	\$705.09
8	\$99,520.82	\$663.47	\$733.76	\$70.29	356	\$3,596.57	\$23.98	\$733.76	\$709.79
9	\$99,450.52	\$663.00	\$733.76	\$70.76	357	\$2,886.79	\$19.25	\$733.76	\$714.52
10	\$99,379.76	\$662.53	\$733.76	\$71.23	358	\$2,172.27	\$14.48	\$733.76	\$719.28
11	\$99,308.53	\$662.06	\$733.76	\$71.71	359	\$1,452.98	\$9.69	\$733.76	\$724.08

12	\$99,236.82	\$661.58	\$733.76	\$72.19	360	\$728.91	\$4.86	\$733.76	\$728.91
<b>Total</b>		<b>\$7,969.81</b>	<b>\$8,805.17</b>	<b>\$835.36</b>	<b>Total</b>		<b>\$369.98</b>	<b>\$8,805.17</b>	<b>\$8,435.20</b>



**Debt Service Chart:** This chart shows the monthly payment needed to amortize a \$100 level-payment fixed rate loan, for each combination of loan term and interest rate. For example, the monthly payment on a \$50,000, 7.0% loan over 20 years is  $(\$50,000/\$100) * \$0.78 = \$390.00$ .

Interest Rate	Loan Term						5 Yrs	10 Yrs	15 Yrs	20 Yrs	25 Yrs	30 Yrs	
	5 Yrs	10 Yrs	15 Yrs	20 Yrs	25 Yrs	30 Yrs							
<b>4.00%</b>	\$1.84	\$1.01	\$0.74	\$0.61	\$0.53	\$0.48	<b>11.00%</b>	\$2.17	\$1.38	\$1.14	\$1.03	\$0.98	\$0.95
<b>4.25%</b>	\$1.85	\$1.02	\$0.75	\$0.62	\$0.54	\$0.49	<b>11.25%</b>	\$2.19	\$1.39	\$1.15	\$1.05	\$1.00	\$0.97
<b>4.50%</b>	\$1.86	\$1.04	\$0.76	\$0.63	\$0.56	\$0.51	<b>11.50%</b>	\$2.20	\$1.41	\$1.17	\$1.07	\$1.02	\$0.99
<b>4.75%</b>	\$1.88	\$1.05	\$0.78	\$0.65	\$0.57	\$0.52	<b>11.75%</b>	\$2.21	\$1.42	\$1.18	\$1.08	\$1.03	\$1.01
<b>5.00%</b>	\$1.89	\$1.06	\$0.79	\$0.66	\$0.58	\$0.54	<b>12.00%</b>	\$2.22	\$1.43	\$1.20	\$1.10	\$1.05	\$1.03
<b>5.25%</b>	\$1.90	\$1.07	\$0.80	\$0.67	\$0.60	\$0.55	<b>12.25%</b>	\$2.24	\$1.45	\$1.22	\$1.12	\$1.07	\$1.05
<b>5.50%</b>	\$1.91	\$1.09	\$0.82	\$0.69	\$0.61	\$0.57	<b>12.50%</b>	\$2.25	\$1.46	\$1.23	\$1.14	\$1.09	\$1.07
<b>5.75%</b>	\$1.92	\$1.10	\$0.83	\$0.70	\$0.63	\$0.58	<b>12.75%</b>	\$2.26	\$1.48	\$1.25	\$1.15	\$1.11	\$1.09
<b>6.00%</b>	\$1.93	\$1.11	\$0.84	\$0.72	\$0.64	\$0.60	<b>13.00%</b>	\$2.28	\$1.49	\$1.27	\$1.17	\$1.13	\$1.11
<b>6.25%</b>	\$1.94	\$1.12	\$0.86	\$0.73	\$0.66	\$0.62	<b>13.25%</b>	\$2.29	\$1.51	\$1.28	\$1.19	\$1.15	\$1.13
<b>6.50%</b>	\$1.96	\$1.14	\$0.87	\$0.75	\$0.68	\$0.63	<b>13.50%</b>	\$2.30	\$1.52	\$1.30	\$1.21	\$1.17	\$1.15
<b>6.75%</b>	\$1.97	\$1.15	\$0.88	\$0.76	\$0.69	\$0.65	<b>13.75%</b>	\$2.31	\$1.54	\$1.31	\$1.23	\$1.18	\$1.17
<b>7.00%</b>	\$1.98	\$1.16	\$0.90	\$0.78	\$0.71	\$0.67	<b>14.00%</b>	\$2.33	\$1.55	\$1.33	\$1.24	\$1.20	\$1.18
<b>7.25%</b>	\$1.99	\$1.17	\$0.91	\$0.79	\$0.72	\$0.68	<b>14.25%</b>	\$2.34	\$1.57	\$1.35	\$1.26	\$1.22	\$1.20
<b>7.50%</b>	\$2.00	\$1.19	\$0.93	\$0.81	\$0.74	\$0.70	<b>14.50%</b>	\$2.35	\$1.58	\$1.37	\$1.28	\$1.24	\$1.22
<b>7.75%</b>	\$2.02	\$1.20	\$0.94	\$0.82	\$0.76	\$0.72	<b>14.75%</b>	\$2.37	\$1.60	\$1.38	\$1.30	\$1.26	\$1.24
<b>8.00%</b>	\$2.03	\$1.21	\$0.96	\$0.84	\$0.77	\$0.73	<b>15.00%</b>	\$2.38	\$1.61	\$1.40	\$1.32	\$1.28	\$1.26
<b>8.25%</b>	\$2.04	\$1.23	\$0.97	\$0.85	\$0.79	\$0.75	<b>15.25%</b>	\$2.39	\$1.63	\$1.42	\$1.34	\$1.30	\$1.28
<b>8.50%</b>	\$2.05	\$1.24	\$0.98	\$0.87	\$0.81	\$0.77	<b>15.50%</b>	\$2.41	\$1.64	\$1.43	\$1.35	\$1.32	\$1.30
<b>8.75%</b>	\$2.06	\$1.25	\$1.00	\$0.88	\$0.82	\$0.79	<b>15.75%</b>	\$2.42	\$1.66	\$1.45	\$1.37	\$1.34	\$1.32
<b>9.00%</b>	\$2.08	\$1.27	\$1.01	\$0.90	\$0.84	\$0.80	<b>16.00%</b>	\$2.43	\$1.68	\$1.47	\$1.39	\$1.36	\$1.34
<b>9.25%</b>	\$2.09	\$1.28	\$1.03	\$0.92	\$0.86	\$0.82	<b>16.25%</b>	\$2.45	\$1.69	\$1.49	\$1.41	\$1.38	\$1.36
<b>9.50%</b>	\$2.10	\$1.29	\$1.04	\$0.93	\$0.87	\$0.84	<b>16.50%</b>	\$2.46	\$1.71	\$1.50	\$1.43	\$1.40	\$1.39
<b>9.75%</b>	\$2.11	\$1.31	\$1.06	\$0.95	\$0.89	\$0.86	<b>16.75%</b>	\$2.47	\$1.72	\$1.52	\$1.45	\$1.42	\$1.41
<b>10.00%</b>	\$2.12	\$1.32	\$1.07	\$0.97	\$0.91	\$0.88							
<b>10.25%</b>	\$2.14	\$1.34	\$1.09	\$0.98	\$0.93	\$0.90							
<b>10.50%</b>	\$2.15	\$1.35	\$1.11	\$1.00	\$0.94	\$0.91							
<b>10.75%</b>	\$2.16	\$1.36	\$1.12	\$1.02	\$0.96	\$0.93							

**AMORTIZATION OF A FIXED RATE LOAN**

**30 YEAR LOAN**

These two charts show the percentage of a fixed rate loan (for either 30 years or 15 years, depending on the chart) that is outstanding after a certain number of years. Thus, on an 8%, 30 year loan, after 20 years, 60.48% of the original principal amount is still outstanding.

**15 YEAR LOAN**

Years	Interest Rate						
	6%	7%	8%	9%	10%	11%	12%
1	95.76	96.09	96.40	96.69	96.97	97.22	97.46
2	91.26	91.90	92.51	93.08	93.62	94.13	94.60
3	86.47	87.40	88.29	89.12	89.92	90.67	91.38
4	81.40	82.58	83.72	84.80	85.83	86.81	87.75
5	76.01	77.41	78.77	80.07	81.32	82.51	83.65
6	70.29	71.87	73.41	74.89	76.33	77.71	79.04
7	64.21	65.93	67.60	69.23	70.82	72.36	73.84
8	57.76	59.55	61.31	63.04	64.73	66.38	67.99
9	50.92	52.72	54.51	56.27	58.01	59.71	61.39
10	43.65	45.39	47.13	48.86	50.58	52.28	53.95
11	35.93	37.54	39.15	40.76	42.37	43.98	45.58
12	27.74	29.11	30.50	31.90	33.30	34.72	36.13
13	19.04	20.08	21.13	22.20	23.29	24.39	25.50
14	9.80	10.39	10.99	11.60	12.22	12.86	13.51
15	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Years	6%	7%	8%	9%	10%	11%	12%
	1	98.77	98.98	99.16	99.32	99.44	99.55
2	97.47	97.89	98.26	98.57	98.83	99.05	99.23
3	96.08	96.73	97.28	97.75	98.15	98.49	98.77
4	94.61	95.47	96.22	96.86	97.40	97.86	98.25
5	93.05	94.13	95.07	95.88	96.57	97.16	97.66
6	91.40	92.69	93.83	94.81	95.66	96.39	97.00
7	89.64	91.15	92.48	93.64	94.65	95.52	96.26
8	87.77	89.49	91.02	92.36	93.53	94.55	95.42
9	85.79	87.72	89.44	90.96	92.30	93.47	94.48
10	83.69	85.81	87.72	89.43	90.94	92.26	93.42
11	81.45	83.77	85.87	87.75	89.43	90.92	92.22
12	79.08	81.58	83.86	85.92	87.77	89.42	90.87
13	76.56	79.23	81.69	83.92	85.93	87.74	89.35
14	73.89	76.72	79.33	81.73	83.91	85.87	87.64
15	71.05	74.02	76.78	79.33	81.66	83.79	85.71
16	68.04	71.12	74.02	76.71	79.19	81.46	83.53
17	64.84	68.02	71.03	73.84	76.45	78.87	81.08
18	61.44	64.69	67.79	70.70	73.43	75.97	78.32
19	57.83	61.13	64.28	67.27	70.09	72.74	75.20
20	54.00	57.30	60.48	63.52	66.41	69.13	71.69
21	49.94	53.20	56.36	59.41	62.33	65.11	67.74
22	45.62	48.80	51.91	54.92	57.83	60.63	63.29
23	41.04	44.08	47.08	50.01	52.86	55.62	58.27
24	36.18	39.02	41.85	44.64	47.37	50.03	52.61
25	31.01	33.60	36.19	38.76	41.30	43.80	46.24
26	25.53	27.78	30.06	32.33	34.60	36.85	39.06
27	19.71	21.55	23.42	25.30	27.20	29.09	30.97
28	13.53	14.86	16.22	17.61	19.02	20.43	21.85
29	6.97	7.69	8.44	9.20	9.98	10.78	11.58
30	0.00	0.00	0.00	0.00	0.00	0.00	0.00

## Mortgage Values at Varying Yields

These tables show the price to be paid for each \$100 of a mortgage so that it will return a specified yield if held to maturity. For example, if you were to purchase a \$50,000 mortgage with an interest rate of 8% and 15 years left to maturity, and want to pay a price that would yield 10% if the mortgage were held for the rest of its maturity, you would pay:  $(\$50,000 / \$100) * 88.93 = \$44,465$ .

Mortgage Interest Rate: 6%						
Yield to Maturity	Years Left to Maturity					
	5	10	15	20	25	30
3%	107.59	114.97	122.20	129.18	135.87	142.21
4%	104.98	109.66	114.08	118.23	122.06	125.58
5%	102.45	104.67	106.71	108.56	110.21	111.69
6%	100.00	100.00	100.00	100.00	100.00	100.00
7%	97.63	95.62	93.88	92.41	91.16	90.12
8%	95.35	91.50	88.30	85.65	83.48	81.71
9%	93.13	87.64	83.20	79.63	76.78	74.51
10%	90.99	84.01	78.53	74.24	70.90	68.32

Mortgage Interest Rate: 7%						
Yield to Maturity	Years Left to Maturity					
	5	10	15	20	25	30
4%	107.52	114.68	121.51	127.94	133.90	139.36
5%	104.93	109.47	113.66	117.48	120.90	123.93
6%	102.42	104.58	106.51	108.22	109.70	110.97
7%	100.00	100.00	100.00	100.00	100.00	100.00
8%	97.66	95.70	94.05	92.69	91.57	90.67
9%	95.39	91.66	88.62	86.17	84.22	82.69
10%	93.20	87.86	83.64	80.34	77.78	75.81
11%	91.07	84.29	79.08	75.11	72.11	69.86

Mortgage Interest Rate: 8%						
Yield to Maturity	Years Left to Maturity					
	5	10	15	20	25	30
5%	107.45	114.39	120.85	126.74	132.03	136.69
6%	104.88	109.28	113.25	116.75	119.79	122.39
7%	102.40	104.50	106.32	107.89	109.20	110.29
8%	100.00	100.00	100.00	100.00	100.00	100.00
9%	97.68	95.78	94.22	92.97	91.97	91.19
10%	95.43	91.81	88.93	86.68	84.94	83.61
11%	93.26	88.08	84.08	81.04	78.75	77.05
12%	91.15	84.57	79.63	75.96	73.28	71.34

Mortgage Interest Rate: 9%						
Yield to Maturity	Years Left to Maturity					
	5	10	15	20	25	30
6%	107.37	114.10	120.19	125.58	130.25	134.20
7%	104.83	109.10	112.84	116.05	118.74	120.94
8%	102.38	104.41	106.13	107.57	108.73	109.66
9%	100.00	100.00	100.00	100.00	100.00	100.00
10%	97.70	95.86	94.39	93.23	92.35	91.69
11%	95.47	91.96	89.24	87.17	85.62	84.49
12%	93.32	88.29	84.51	81.71	79.68	78.22
13%	91.23	84.84	80.16	76.80	74.41	72.74

Mortgage Interest Rate: 10%						
Yield to Maturity	Years Left to Maturity					
	5	10	15	20	25	30
7%	107.30	113.82	119.56	124.47	128.57	131.91
8%	104.79	108.92	112.45	115.37	117.74	119.60
9%	102.35	104.32	105.95	107.26	108.28	109.07
10%	100.00	100.00	100.00	100.00	100.00	100.00
11%	97.72	95.94	94.55	93.49	92.71	92.15
12%	95.52	92.11	89.54	87.64	86.28	85.32
13%	93.38	88.51	84.93	82.37	80.57	79.33
14%	91.31	85.11	80.69	77.60	75.49	74.06

Mortgage Interest Rate: 11%						
Yield to Maturity	Years Left to Maturity					
	5	10	15	20	25	30
8%	107.23	113.54	118.93	123.40	126.99	129.79
9%	104.74	108.74	112.06	114.72	116.79	118.36
10%	102.33	104.24	105.77	106.96	107.86	108.52
11%	100.00	100.00	100.00	100.00	100.00	100.00
12%	97.74	96.01	94.70	93.74	93.06	92.58
13%	95.56	92.26	89.83	88.10	86.90	86.09
14%	93.44	88.72	85.35	83.01	81.42	80.37
15%	91.39	85.38	81.21	78.39	76.52	75.32

## **ACCELERATION AND PREPAYMENT**

Many mortgages are made with long terms: 20 or 30 year loans are not uncommon, and some mortgages are even made for 40 years. Yet most mortgages are not outstanding for that long. They get paid off at some earlier date, for any of a number of reasons. For example, the borrower may choose to refinance the mortgage, or may sell the property (examples of prepayment), or the borrower might default on the loan (resulting in the lender accelerating the loan and starting enforcement proceedings). A common issue in any of these situations is whether the lender is entitled to any compensation for the loss of its long-term investment.

**Lazzareschi Inv. Co. v. San Francisco Fed. Sav. & Loan Ass'n**,  
22 Cal.App.3d 303, 99 Cal.Rptr. 417 (Ct. App. 1971)

**DEVINE, Presiding Justice.** Plaintiff appeals from a summary judgment. Plaintiff, by its complaint, seeks recovery of an allegedly illegal penalty and seeks punitive damages against defendants for assertedly exacting it. From declarations presented by the parties at the motion for summary judgment, we have the following narration of facts.

On February 21, 1967, Frank A. Marshall borrowed \$300,000 from defendant San Francisco Federal Savings and Loan Association, for which he executed a promissory note secured by a deed of trust on property used for commercial purposes. The second defendant is the trustee. In the note Marshall reserved the right to prepay in whole or in part at any time prior to maturity the \$300,000 obligation. This privilege, however, was subject to a prepayment fee provision which provided for the following: 'Privilege is reserved to make additional payments on the principal of this indebtedness at any time without penalty, except that as to any such payments made which exceed twenty percentum (20%) of the original principal amount of this loan during any successive twelve (12) month period beginning with the date of this promissory note, the undersigned agree to pay, as consideration for the acceptance of such prepayment, six (6) months advance interest on that part of the aggregate amount of all prepayments in excess of such twenty percentum (20%). The privilege of paying amounts not in excess of said twenty percentum (20%) of the original principal sum without consideration shall be noncumulative, if not exercised. The undersigned agree that such six

(6) months advance interest shall be due and payable whether said prepayment is voluntary or involuntary, including any prepayment effected by the exercise of any acceleration clause provided for herein.'

On November 17, 1967, plaintiff purchased the real property securing San Francisco Federal's loan from a court-appointed receiver, in the Contra Costa County divorce proceedings of Frank A. Marshall. The purchase price was \$570,000. In order to consummate the purchase, plaintiff had to procure new financing. Immediately before the close of escrow, San Francisco Federal submitted a demand in the sum of \$9,130.02, which constituted the prepayment fee computed in accordance with the provisions of the note. This sum was in addition to the price and other payments, including accrued interest, which plaintiff had agreed to pay for the real property. Plaintiff paid and defendants received the amount demanded, but plaintiff noted in the buyer's instructions that it did so under protest.

In his declaration, Mr. Lazzareschi, president of plaintiff corporation, avers that it was necessary for him to pay the money in order to close the escrow, 'otherwise said judicial sale would have failed.' Plaintiff also declares that the interest rate of defendants' loan was then 7 3/4%, substantially less than that which defendants could obtain by a new loan of the recovered funds; wherefore defendants actually profited from the early prepayment rather than being prejudiced thereby. On the basis of these circumstances, plaintiff alleges in its complaint that the amount of the prepayment charge bears no reasonable relationship to any damage allegedly sustained by the defendants by virtue of the prepayment. Plaintiff also alleges that the prepayment fee constitutes an unreasonable restraint on alienation. . . .

### **The Subject of Penalty**

Appellant cites *Freedman v. Rector, Wardens & Vestrymen*, 37 Cal.2d 16, 230 P.2d 629, for the principle that damages imposed must bear a reasonable relationship to the injury caused. But the *Freedman* case and all of those which have been based on it are concerned with breach of a contract in some manner. In the instant case, there has been no breach. The borrower had the option, clearly spelled out in the promissory note, of making one or more prepayments. He, by the action of the receiver, availed himself of the option. This is not a situation of liquidated damages. Although the word 'penalty' is used, and perhaps properly so in that a charge is made which is

equivalent to unearned interest, there is no penalty in the sense of retribution for breach of an agreement, nor is there provision for liquidated damages because of ascertaining what the damages for such breach may be. Nor is the case one in which there is forfeiture for a default which, under appropriate circumstances, may be relieved under Civil Code section 3275 . . . Indeed, in the case before us there is the opposite of default, that is, a payment made before the promisor was obliged to make it.

Prepayment charges have been upheld against accusations of usury in *French v. Mortgage Guarantee Co.*, 16 Cal.2d 26, 104 P.2d 655; *Grall v. San Diego Bldg. & Loan Assn.*, 127 Cal.App. 250, 15 P.2d 797; and *McCarty v. Mellinkoff*, 118 Cal.App. 11, 4 P.2d 595. But the usury laws do not now apply to building and loan associations (Cal.Const., art. XX, s 22), so that attack on prepayment charges as usurious is not possible.

There are indications that an extortionate charge for prepayment would not be supported in judicial proceedings and that on one theory or another, yet undetermined, a person forced to sustain such a charge might have a remedy. . .

For the purpose of this appeal, we shall assume that palpably exorbitant charges would be subject to defeat by judicial decision. We proceed to examine the contract, the promissory note, in the present case. It is necessary, however, to examine it not as an isolated transaction, but as a transaction existing with a multitude of others which the lender must enter in order to stay in business. . . [W]e are dealing with a twenty-year loan. The lender cannot recall the funds in the absence of default or sale of the property (the due-on-sale clause is valid: *Coast Bank v. Minderhout*, 61 Cal.2d 311, 38 Cal.Rptr. 505, 392 P.2d 265). If interest rates increase sharply, the lender has no option to renegotiate the loan. Of course, if a prepayment is made at the borrower's choice (sometimes made for him as in this receiver's case, but chargeable to him) when interest rates have increased, the lender may gain from the repayment. But in the whole portfolio there may be many loans which will not be repaid although some of the borrowers have become well able to repay. The borrowers can use the money more advantageously. On the other hand, if interest rates decline, borrowers will be able to refinance at lower rates, and if there were not adequate charge for repayment, they could discharge the note, giving the original lender funds which could be put out only at a lower rate. In *Cherry v. Home Sav. & Loan Assn.* this fact of economic life was recognized in a due-on-sale case. Thus, unlike the *Freedman* type of case, the loan situation calls for attention to economic

forces over a period which may be long--here, twenty years.

But even prescinding from the variables which are built into a loan which may run for as long as twenty years, we observe that there would be difficulty in deciding upon the advantage, if any, to the lender by early repayment. There is, of course, the matter of expense in all of the activities which lead to the decision to make the loan on a particular basis. Moreover, there is the matter of possible loss of time between repayment of the funds and placing them on loan anew. It would be impossible to trace the exact funds from one loan to another. The repaid monies surely would be used, but until the expiration of such time as would ordinarily be necessary to complete the new loan or loans (not identifiable), the funds, as part of the loanable resources of the lending institution, must remain in competition, as it were, with other resources of the lender and with the resources of similar institutions, awaiting settlement upon an acceptable borrower.

Here again, we do not foreclose inquiry into possible exorbitancy, but merely point out that a prepayment case does not fall into a simple calculation at any one point of time of the difference between the interest rate on the repaid loan and that which might be available to the lending institution on a new loan of about the same size made to a new borrower. . . .

We do not find the terms of the loan to be shocking to the judicial conscience.

### **The Subject of Restraint on Alienation**

Plaintiff contends that because the loan was secured by a deed of trust which could not be lifted without satisfying the promissory note, it partakes of the nature of a restraint on alienation in violation of section 711 of the Civil Code. But it has been held that reasonable restraints made in protection of justifiable interests of the parties are sustainable. (*Coast Bank v. Minderhout*, 61 Cal.2d 311, 316--317, 38 Cal.Rptr. 505, 392 P.2d 265.) The *Coast Bank* case involved a due-on-sale provision, but it was pointed out in the opinion that several other kinds of restraints on alienation are recognized as lawful. The prepayment charge by no means constitutes an absolute restraint and because we do not regard it as an exorbitant burden, as pointed out above, and because there are legitimate interests of the lender to be protected, as also discussed, we do not discern an unlawful restraint on alienation.

### **Conclusion**

Finally, we remark that the control of charges, if it be desirable, is

better accomplished by statute or by regulation authorized by statute than by ad hoc decisions of the courts. Legislative committees and an administrative officer charged with regulating an industry have better sources of gathering information and assessing its value than do courts in isolated cases. Besides, institutions which lend vast sums of money should be informed, not by judgments after the facts on a case-to-case basis, but by laws or regulations which are in existence in advance of the undertaking to execute loans, of the validity or invalidity of terms that are commonly used. Otherwise, the lending institutions themselves may be the object of lawsuits in which a penalty is demanded, as in the third cause of action in the present case in which plaintiff seeks punitive damages.

The judgment is affirmed.

RATTIGAN and BRAY, JJ., concur.

Hearing denied; PETERS and MOSK, JJ., dissenting.

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### Problem: Acceleration by the Lender

1. Consider the following provision, which you might see in a commercial real estate transaction. If you represent the borrower, would you allow the lender to include this provision in its documents? If you represent the lender, do you see any disadvantages or potential problems in this clause? In either case, what modifications might you seek in the negotiations?

**Material Adverse Change.** The indebtedness hereby secured will become immediately due and payable, at the option of the Mortgagee, if in the reasonable opinion of the Mortgagee there shall have occurred a material adverse change in the financial condition of the Mortgaged Premises, the Mortgagor, or any guarantor of the indebtedness hereby secured, from the financial condition existing on the date hereof; provided that such material adverse change is not cured within thirty (30) days after the Mortgagee gives written notice to the Mortgagor of the Mortgagee's intent to declare the indebtedness hereby secured due and payable by reason of such adverse change.

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### Problem: Prepayment by the Borrower

Lender made a 30-year, self-amortizing, fixed rate mortgage loan to Borrower. The loan was for \$1.5 million, and carried an interest rate of 8%. Five years later, interest rates have dropped so that the Borrower can now obtain a similar loan at 6.5%. If the Borrower is allowed to prepay the mortgage loan without any prepayment premium, what is the amount of the Lender's loss?

