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CHAPTER EIGHTEEN

Consumer Loans, Credit Cards, and Real Estate Lending

Key Topics in This Chapter

- Types of Loans for Individuals and Families
- Unique Characteristics of Consumer Loans
- Evaluating a Consumer Loan Request
- Credit Cards and Credit Scoring
- Disclosure Rules and Discrimination
- Loan Pricing and Refinancing

18–1 Introduction

Statesman, philosopher, and scientist Benjamin Franklin once observed: "If you would know the value of money go and try to borrow some." Over the past couple of generations millions upon millions of consumers (individuals and families) have tried to do just that—borrow money—in order to supplement their income and enhance their lifestyle. Apparently many have succeeded. Consumer debt is one of the fastest growing forms of borrowing money around the globe, reaching more than $10 trillion in volume in the United States alone as the 21st century began to unfold.

Just as consumer borrowing has become a key driving force in the financial marketplace today, so have banks choosing to make these loans. Bankers have emerged in recent decades to become dominant providers of credit to individuals and families, aggressively advertising their services through "money shops," "money stores," and other enticing sales vehicles. Of course, things didn't start out that way—for most of their history banks largely ignored household borrowers, allowing credit unions, savings associations, and finance companies to move in and capture this important marketplace, while banks concentrated on their business customers.

In part, the modern dominance of banks in lending to households stems from their growing reliance on individuals and families for their chief source of funds—checkable and savings deposits. Many households today would be hesitant to deposit their money in a bank unless they believed there was a good chance they would also be able to borrow from that same institution when they needed a loan. Then, too, recent research suggests that consumer credit is often among the most profitable services a bank can offer.

However, services directed at consumers can also be among the most costly and risky financial products that a financial firm sells because the financial condition of individuals and families can change quickly due to illness, loss of employment, or other family tragedies. Lending to households, therefore, must be managed with care and sensitivity to the special challenges they represent. Moreover, profit margins on many consumer loans have narrowed appreciably as leading finance companies like Household Finance and GMAC, key savings associations like Washington Mutual, and thousands of aggressive credit unions have grown to seriously challenge the dominance of banks in this field.

In this chapter we examine the types of consumer and real-estate-centered loans lenders typically make and see how they evaluate household loan customers. We also explore the broad dimensions of the enormously significant credit card market, which accounts for a major share of consumer loans today. In addition, the chapter examines the powerful role of regulation in the consumer financial-services field as federal and state governments have become major players in setting the rules that govern this important market. Finally, we examine the pricing of consumer and real estate loans in a financial-services marketplace where the battle for household borrowers has become intense and many institutional casualties are strewn along the way.

18–2 Types of Loans Granted to Individuals and Families

Several different types of consumer loans are available, and the number of credit plans to accommodate consumers' financial needs is growing in the wake of deregulation of financial institutions in the United States and in many other industrialized countries. We can classify consumer loans by *purpose*—what the borrowed funds will be used for—or by *type*—for example, whether the borrower must repay in installments or repay in one lump sum when the loan comes due. One popular classification scheme for consumer loans combines both loan types and loan purposes.

For example, loans to individuals and families may be divided into two groups, depending upon whether they finance the purchase of new homes with a *residential loan* (such as a home mortgage or home equity loan) or whether they finance other, nonhousing consumer activities through *nonresidential loans*. Within the nonresidential category, consumer loans are often divided into subcategories based on type of loan—*installment* loans (such as auto or education loans); *noninstallment* loans (such as a cash advance); and *revolving credit* loans (including the familiar credit-card loan). We will look at the nature of these consumer loan types more closely in subsequent sections of this chapter.

Residential Loans

Credit to finance the purchase of a home or to fund improvements on a private residence comes under the label of **residential mortgage loans.** The purchase of residential property in the form of houses and multifamily dwellings (including duplexes and apartment buildings) usually gives rise to a long-term loan, typically bearing a term of 15 to 30 years and secured by the property itself. Such loans may carry either a fixed interest rate or a variable (floating) interest rate that changes periodically with a specified base rate (such as the market yield on 10-year U.S. government bonds) or a national mortgage interest rate (for example, the Federal Home Loan Bank Board's average home mortgage yield). A commitment fee, typically 1 to 2 percent of the face amount of the loan, is routinely charged up front to assure the borrower that a residential loan will be available for a stipulated period. Although banks are the leading residential mortgage lenders today, several other important lenders in this market include savings associations, credit unions, finance companies, and insurance companies as well as the mortgage banking subsidiaries of financial holding companies.

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Nonresidential Loans

In contrast to residential mortgage loans, nonresidential loans to individuals and families include installment loans and noninstallment (or single-payment) loans and a hybrid form of credit extended through credit cards (usually called revolving credit).

Installment Loans

Short-term to medium-term loans, repayable in two or more consecutive payments (usually monthly or quarterly), are known as **installment loans.** Such loans are frequently employed to buy big-ticket items (e.g., automobiles, recreational vehicles, furniture, and home appliances) or to consolidate existing household debts.

Noninstallment Loans

Short-term loans individuals and families draw upon for immediate cash needs that are repayable in a lump sum are known as *noninstallment loans*. Such loans may be for relatively small amounts—for example, $500 or $1,000—and include charge accounts that often require payment in 30 days or some other relatively short time period. Noninstallment loans may also be made for a short period (usually six months or less) to wealthier individuals and can be quite large, often ranging from $5,000 to $50,000 or more. Noninstallment credit is frequently used to cover the cost of vacations, medical care, the purchase of home appliances, and auto and home repairs.

Factoid
Who makes more credit card loans than any other originator of such loans?
Answer: Commercial banks do, followed by securitized pools of credit card loans, finance companies, thrifts and credit unions.

Credit Card Loans and Revolving Credit

One of the most popular forms of consumer credit today is accessed via credit cards issued by VISA, MasterCard, Discover, and many smaller credit card companies. Credit cards offer their holders access to either installment or noninstallment credit because the customer can charge a purchase on the account represented by the card and pay off the charge in one billing period, escaping any finance charge, or choose to pay off the purchase price gradually, incurring a monthly finance charge based on an annual interest rate usually ranging from about 10 percent to 24 percent and sometimes more. Today approximately two-thirds of all credit cards have variable rates of interest.

Card companies find that *installment users* of credit cards are far more profitable due to the interest income they generate than are *noninstallment users*, who quickly pay off their charges before interest can be assessed. Banks and other card providers also earn discount fees (usually 1 to 7 percent of credit card sales) from the merchants who accept their cards. So rapid has been the acceptance of charge cards that close to two trillion are estimated to be in use today around the globe.

Credit cards offer *convenience* and a *revolving line of credit* that the customer can access whenever the need arises. Card providers have found, however, that careful management and control of their card programs is vital due to the relatively high proportion of delinquent borrowers and the large number of cards that are stolen and used fraudulently. There is evidence that significant economies of scale pervade the credit card field because, in general, only the largest card operations are consistently profitable. Nevertheless, credit card programs may survive for a considerable future period because of advancing technology that may give most cardholders access to a full range of financial services, including savings and payments accounts.

While the credit card market is heavily concentrated among a handful of leaders—VISA and MasterCard, in particular—new varieties of card plans, such as Citibank's AT&T Universal, are aggressively expanding to offer no-interest or low-interest programs to attract consumers willing to transfer their account balances from competing programs. However, once the no-interest or low-interest period ends, many card programs plan a

Real Banks, Real Decisions

CREDIT CARDS: CAN EARNINGS BE PROTECTED IN A DECLINING MARKET?

The credit card market has seen better days. Consumers have been turning more toward debit cards, rather than credit cards, to make their purchases, avoiding expensive credit card balances. Many homeowners have turned from borrowings on their credit cards to home equity loans, using their homes as collateral to obtain cheaper credit with tax benefits. Moreover, leading card systems like VISA and MasterCard have been under attack in the courts over allegations that they have acted to restrain trade by prohibiting member institutions from accepting other card plans, such as American Express and Discover, or have been charging excessive fees without proper notice to their customers. Equally serious, U.S. government regulations have recently pressured card programs to tighten up their lending standards and disclose more fully to the public the terms of card usage.

With this assault from several different directions managers of card companies face a real dilemma: *where do we go from here?* One possible solution, which several companies adopted in 2005 and 2006, was to sharply increase minimum monthly payments and to raise fees for late payments and charges beyond the customer's credit limit. Other banks focused on diverting more of their resources to the markets for home equity loans, debit cards, smart cards, and affinity cards, appealing to special customer groups. Still other companies have looked overseas, especially to Europe and Asia where fewer families have cards and account balances are typically much lower. Most attractive to the largest banks, like HSBC, Citigroup, and the Royal Bank of Scotland, is China, where only about 1 percent of the 1.3 billion Chinese have credit cards, though China's market appears to be doubling in size every year.

If you were the manager of a credit card company, which way would you go and why?

jump in interest rates to 10 percent or higher. The purpose of this aggressive marketing effort is traceable to recently slowing growth in the credit card market.

New Credit Card Regulations

New credit card regulations appeared early in 2003 as the chief U.S. regulators of depository institutions—the Office of the Comptroller of the Currency, the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of Thrift Supervision—moved to slow the expansion of credit card offers to customers with low credit ratings. Regulators expressed concern that many weak household borrowers were being carried on the books of credit card lenders for months even when their payments were woefully behind schedule. Some lenders allegedly had adopted the policy of liberalizing credit terms so that delinquent borrowers would continue to run up charges and fees with little hope of eventual repayment.

Indeed, there was evidence that some customers were charged high fees but asked to make low minimum payments, resulting in "negative amortization" of their debt. This meant that rather than paying down their debts, many troubled card customers found themselves owing still more over time due to late payment fees, over-credit-limit charges, and such. As the 21st century opened regulatory agencies warned lenders that federal examiners would begin looking for excessive use of fees and unreasonably liberal credit terms that appeared to "doom" low-credit-rated customers to making payments indefinitely without hope of ever retiring their debts. Regulators began to pressure lenders to make sure the majority of their credit card borrowers were set up in repayment plans that normally would result in complete repayment of balances owed within 60 months.

Debit Cards: A Partial Substitute for Credit Cards?

Debit cards—plastic cards that may be used to pay for goods and services, but not to extend credit—are today one of the fastest growing of all household financial services,

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substantially exceeding the recent growth of credit cards. Currently the credit card market is about triple the size of the debit card market, but debit cards are closing the gap. Among the leading firms offering these plastic substitutes for cash are First Data Corp. VISA USA Inc., and MasterCard International Inc.

Debit cards are a convenient method of paying *now* and a vehicle for making deposits into and withdrawals from ATMs. These cards are also used to facilitate check cashing and to establish a customer's identity. Close relatives of the debit card, especially popular in Europe today, are "smart cards" that carry balances that can be spent electronically in stores until the balance entered on the card is fully used up. Prepaid or niche cards, offered by such institutions as MasterCard International, VISA USA, and Comdata Corp., are emerging that, like smart cards, are preloaded with cash. One of the most common uses of these newer card types is by employers who can pay their employees by filling their cards with salary money each month or prepay employee travel expenses.

Debit cards enforce discipline on consumers who, when using such a card, must pay immediately without borrowing money. They save both customer and banker time and paperwork compared to the use of checks. Moreover, financial firms have found them to be an additional source of fee income with somewhat lower losses associated with default and theft than credit cards.

Rapid Consumer Loan Growth

Whatever their category, most types of consumer loans have grown explosively in recent years, fed by a growing economy and intense competition among consumer lenders. For example, household debt grew in the United States from less than 70 percent of family disposable income in 1985 to more than 100 percent of personal disposable income as the new century began to unfold. Home mortgage loan growth was the fastest of all consumer loan categories, rising from less than 45 percent of U.S. disposable personal income in 1985 to about two-thirds of that measure of household income nearly two decades later.

18–3 Characteristics of Consumer Loans

By and large, household lenders regard consumer loans as profitable credits with "sticky" interest rates. That is, they are typically priced well above the cost of funding them, but their contract interest rates often don't change readily with market conditions as do interest rates on most business loans, though flexible-rate consumer credit appears to be growing. This means that many consumer loans are exposed to significant interest rate risk. However, consumer loans are usually priced so high (i.e., with a large risk premium built into the loan rate) that market interest rates on borrowed funds and default rates on the loans themselves would have to rise substantially before most consumer credits would become unprofitable.

Why are interest rates so high on most consumer loans? One reason is that consumer loans are among the most costly and most risky to make per dollar of loanable funds of any of the loans that most lending institutions grant to their customers. Consumer loans also tend to be *cyclically sensitive*. They rise in periods of economic expansion when consumers are generally more optimistic about the future. On the other hand, when the economy turns down, many individuals and families become more pessimistic about the future and reduce their borrowings accordingly.

Household borrowings appear to be relatively *interest inelastic:* Consumers are often more concerned about the size of monthly payments required by a loan agreement than the interest rate charged (though, obviously, the contract rate on a loan influences the size of its required payments). While the level of the interest rate is often not a significant conscious factor among household borrowers, both education and income levels *do* materially influence consumers' use of credit. Individuals with higher incomes tend to borrow more

in total and relative to the size of their annual incomes. Those households in which the principal breadwinner has more years of formal education also tend to borrow more heavily relative to their level of income. For these individuals and families, borrowing is often viewed as a tool to achieve a desired standard of living rather than as a safety net to be used only in emergencies.

Concept Check

18–1. What are the principal differences among residential loans, nonresidential installment loans, noninstallment loans, and credit card or revolving loans?

18–2. Why do interest rates on consumer loans typically average higher than on most other kinds of loans?

18–4 Evaluating a Consumer Loan Application

Character and Purpose

Key factors in analyzing any consumer loan application are the *character* of the borrower and the borrower's *ability to pay*. The lender must be assured that the borrowing customer feels a keen sense of moral responsibility to repay a loan on time. Moreover, the borrower's income level and valuable assets (such as holdings of securities or savings deposits) must be sufficient to reassure the lender that the customer has the ability to repay the loan with a comfortable margin for safety. For this reason, consumer lenders nearly always check with one or more national or regional **credit bureaus** concerning the customer's credit history. These institutions hold files on most individuals who, at one time or another, have borrowed money, indicating their record of repayment and credit rating.

Often the fundamental character of the borrower is revealed in the *purpose* of the loan request. Lenders often ask: Has the customer clearly stated what he or she plans to do with the money? Is the stated purpose of the loan consistent with the lender's loan policy? Is there evidence of a sincere intention to repay any funds borrowed? Some senior loan officers counsel new loan officers to visit with their customers, where this is practical, because such conversations often reveal flaws in character and sincerity that have a direct bearing on the likelihood of loan repayment. By asking the customer pertinent questions a lender often can make a better call on whether the customer's loan request meets the lender's quality standards.

Unfortunately, economic pressures encouraging automation in consumer lending have led most lenders to spend *less* time with the customer. Information gathering and loan evaluation increasingly are being turned over to computer programs. The result is that many consumer loan officers today know very little about the character traits of their customers beyond the information called for on a credit application, which may be faxed or telephoned in or sent via computer.

In the case of a borrower without a credit record or with a poor track record of repaying loans, a **cosigner** may be requested to support repayment. Technically, if the borrower defaults on a cosigned loan agreement, the cosigner is obligated to make good on the loan. However, many lenders regard a cosigner mainly as a psychological device to encourage repayment of the loan, rather than as a real alternative source of security. The borrower may feel a stronger moral obligation to repay the loan knowing the cosigner's credit rating also is on the line.

Income Levels

Both the *size* and *stability* of an individual's income are considered important by most lenders. They generally prefer the customer to report *net salary*, or *take-home pay*, as

opposed to gross salary, and, with large loans, may check with the customer's employer to verify the accuracy of customer-supplied income figures and length of employment.

Deposit Balances

An indirect measure of income size and stability is the *daily average deposit balance* maintained by the customer, which the loan officer *may* verify with the depository institution involved. In some states lenders may be granted the **right of offset** against the customer's deposit as additional protection against the risks of consumer lending. This right permits the lender to call a loan that is in default and seize any checking or savings deposits the customer may hold in order to recover its funds. However, in many cases the customer must be notified at least 10 days in advance before this right is exercised, which can result in funds disappearing before the lending institution can recover any portion of its loan.

Employment and Residential Stability

Among the many factors considered by lenders is *duration of employment*. Many lenders are not likely to grant a sizable loan to someone who has held his or her present job for only a few weeks or months. *Length of residence* may also be considered because the longer a person stays at one address, the more stable his or her personal situation is presumed to be. Frequent changes of address can be a negative factor in deciding whether to grant a loan.

Pyramiding of Debt

Lenders are especially sensitive to evidence that debt is piling up relative to a consumer's income. *Pyramiding of debt*—where the individual draws credit at one lending institution to pay another—is frowned upon, as are high or growing credit card balances and frequent returned checks drawn against the customer's account. These items are viewed as indicators of the customer's money management skills. Customers lacking these basic skills may be unable to avoid taking on too much debt and getting themselves in serious trouble.

How to Qualify for a Consumer Loan

Are there ways to improve one's chances of getting a loan? One positive factor is *home ownership* or, for that matter, ownership of any form of real property, such as land or buildings. Even if such property is not posted as collateral behind a loan, it conveys the impression of stability and good money management skills. Having a telephone may also be a sign of stability and a low-cost way for the lender's collections department to contact the borrower in case of trouble. Another positive factor is maintaining *strong deposit balances*. Not only do above-average deposit levels suggest a financially disciplined individual determined to meet his or her obligations, but also the lender may be able to profitably use those deposits to fund other loans.

The most important thing to do, however, is to answer all the loan officer's questions truthfully. A lender may look for *inconsistencies* on a loan application as a sign the borrower is untruthful or, at best, forgetful. For example, a Social Security or personal ID number often reveals what geographic area a person comes from. Does the borrower's Social Security number match his or her personal history as indicated on the loan application? Are the borrower and his or her employer located at the addresses indicated? Is the amount reported as take-home pay the same as what the employer reports? Has the customer reported all debts outstanding, or does a credit bureau report reveal many unreported obligations the customer has forgotten or simply walked away from?

The Challenge of Consumer Lending

Consumer loans are not easy to evaluate. For one thing, it is often easier for individuals to conceal pertinent information bearing on the payout of a loan (such as their health or future

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employment prospects) than for most businesses (whose loan applications are frequently accompanied by audited financial statements). Moreover, a business firm usually can more easily adjust to ill health, injury, or financial setbacks than can individuals. The default rate on consumer loans usually is several times higher than that for many types of business loans. The key features of consumer loans that help lenders hold down potential losses are that most are small in denomination and often secured by marketable collateral, such as an automobile.

18–5 Example of a Consumer Loan Application

We can illustrate some of the most important types of information a consumer lender may gather and what these bits of information are designed to reveal by examining the sample loan application shown in Table 18–1. This is a credit application to finance the purchase of a new automobile, normally one of the more profitable and secure types of loans made by a consumer lending institution. The customer, J. P. Skylark, is trading in an aging used car in order to purchase a newer and more reliable vehicle. The trade-in value and down payment will cover nearly 20 percent of the purchase price, and the lender is asked to cover the remainder

TABLE 18–1
A Typical Consumer Loan Application

Credit application submitted by J. P. L. Skylark V on December 1, this year to First National Bank

Applicant's street address: 3701 Elm Street

City of residence: Orangeburg State and Zip Code: CA 77804

Purpose of the requested loan: To purchase a newer car for personal and family use

Desired term of loan: 5 years

For auto loan requests, please fill in the following information:

Make: Ford Taurus

Model: 4-Door Sedan Vehicle identification no. 8073617

The vehicle is equipped with: Air conditioning, automatic transmission, power steering, disk brakes, AM/FM stereo, disk player, automatic locks, tinted glass

Vehicle to be traded in: Chevrolet Monte Carlo Model: 4-door Sedan

Age of trade-in vehicle: 8 years Vehicle identification no. 6384061

Optional equipment on trade-in vehicle: Air conditioning, automatic transmission, disk brakes, power steering, AM/FM radio, tape player

Details of the proposed purchase:

Purchase price quoted by seller:	$18,750
Cash down payment to be made:	$ 1,575
Value of trade-in vehicle:	$ 3,500
Total value put down:	$ 5,075
Unpaid portion of purchase price:	$13,675
Other items covered in the loan:	$ 650
Total amount of credit requested:	**$14,325**

Customer information:

Social Security no. 671-66-8324 Birthdate: 2/21/75

Time at present address: 10 months Phone no. 965-1321

Previous home address: 302 W. Solar St., Casio City, California

(Continued)

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TABLE 18–1
Continued

How long at previous address: 1 year

Driver's license no. and state: A672435 California Number of dependents: 3

Current employer: Hometown Warehouse Co.

Length of employment with current employer: 8 months

Nature of work: Drive truck, load merchandise, keep records

Annual salary: $30,000 Employer's phone no. 963-8417

Other income sources: Investments, Trust Fund

Annual income from other sources: $2,000

Debts owed (including home mortgage): $103,000 Monthly debt payments: $1,140

Nearest living relative (not spouse): Elsa Lyone Phone: 604-682-7899

Address: 6832 Willow Ave., Amera, OK, 73282

Does the applicant want the lender to consider spouse's income in evaluating this loan?

X Yes ______ No

Spouse's current annual income: $8,000

Name of spouse's employer: Dimmitt Savings and Security Association

Occupation: Secretary Length of employment: 8 months

The information I have given in this credit application is true and correct to the best of my knowledge. I am aware that the lender will keep this credit application regardless of whether or not the loan is approved. The lender is hereby granted permission to investigate my credit and employment history for purpose of verifying the information submitted with this credit application and for evaluating my credit status.

Customer's signature: J. P. Skylark

Date signed: 12/1/current year

(80 percent) of the automobile's price. The lending institution will take a *chattel mortgage* against the vehicle in order to gain the legal right to repossess if the loan is defaulted. As long as car prices remain fairly stable or increase, the lender's funds should be reasonably well secured.

However, character, stability, and adequate disposable income (not heavily burdened with debt obligations and taxes) are important components of any consumer loan request, and these elements raise serious questions about this particular credit request. Skylark has been at his present address for only 10 months and stayed at his previous address in another city for just one year. He has worked only eight months for his present employer. Many lenders prefer borrowing customers who have resided or worked in their market area for at least one year, often considered a sign of reliability.

Factoid
Who are the two leading automobile lenders?
Answer: Commercial banks and finance companies.

The Skylarks' annual gross income is about average and, for both husband and wife, amounts to about $40,000 or about $32,000 in total take-home pay. The family has debt obligations amounting to $103,000 which appears to be high—about three times their take-home income—but includes their home mortgage loan. Most home mortgage lenders would find a debt to income ratio of two and one-half to three times not unusual by today's standards.

The monthly payments on this debt *are* on the high side, however, at just over $1,140 (including the home mortgage payment). Monthly debt payments already account for more than a third of monthly gross income, not counting the payments of $225 per month that the requested car loan will require. Many lenders prefer to see a required-monthly-payment-to-income ratio no more than 25 to 30 percent. However, the bulk of the family's debt and debt service payments are on their home and, in a reasonably strong local real estate market, the value of that home might provide adequate security for the lender. Moreover, the Skylarks seem to have adequate insurance coverage and hold at least some liquid financial

investments in the form of stocks, bonds, and other securities. The loan officer's check with both Mr. and Mrs. Skylark's employers revealed that they both have good prospects for continued employment.

The Skylarks' loan application is for a reasonable purpose, consistent with this bank's loan policy, and the family's reported income high enough to suggest a reasonably strong

TABLE 18–2
Sample Credit Bureau Report

E-Z Credit Bureau Report on J.P.L. Skylark, SSN 671-66-8324
Credit bureau address: 8750 Cafe Street, San Miguel, CA 87513
607-453-8862
Credit items as of: *6/15/Current Year*

Name of Creditor	Maximum Term Credit	Amount Owed	Outstanding Balance	Past Due	Monthly Payments	Status
Windcrest Deluxe Apts.	Six months	$ 610	$ 610	$610	$305	Past due
VISA	Open	$1,680	$1,540	$250	$125	Past due
MasterCard	Open	$1,435	$1,250	$176	$ 88	Past due
First State Bank of Slyvon	Six months	$ 750	$ 150	$150	$ 75	Past due
Kinney's Furniture Mart and Emporium	One year	$ 847	$ 675	—	$ 34	Current
First National Bank of Orangeburg	One year	$2,500	$ 675	—	$120	Current
Saint Barrio Hospital and Medical Clinic	Open	$ 160	$ 160	—	—	Charged off

TABLE 18–3
Statement of Denial, Termination, or Change on a Customer Credit Application

First National Bank

Statement to: Mr. J. P. L. Skylark
Customer's Name

3701 Elm Street Orangeburg, CA 77804
Customer's residence address City State

Statement date: 6/18/current year

Credit requested by customer: $14,325, 5-year auto installment loan

Action taken by the bank on the request: Loan denied

Unfortunately, the bank cannot approve the amount and terms of credit you have asked for as of the date indicated above. The reason(s) for our denial of your requested loan are: Past-due loans.

Our investigation of your credit request included a credit report from: E-Z Credit Bureau, 8750 Cafe Street, San Miguel, CA 87513. Federal law allows you to obtain, upon submission of a written request, a copy of the information that led to a denial of this credit request.

If you believe you have been discriminated against in obtaining credit because of your race, color, religion, sex, national origin, marital status, legal age, receipt of public assistance, or exercise of rights under the Consumer Credit Protection Act, you may apply to the principal federal regulatory agency for this bank, which is the Comptroller of the Currency, U.S. Treasury Department, Washington, D.C. 20219.

Please let me or other employees of our bank know at any time in the future if we can assist you with other services this bank offers. We value your business and would like to be of assistance in meeting your banking needs. Please consider submitting another loan request in the future if the situation that led to denial of this credit request improves.

Sincerely,

W. A. Numone
William A. H. Numone III
Senior Vice President
Personal Banking Division

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Insights and Issues

THE KEY FUNCTION OF CREDIT BUREAUS IN CONSUMER LENDING DECISIONS

Credit bureaus—often called *credit-reporting agencies* (CRAs)—assemble and distribute to lenders the credit histories of millions of borrowers. The first CRAs operating in the United States go back to the 19th century and others emerged in Western Europe, Australia, and Canada at about the same time. Today CRAs receive close to 70 million data items daily from more than 30,000 lenders and provide more than 3 million credit reports a day. While there are many small CRAs, three agencies—Equifax, Experian, and Transunion—dominate the national financial marketplace in the United States.

The reports provided by CRAs provide lenders and others with:

a. *Personal identifying data* (name, old and new addresses, birth date, current and former employers, and Social Security number).
b. *Personal credit histories derived from data submitted by lenders* (including personal credit limits, loan balances, and payments records).
c. *Public information that may bear on each borrower's honesty and stability* (such as bankruptcy filings or court judgments against borrowers).
d. *The volume of inquiries from lenders and others about a borrower's credit status.*

CRAs provide valuable information to lenders in a society where borrowers move frequently and use extensive amounts of credit. They have made possible the rapid expansion of unsecured debt, encouraged borrowers and lenders to be more honest, increased competition in lending, and led to more efficient pricing of credit services by supplying timely information to lenders, employers, and others with a need to know.

At the same time CRAs have aroused considerable controversy that has led to a welter of new government regulations. They have a spotty record of protecting consumer privacy and have sometimes unintentionally leaked information that led to identity theft. Many credit files contain errors, often lacking credit limit information and overestimating open accounts and amounts owed. For their part CRAs have invested heavily in information technology and pledged to correct errors promptly. Federal rules require CRAs to set up a system of fraud alerts to aid ID theft victims.

In response leading CRAs are developing multiple new services, including account fraud monitoring, and, in some cases, loan term simulators to aid credit shoppers. These new services should help to expand and stabilize CRAs' revenues. (For a detailed discussion of credit bureaus see especially Robert M. Hunt, "A Century of Consumer Credit Reporting in America," Working Paper No. 05-13, Federal Reserve Bank of Philadelphia, June 2005.)

probability the loan would be repaid. Accordingly, the loan officer accepted their application and proceeded to check out the Skylarks' credit record. When the report from the *credit bureau* arrived on-screen minutes later, however, the loan officer saw very quickly that there was a serious problem with this application. Unfortunately, as shown in Table 18–2, the Skylarks had a mixed credit record, with at least five instances of delinquent or unpaid bills. The other debts were essentially as reported on the loan application with only minor discrepancies. At best, the loan officer would ask the Skylarks about these unreported debts, but more likely this loan request will simply be turned down due to an unacceptable credit record. The loan officer clearly would be justified in having doubts about this borrower's sense of judgment and responsibility in borrowing and repaying borrowed funds.

Key URLs
To find out more about the information credit bureaus provide consumer lenders you may wish to contact the 3 largest credit bureaus in the U.S. at **www.experian.com**, **www.equifax.com**, and **www.transunion.com**.

The Equal Credit Opportunity Act requires U.S. banks and selected other consumer lending institutions to notify their credit customers in writing when they deny a loan request. They must give *reasons* for the denial, and where a credit bureau report is used, the customer must be told where that credit bureau is located. This way the customer can verify his or her credit record and demand that any errors found in the report be corrected. Table 18–3 shows the credit denial report form given to the Skylarks and the reasons they were given on why their loan was turned down. In this case, the loan officer cited the customer's debts that remained past due and unpaid. A good feature of this particular denial form is that the customer is cordially invited to use other services at the lending institution and to reapply if his or her financial situation improves.

An acceptable consumer loan request will display evidence of *(a)* the stability of the borrower's employment or residence location; *(b)* the accuracy and consistency of information the borrower supplies; *(c)* the legitimacy of the borrower's purpose for borrowing money; and *(d)* the borrower's personal money management skills. It is when a household

application is weak in one or two of these features that loan officers face tough decisions and increasingly today rely on objective credit scoring systems to make good lending decisions. The ultimate decision to accept or deny any particular loan request depends on the expected return and risk of that proposed loan relative to the expected returns and risks of other possible investments the lender might make and management's attitude toward risk.

18–6 Credit Scoring Consumer Loan Applications

Most lenders today use **credit scoring** to evaluate the loan applications they receive from consumers. In fact, major credit card systems, such as Master Card and VISA, use these systems routinely to evaluate their credit card applicants. Many insurance companies also use scoring systems today to help them evaluate new policyholders and the risks these prospective customers might present to the insurer.

Credit-scoring systems have the advantage of being able to handle a large volume of credit applications quickly with minimal labor, thus reducing operating costs, and they may be an effective substitute for the use of judgment among inexperienced loan officers, thus helping to control bad-debt losses. Many customers like the convenience and speed with which their credit applications can be handled by automated credit-scoring systems. Often the customer can phone in a loan request or fill out an Internet application, and in a matter of minutes the lender can dial up that customer's credit bureau report online and reach a quick decision on the customer's request (now within eight minutes, on average, for auto loan requests).

Key URL
You can learn more about credit scoring techniques by consulting Experian Scorex at **www.experian-scorex.com**.

Credit-scoring systems are usually based on discriminant models or related techniques, such as logit or probit analysis or neural networks, in which several variables are used jointly to establish a numerical score for each credit applicant. If the applicant's score exceeds a critical cutoff level, he or she is likely to be approved for credit in the absence of other damaging information. If the applicant's score falls below the cutoff level, credit is likely to be denied in the absence of mitigating factors. Among the most important variables used in evaluating consumer loans are credit bureau ratings, home ownership, income bracket, number and type of deposit accounts owned, and type of occupation.

The basic theory of credit scoring is that lenders and statisticians can identify the financial, economic, and motivational factors that separate good loans from bad loans by observing large groups of people who have borrowed in the past. Moreover, it assumes that the same factors that separated good from bad loans in the past will, with an acceptable risk of error, separate good from bad loans in the future. Obviously, this underlying assumption can be wrong if the economy or other factors change abruptly, which is one reason good credit scoring systems are frequently retested and revised as more sensitive predictors are identified.

Scoring systems usually select a few key items from a customer's credit application and assign each a point value (for example, from 1 to 10). Examination of a sample of consumer credit accounts might show that the factors in Table 18–4 were important in separating good loans (i.e., those that paid out in timely fashion) from bad loans (i.e., where repayment was seriously delayed or not made at all).

The highest score a customer could have in the eight-factor credit-scoring system that follows is 430 points. The lowest possible score is 90 points. Suppose the lender finds that, of those past-approved loan customers scoring 280 points or less, 40 percent (or 1,200) became bad loans that had to be written off as a loss. These losses averaged $600 per credit account, for a total loss of $720,000. Of all the good loans made, however,

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TABLE 18–4
Predictive Factors in an Example of a Credit Scoring Model and Their Point Values

Factors for Predicting Credit Quality	Point Value
1. Customer's occupation or line of work:	
Professional or business executive	100
Skilled worker	80
Clerical worker	70
Student	50
Unskilled worker	40
Part-time employee	20
2. Housing status:	
Owns home	60
Rents home or apartment	40
Lives with friend or relative	20
3. Credit rating:	
Excellent	100
Average	50
No record	20
Poor	00
4. Length of time in current job:	
More than one year	50
One year or less	20
5. Length of time at current address:	
More than one year	20
One year or less	10
6. Telephone in home or apartment:	
Yes	20
No	00
7. Number of dependents reported by customer:	
None	30
One	30
Two	40
Three	40
More than three	20
8. Deposit accounts held:	
Both checking and savings	40
Savings account only	30
Checking account only	20
None	00

only 10 percent (300) scored 280 points or less under this scoring system. At $600 per loan, these low-scoring good loans amounted to $180,000. Therefore, if a loan officer uses 280 points as the *criterion score*, or *break point*, the lender will save an estimated $720,000 minus $180,000, or $540,000, by following the decision rule of making only those loans where the credit applicant scores higher than 280 points. If the lender's future loan-loss experience is the same, denying all loan applications scoring 280 points or less will reduce loss accounts by about 40 percent and reject just 10 percent of the good loan customers. Management can experiment with other criterion scores to determine which cutoff point yields the greatest net savings in loan losses for the institution's consumer credit program.

Let's suppose the lender finds that 280 points is indeed the optimal break point for maximum savings from loan losses. The lender's consumer credit history could be further analyzed to find out what influence the *amount of credit* extended to a customer has upon the lender's loan-loss experience. This lender might find that the point-scoring schedule shown in Table 18–5 results in the largest net savings from consumer credit losses.

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TABLE 18–5
Point-Scoring Schedule of Approved Credit Amounts

Point Score Value or Range	Credit Decision
280 points or less	Reject application
290–300 points	Extend credit up to $1,000
310–330 points	Extend credit up to $2,000
340–360 points	Extend credit up to $3,000
370–380 points	Extend credit up to $4,000
390–400 points	Extend credit up to $6,000
410–430 points	Extend credit up to $10,000

Clearly, such a system removes personal judgment from the lending process and reduces the lender's decision time from hours to minutes. It does run the risk, however, of alienating those customers who feel the lending institution has not fully considered their financial situation and the special circumstances that may have given rise to their loan request. There is also the danger of being sued by a customer under antidiscrimination laws (such as the Equal Credit Opportunity Act) if race, gender, marital status, or other discriminating factors prohibited by statute or court rulings are used in a scoring system. Federal regulations allow the use of age or certain other personal characteristics as discriminating factors if the lender can show that these factors *do* separate, at a statistically significant level, good from bad loans and that the scoring system is frequently statistically tested and revised to take into account recent changes in actual credit experience. The burden of proof is on the lender to demonstrate that its credit scoring system successfully identifies quality loan applications at a statistically significant level.

Frequent verification and revision of a credit-scoring system are not only wise from a legal and regulatory point of view, but also mitigate the biggest potential weakness of such systems—their inability to adjust quickly to changes in the economy and in family lifestyles. An inflexible credit evaluation system can be a deadly menace to a lending institution's loan program, driving away sound credit requests, ruining the lender's reputation in the communities it serves, and adding unacceptably high risks to the loan portfolio.

The FICO Scoring System

The most famous of all credit-scoring systems currently in use is known as FICO, developed and sold by Fair Isaac Corporation. Fair Isaac's scoring system calculates scores for millions of consumers worldwide and provides these scores to credit bureaus, lending institutions, and individuals who file a request. Fair Isaac also provides programs for individuals and families that suggest how they can improve their FICO score and, thereby, gain access to more credit or access credit more cheaply. A FICO score simulator allows individuals to estimate what would happen to their FICO score if certain changes were made in their personal financial profile. Many borrowers check their FICO rating before they seek a large loan (such as a home mortgage) in order to assess their chances of getting approved and to make sure there are no errors in their record.

Key URLs
To learn more about FICO credit scoring, see especially **www.fairisaac.com** and **www.myfico.com**. A competing system under recent development is Vantage Score at **www.vantagescore.com**.

FICO scores range from 300 to 850, with higher values denoting less credit risk to lenders. An individual with a lower FICO score implies a lower probability of timely repayment if the lender should grant a loan and, therefore, a loan is less likely to be granted. However, all lenders do not adopt the same cutoff score for loan approval so that a good score for one lender may not be a good mark for another. It is an individual lender's decision.

While Fair Isaac provides the public only general information about its scoring systems, its credit scores are based on five different types of information (arrayed from most important to least important):

1. The borrower's payment history.
2. The amount of money owed.

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Insights and Issues

CREDIT-SCORING SYSTEMS: PLUSES AND MINUSES

Credit scoring is a statistical device first developed about 50 years ago to objectively rank borrowers' likelihood of repaying a loan. In recent years credit-scoring models have become dominant tools in assessing the quality of borrowers seeking new credit cards, auto and home mortgage loans, and even loans to support businesses. Mortgage giants Fannie Mae and Freddie Mac have urged home mortgage loan originators to make greater use of these systems. Recent research suggests that credit-scoring technology has lowered loan delinquency rates 20 to 30 percent compared to lenders that use only loan officer judgment in making credit decisions. Moreover, scoring appears to increase borrower acceptance rates, lower loan processing costs, and result in faster credit decision making.

Credit-scoring systems use a variety of statistical techniques to calculate a prospective borrower's credit score, including multiple discriminant analysis and logistic regression. The factors used in predicting credit quality vary but there is a trend toward using more readily available data, such as items typically found in the average borrower's credit report. Examples include the number of credit lines the borrower has outstanding, the number of times a borrower has been 30 to 60 days late with payments, the number of inquiries creditors have made about a borrower's account, and the highest credit limit the customer currently has available from one or more lenders. However, system operators are very careful to avoid disclosing exactly what factors they consider.

Credit-scoring systems have been subject to great controversy almost from their beginnings. For example, it is alleged they tend to be biased against lower-income applicants and members of minority groups. They may exclude factors that might be more favorable to lower-income borrowers, such as length of time with the same employer or in the same residence. However, scoring systems tend to be objective and avoid "personality" clashes between lenders and borrowers.

3. The length of a prospective borrower's credit history.
4. The nature of new credit being requested.
5. The types of credit the borrower has already used.

Fair Isaac also indicates what elements of a borrower's background—especially age, race, color, sex, religion, marital status, employment history and salary, and residential location—are *not* considered in establishing a FICO score. It confines the list of factors considered in its credit scoring system to those items usually available in each customer's credit bureau report. FICO scores are recalculated as *new* information comes in.

Concept Check

18–3. What features of a consumer loan application should a loan officer examine most carefully?

18–4. How do credit-scoring systems work?

18–5. What are the principal advantages to a lending institution of using a credit-scoring system?

18–6. Are there any significant disadvantages to a credit-scoring system?

18–7. In the credit-scoring system presented in this chapter, would a loan applicant who is a skilled worker, lives with a relative, has an average credit rating, has been in his or her present job and at his or her current address for exactly one year, has four dependents and a telephone, and holds a checking account be likely to receive a loan? Please explain why.

18–8. What is FICO and what does it do for lenders? Why is this credit-scoring system so popular today?

18–7 Laws and Regulations Applying to Consumer Loans

Numerous laws and regulations limiting the activities of consumer lending institutions have been enacted during the past four decades. The principal federal laws fall into two broad groups: (1) **disclosure rules,** which mandate telling the consumer about the cost

and other terms of a loan or lease agreement; and (2) **antidiscrimination laws,** which prevent categorizing loan customers according to their age, sex, race, or other irrelevant factors and denying credit to anyone solely because of membership in one or more of these groups. Many lenders view such rules as burdensome and out of step with technological and service innovations. They are a constant challenge to the enforcement powers of the regulatory community, which is burdened with numerous complaints and questions of interpretation. Yet, the flow of adequate financial information to consumers is vital in the wake of government deregulation of the financial sector, which has been accompanied by greater risk for both financial institutions and their customers.

Customer Disclosure Requirements

One of the most prominent pieces of federal legislation in the consumer services field is the **Truth-in-Lending Act,** passed in 1968 by the U.S. Congress and simplified in 1981 through passage of the Truth-in-Lending Simplification and Reform Act. The Federal Reserve Board has prepared Regulation Z to implement these laws. The express purpose of truth in lending is to promote informed use of credit among consumers by requiring full disclosure of credit terms and costs. Lenders must tell customers the annual percentage rate (APR, or actuarial, rate) on the loan requested, the amount of all finance charges, and, in the case of home mortgage loans, the required fees for approvals, closing costs, and other loan-related expenses.

Amendments to Truth in Lending in 1970 and 1974 gave rise to the Fair Credit Reporting Act and the Fair Credit Billing Act. The former expressly grants consumers access to their credit files, usually kept by credit bureaus. The **Fair Credit Reporting Act** authorizes individuals and families to review their credit files for accuracy and to demand an investigation and correction of any inaccuracies. The law requires a credit bureau to correct these inaccuracies promptly and to allow consumers to insert a brief statement of explanation for any damaging items displayed in the file. Moreover, it restricts access to consumer credit files, requiring an individual's written consent.

The **Fair Credit Billing Act** of 1974 permits consumers to dispute billing errors with a merchant or credit card company and receive a prompt investigation of billing disputes. The consumer may withhold payment on the disputed portions of a bill and cannot be reported as delinquent or forced to pay interest penalties until the dispute is settled. Any creditor who does not respond to a consumer's inquiry about a bill or, having responded, does not investigate and attempt to resolve the matter must ultimately forfeit the disputed charge (up to a maximum of $50). A 30-day notice to customers is required before a lender or merchant can alter credit charges or service fees.

The *Fair Credit and Charge-Card Disclosure Act* requires that customers applying for credit cards be given early written notice (usually before a credit card is used for the first time) about required fees to open or renew a credit account. Also, if a fee for renewal is charged, the customer must receive written notice in advance. The consumer must be told if there is any change in credit card insurance coverage or fees. These rules are designed especially for credit cards granted to customers following solicitations made by direct mail, by telephone, or through advertisements that reach the general public.

Finally, if a credit customer gets behind in his or her loan payments, the **Fair Debt Collection Practices Act** limits how far a creditor or collection agency can go in pressing that customer to pay up. For example, a bill collector is not allowed to "harass" a debtor or use misrepresentation to obtain information about or gain access to a debtor. Calls placed at unusual times or to a debtor's place of work are illegal if made without the debtor's permission; nor can a bill collector legally disclose the purpose of the call to someone other than the debtor. These debt collection rules are enforced in the United States by the Federal Trade Commission.

Outlawing Credit Discrimination

Access to credit is an essential ingredient of the good life for the average family today. Recognition of this fact led the U.S. Congress to outlaw discrimination in the granting of credit based on age, sex, race, national origin, religion, location of residence, or receipt of public assistance. The **Equal Credit Opportunity Act** prohibits lenders from asking certain questions of a customer, such as the borrower's age or race. (An exception is made for home mortgage loans so that the federal government can collect information on who is or is not receiving mortgage credit to determine if discrimination is being practiced in this vital loan area.) Also, the loan officer cannot ask about other income sources beyond wage and salary income unless the customer voluntarily supplies this information.

The **Community Reinvestment Act** (CRA) is designed to prevent a lender from arbitrarily marking out certain neighborhoods deemed undesirable and refusing to lend to people whose addresses place them in the excluded area. The CRA requires each lending institution to delineate the *trade territory* it plans to serve and to offer all of its services without discrimination to all residents in that particular trade territory. The lender's board of directors must review annually the definition of trade territory that management has chosen to see if it is still valid. Moreover, each lending institution's performance in making an affirmative effort to serve the financial-service needs of its trade territory is evaluated by federal examiners (known as a *CRA rating*). The regulatory authorities take a lender's CRA rating into account when it applies to establish a new branch office or close a branch, requests approval for a merger, or requests permission to offer new services.

In August 1989, Title XII of the Financial Institutions Reform, Recovery, and Enforcement Act required the federal banking agencies to *publish* the CRA ratings of depository institutions so their customers are aware of which lenders are providing broad-based support to their local communities. Each covered lending institution must place its CRA performance rating in a public file at its head office and in at least one office in each community the lender serves. This public file must be open for customers to inspect during regular business hours and the lender must provide copies to anyone requesting materials in the file.

CRA ratings are based on 12 "assessment factors" that examiners review when they visit a bank or other covered lender, including the lender's efforts to communicate with members of the local community concerning their credit needs, its participation in government-related housing programs, the geographic distribution of loans the lender has made, and any evidence of illegal credit discrimination. Federal examiners assign one of four different CRA ratings: outstanding (O), satisfactory (S), needs to improve (N), or substantial noncompliance (SN). A study by one of the authors [8] finds that banks receiving a grade of O—the highest CRA rating—periodically survey their employees who are active in the local community to be able to *document* their strong community involvement. Top-rated banks also frequently survey their customers to determine their perceptions about the quality of the bank's services and to keep up with changing customer service needs. Banks with the highest community service ratings often get involved in local affordable housing programs, hold seminars to counsel small businesses and new home buyers on how to apply for loans, and monitor the geographic distribution of their loans to make sure certain areas of the community are not systematically being shut out in their access to services.

Factoid
Which major bank inside the United States was the first to establish a separate department for granting loans to consumers?
Answer: First National City Bank of New York (later Citibank).

Laws that supplement the provisions of the Community Reinvestment Act are the Home Mortgage Disclosure Act, the Fair Housing Act, and the Financial Institutions Reform, Recovery, and Enforcement Act. The former requires that mortgage lenders publicly disclose at least once a year the areas in urban communities where they have granted residential mortgage and home improvement loans. The Fair Housing Act prohibits discrimination in the sale, leasing, or financing of housing because of color, national origin,

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ETHICS IN BANKING AND FINANCIAL SERVICES

IDENTITY THEFT CHALLENGES FINANCIAL INSTITUTIONS AND THEIR CUSTOMERS

The fastest rising financial crime against individuals today is *identity theft*—the deliberate attempt to make unauthorized use of someone else's Social Security number, credit card account numbers, or other personal data in order to fraudulently obtain money, credit, or other property. Millions have been victimized by this crime all over the globe. Moreover, unless an individual is alert virtually all of the time and aware of what's happening to their accounts, ID theft can be difficult to detect and costly to recover from.

It is also a big challenge to credit card companies and other financial-service providers who increasingly wind up "holding the bag" for customer losses. Recently the Federal Trade Commission estimated that the total cost to all U.S. businesses from identity theft was running close to $50 billion a year. Another study in New England suggested that close to 10 percent of consumers have switched banks in the wake of widely publicized ID thefts, almost one-fifth stopped online shopping when reports of serious security breaches occurred, and close to half indicated they would be willing to move their accounts to another financial-service provider if they thought their accounts would be better protected from ID theft.

In an effort to encourage consumers to check their credit bureau reports more frequently, the U.S. Congress passed the Fair and Accurate Credit Transactions (FACT) Act in 2003, providing consumers the opportunity to order one free credit report annually from each of three nationwide credit bureaus—Equifax Inc., Experian, and TransUnion. Consumers are instructed to contact a central Web site, **www.annualcreditreport.com,** or call a toll-free phone number (1-877-322-8228), or send in a written request to the Annual Credit Report Request Service, P.O. Box 105281, Atlanta, Georgia 30348-5281. Credit reports may be requested from all three credit bureaus at the same time or spread out among the three over the period of a year.

race, religion, or sex. The Financial Institutions Reform, Recovery, and Enforcement Act requires lending institutions to report the race, sex, and income of all those individuals *applying* for mortgage loans so that federal regulators can more easily detect discrimination in home mortgage lending.

These laws do not tell lenders *who* should receive credit. Rather, they require each lending institution to focus on the facts pertinent to each individual loan application, case by case, and prevent lenders from lumping their customers into categories (such as by age, sex, or race) and making credit decisions solely on the basis of group membership.

Predatory Lending and Subprime Loans

One of the most controversial consumer credit practices today is **predatory lending**—an abusive practice among some lenders, often associated with home mortgage and home equity loans. This usually consists of granting **subprime loans** to borrowers with below-average credit records and, in the eyes of the regulatory community at least, charging excessive fees for these lower-quality loans. Subprime loans tend to go to borrowers with a record of delinquent payments, previously charged-off loans, bankruptcies, or court judgments to pay off.

Some predatory lenders may insist on unnecessary and expensive loan insurance in amounts well beyond what is needed to cover actual loan risk. Excessive loan insurance costs and higher interest rates may result in unaffordable payments for weak borrowers. This kind of abusive lending practice increases the chances that low-credit-rated borrowers will lose their homes.

In 1994 the U.S. Congress passed the Home Ownership and Equity Protection Act, aimed at protecting home buyers from loan agreements they couldn't afford to carry. Loans with annual percentage rates (APR) of 10 percentage points or more above the yield on comparable maturity U.S. Treasury securities and closing fees above 8 percent of the loan amount were defined as "abusive." When those high rates are charged, the consumer has

a minimum of six days (three days before plus three days after a home loan closing) to decide whether or not to proceed with the transaction. If a credit-granting institution fails to properly disclose the costs and risks or includes prohibitive terms in a loan agreement, the borrower has up to three years to rescind the transaction, and creditors may be liable for damages.

Subprime lending is difficult to regulate. It can open the door to predatory lending practices. However, the subprime market also opens up opportunities for access to credit among those households who are unable to access credit in any other way.

Concept Check

18–9. What laws exist today to give consumers fuller disclosure about the terms and risks of taking on credit?

18–10. What legal protections are available today to protect borrowers against discrimination? Against predatory lending?

18–11. In your opinion, are any additional laws needed in these areas?

18–8 Real Estate Loans

Depository institutions and finance and insurance companies, to name just a few financial institutions, make real estate loans to fund the acquisition of real property—homes, apartment complexes, shopping centers, office buildings, warehouses, and other physical structures, as well as land. Real estate lending is a field unto itself, possessing important differences from other types of loans. These credits may be either short-term **construction loans,** paid out within months as a building project is completed, or long-term mortgages that may stretch out 25 to 30 years in order to provide permanent financing for the acquisition or improvement of real property. Whatever their maturity, real estate loans have been one of the most rapidly growing areas of lending over the past decade, climbing at a double-digit growth rate and reaching nearly a third of all bank assets as the 21st century began. Unfortunately, such loans can be among the riskiest forms of credit extended to customers.

Differences between Real Estate Loans and Other Loans

Real estate loans differ from most other kinds of loans in several respects. First, the average size of a real estate loan is usually much larger than the average size of other loans, especially among consumer and small business loans. Moreover, certain mortgage loans, mainly on single-family homes, tend to have the longest maturities (from about 15 years to 30 years) of any loan made. Long-term lending of this sort carries considerable risk for the lending institution because many things can happen—including adverse changes in economic conditions, interest rates, and the financial and physical health of the borrower—over the term of such a loan.

With most other types of loans the projected cash flow or income of the borrower is most important in the decision to approve or deny a loan application. With real estate lending, however, the condition and value of the property that is the object of the loan are nearly as important as the borrower's income. In real estate lending, competent property appraisal is vitally important to the loan decision. Such appraisals must conform to industry standards and government regulations, particularly if it is likely the mortgage will be sold in the secondary market.

Filmtoid
What 1989 film documentary reveals the negative effects the closure of a GM plant had on the property values in Flint, Michigan, and the inability of laid-off workers to meet debt obligations?
Answer: *Roger and Me*.

One such regulation is the Federal National Mortgage Association's requirement that any home mortgage loans FNMA purchases must come from borrowers whose monthly house payment (including loan principal and interest, taxes, and insurance) does not

Factoid
Which government agency holds more home mortgages than any other? And who comes in second place?
Answer: Federal National Mortgage Association or Fannie Mae and then the Federal Home Loan Mortgage Corporation or Freddie Mac.

normally exceed 28 percent of their monthly gross income and the sum of whose regular monthly payments (including housing costs) does not exceed 36 percent of monthly gross income. The maturity of the home mortgage loan cannot be less than 10 years or more than 30 years, and the property must be appraised by a FNMA–approved appraiser. Fannie Mae's regulations also stipulate that the borrower's credit report cannot be more than 90 days old.

Changes in regulations and the shifting fortunes of different financial institutions have resulted in major changes in lenders granting mortgage loans. While banks often prefer to make shorter-term property loans (especially construction loans), the mortgage banking subsidiaries of financial holding companies now account for a major portion of all home mortgage loans. These subsidiary firms have strong market contacts and can usually resell any home mortgage loans they make in short order to long-distance mortgage lenders, such as life insurers, savings banks, or foreign investors. Mortgage subsidiaries usually establish short-term "warehouse lines" at other lending institutions in order to provide them with adequate funding to carry the mortgages they originate or buy until they sell those same loans to other investors.

Factors in Evaluating Applications for Real Estate Loans

In evaluating real estate loan applications loan officers must consider the following:

1. The amount of the down payment planned by the borrower relative to the purchase price of mortgaged property is a critical factor in determining how safe a mortgage loan is from the lender's point of view. In general, the higher the ratio of loan amount to purchase price, the less incentive the borrower has to honor all the terms of the loan because the borrower has less equity in the property. When mortgages reach 90 percent or more of the property's purchase price, mortgage insurance becomes important and the lender must place added emphasis on assessing the borrower's sense of responsibility.
2. Real property loans often bring in other business (such as deposits and future property-improvement loans) from the borrowing customer. Therefore, they should be viewed in the context of a *total relationship* between borrower and lender. For example, the lender might be willing to give a mortgage loan customer a somewhat lower loan rate in return for a pledge that the customer will use other financial services.
3. Home mortgage loans require the real estate loan officer to assess the following aspects of each credit application:
   a. *Amount and stability of the borrower's income*, especially relative to the size of the mortgage loan and the size of payments required.
   b. *The borrower's available savings and where the borrower will obtain the required down payment*. If the down payment is made by drawing down savings significantly, the customer has fewer liquid assets available for future emergencies, such as paying off the mortgage if someone in the family becomes ill or loses a job.
   c. *The borrower's track record in caring for and managing property*. If the mortgaged property is not properly maintained, the lender may not fully recover the loaned funds in a foreclosure and sale.
   d. *The outlook for real estate sales in the local market area in case the property must be repossessed*. In a depressed local economy with substantial unemployment, many homes and business structures are put up for sale often with few active buyers. The lender could wait a long time for recovery of its funds.

Factoid
Who is the leading holder of home mortgage loans inside the United States?
Answer: Pools or trusts holding securitized mortgage loans, followed by commercial banks, thrift institutions, credit unions, and finance companies.

e. The outlook for market interest rates. While the secondary market for floating-rate mortgage loans has improved in recent years, fixed-rate home mortgages are still typically easier to sell.

During the 1970s and 1980s, severe problems appeared in the real estate loan portfolios of many home mortgage lenders. Several of the largest banks in the United States, for example, foreclosed on and sold commercial and residential properties at deeply discounted prices. In response to these problems, Congress enacted Title XI of the Financial Institutions Reform, Recovery, and Enforcement Act of 1989. Title XI requires the use of state-certified or licensed appraisers for real estate loans that come under the regulatory authority of the federal banking agencies. The four chief federal regulators of banks and thrifts have recently ruled that certified or licensed appraisals are required for most real estate loans that exceed $250,000 in amount. (Renewals of existing loans are generally exempt from specific appraisal requirements.) For smaller-denomination real estate loans, a lender must follow "prudent" evaluation standards and document in writing its valuation of any property that is the basis for a real estate loan, including the assumptions upon which estimates of property values are based.

Further tightening of standards and regulations surrounding real estate loans occurred when Congress passed the National Affordable Housing Act in 1990. This law and its supporting regulations require that applicants for mortgage loans must be given a disclosure statement indicating whether the servicing rights (i.e., the right to collect payments from the borrower) could be transferred to another institution that borrowers will have to deal with during the life of their loan. In an effort to reduce the loss of homes through foreclosure, Congress stipulated that lenders must tell borrowers delinquent in repaying their loans if the lender counsels home owners or knows of any nonprofit organizations that provide such counseling.

Concept Check

18–12. In what ways is a real estate loan unique compared to other kinds of bank loans?

18–13. What factors should a lender consider in evaluating real estate loan applications?

Home Equity Lending

In the United States, the 1986 Tax Reform Act opened up even wider the rapidly growing field of **home equity loans.** Under these credit programs, home owners whose residence has appreciated in value can use the *equity* in their homes—the difference between a home's estimated market value and the amount of the mortgage loans against it—as a borrowing base. Thus, if a home was purchased for $100,000 and has a $70,000 mortgage loan against it today and, due to inflation and growing demand for housing, its market value is now $150,000, the home owner will have a *borrowing base* of about $80,000 (i.e., $150,000 – $70,000). This base might be drawn upon as collateral for a loan to remodel the home, purchase a second home, or for some other legitimate purpose.

Two main types of home equity loans are in use today. The first is the *traditional home equity loan*—a closed-end credit covering a specific period of months and years and used mainly for home improvements. Traditional equity credits are normally repaid in equal installments, quarterly or monthly, and are most frequently secured by a second mortgage against the borrower's home. This lump-sum credit usually carries a fixed interest rate.

Many lenders have seized upon the home equity lending opportunity by offering consumers a second and newer type of home equity loan—*lines of credit against a home's borrowing base.* They usually determine the credit limit on these home equity lines by taking

a percentage of the appraised value of the borrowing customer's home (say, 75 percent) and subtracting the amount the customer still owes on the existing loan. That is:

Appraised value of home	$150,000
Times percentage allowed	×75%
Equals percentage of home's appraised value	$112,500
Minus balance still owed on home mortgage	−70,000
Equals maximum credit line available to customer	$ 42,500

The maximum loan amount allowed may be adjusted based on the customer's income and debts plus his or her past repayment record with previous loans.

These credit lines can be used for any legitimate purpose, not just housing-related expenditures—for example, to purchase an automobile or finance a college education. Moreover, many home-equity credit lines are revolving credits—the customer can borrow up to the maximum amount of the loan, repay all or a portion of the amount borrowed, and borrow again up to the stipulated maximum amount any number of times until the credit line matures, usually within 1 to 10 years. Because home equity–based credit tends to be longer term and more secure, it often carries a lower loan rate and longer payout period, thus reducing the borrower's installment payments below the required payments on more conventional consumer loans. Traditional home equity loans normally are priced using longer-term interest rates, while home equity credit lines often have interest rates tied more closely to short-term rates, such as the prime rate. While normally carrying variable rates, some equity credit lines carry a fixed-rate option for a fee.

Home equity borrowers tend to be more affluent than the average homeowner. They report higher levels of personal income and more equity in their homes. Home equity borrowers also tend to be older customers with a longer period of home ownership and a longer record of employment. Most home equity customers are in their late 40s or older; many are in or approaching retirement and have substantially paid off their first home mortgage. Most equity loans are used to pay for home improvements, repay old loans, finance an education, fund vacations, or cover medical costs.

Loan officers need to exercise great care with home equity loan requests. For one thing, they rest on the assumption that housing prices will not decline significantly. Yet there is ample historical evidence that economic downturns and rising unemployment can flood local housing markets with homes for sale, depressing prices. While in most states a lender can repossess a home pledged as collateral for a loan, often the lending institution has difficulty selling the home for a price that recoups all its funds plus all the costs incurred in making and servicing the loan and taking possession of the collateral. There is also room to question the wisdom of using an appreciating asset, such as a house, to purchase an asset not likely to appreciate, such as an automobile, furniture, or appliances. Loan officers must exercise care in granting such credit requests, lending only a portion (perhaps no more than 60 or 70 percent in riskier markets) of the home's estimated equity value in order to allow an adequate cushion should real estate markets turn down.

Moreover, strict regulations at the federal level require lenders to put an interest rate cap on how high loan rates can go on floating-rate home equity loans. Lenders must provide their customers with information on all loan charges and risks under a required Truth in Lending Act disclosure statement. The consumer's overriding risk is that the lender would be forced to repossess his or her home. Not only does such an event destroy customer relationships and result in adverse publicity for the lending institution, but it may also saddle the lender with an asset that could be difficult to sell.

The Consumer Protection Act of 1988 prohibits a home equity lender from arbitrarily canceling a loan and demanding immediate payment. However, if the lender can show that the customer has committed fraud or misrepresentation, failed to pay out the loan as

promised, or not kept up the value of the property involved, collection of the loan can be accelerated. The home equity loan customer, then, has little choice but to pay up or surrender the home that was pledged as collateral, unless protected by law.

The Most Controversial of Home Mortgage Loans: Interest-Only Mortgages

By the middle of the current decade nearly 70 percent of American families owned their own home and 30 percent of the value of U.S. households' assets came from their ownership of residential property. Not surprisingly, home mortgage credit has become the number one asset for many financial institutions.

Yet, recent soaring home prices have roused the concern of many mortgage lenders. The incredible housing boom of the past decade could become the "housing bust" of the new era. Fewer and fewer new home buyers seem able to afford the high-priced homes present in many parts of the United States and overseas. Many households are already deeply in debt as credit card balances approached record levels. How can households seeking new homes afford to buy them?

Key URL
Recently the U.S. Mortgage Bankers Association set up a consumer education site to help home buyers understand the terms of their home loans. See **www.homeloanlearningcenter.com.**

Clever mortgage bankers have quickly come up with an alternative—offering cash-strapped families an *interest-only adjustable mortgage loan* or **option ARM.** With this type of credit the home buyer is obligated to pay only the interest on his or her home loan for an initial period—for example, the first 10 years. Then after that initial time interval *both* principal and interest payments would have to be made until the loan was paid off. Unfortunately, some lenders failed to tell their clients that by paying only the interest on these new instruments, the principal payments would be much higher when these eventually came due because there would be a shorter time available to pay off their loan. To many observers interest-only loans resembled predatory lending against lower-income families.

Some mortgage bankers countered, however, that most families stay only a few years in any one home. A rough average is 7 to 8 years and then a new family moves in and takes out a new mortgage. Therefore, the interest-only loan customer may not stay in his or her home long enough to worry about a future sharp rise in his or her monthly home loan payments. However, what some mortgage bankers failed to convey was that a lack of repayment of principal meant that the family selling their home would gain little equity and might have a lot less money to make a down payment on their next home.

Equally problematic is the fact that most such loans carry an adjustable loan rate (though fixed-rate interest only home mortgages are on the rise). Therefore, in an environment of rising market interest rates many interest-only home borrowers face increased principal payments and higher interest payments down the road, raising the specter of possible bankruptcy or perhaps having to surrender their home. Mortgage lenders have learned that it's critically important to make sure their borrowing customer is fully informed about the *risks*, as well as the advantages, of any home mortgage contract in order to head off trouble for *both* home buyer and lender.

18–9 The Changing Environment for Consumer and Real Estate Lending

Powerful forces are reshaping the extension of credit to individuals and families today. For one thing, the population is *aging* rapidly in the United States, Japan, and other industrialized nations. As people grow older, they tend to make *less* use of credit and to pay down their outstanding debts. This suggests that the total demand for consumer credit per capita eventually may slow, forcing lenders to fight hard for profitable consumer loan accounts. Indeed, in the home equity credit line market there are already signs of slowing after several years of double-digit growth. Moreover, deregulation has brought more lenders into the consumer credit field. Financial institutions hoping to protect their revenues in this field will need to construct their fee schedules carefully and develop new marketing strategies.

A related trend in consumer lending—*point-of-sale loans*—also reflects changes going on in the population to whom lenders market their credit services. More loan customers today demand speed and convenience in the lending process. Many consumers want credit available instantly when they are making purchases rather than having to drive to a lending institution to request a loan. Many lenders today are offering *indirect loans* through dealers in autos, home appliances, and other big-ticket items.

The dealer prepares a credit agreement and phones or faxes the borrowing customer's information to the lender, seeking quick approval. Other lending institutions are offering *preapproval credit programs* where the customer phones in or mails credit information to the lender and gets approval for a loan before a purchase is made. In this instance the store or dealer where the customer makes a purchase can simply verify with the lending institution that a loan has already been approved.

These newer approaches reduce the need to enter a lending institution and result in more *indirect lending* at the point at which a sale is being made, rather than direct lending to the customer at the branch office of a lending institution. The result is greater convenience for the customer, but lenders must be alert to the added risks involved in making quick credit decisions and the possible loss of direct relationships with their customers, reducing opportunities to sell additional services.

18–10 A New Federal Bankruptcy Code Appears

Yet another powerful trend in consumer lending emerged recently as households in record numbers sought protection from their creditors under the U.S. bankruptcy code. Individuals filing bankruptcy petitions soared to well over a million annually as the 21st century opened, anticipating that a new, less forgiving bankruptcy code would soon become law. Most sought to have their debts completely erased, to literally "start over."

On April 20, 2005, President George W. Bush signed the Bankruptcy Abuse Prevention and Consumer Protection Act. The net effect of the new code is likely to make filing for bankruptcy more expensive and time-consuming than in the past, which, in turn, may discourage some consumers from taking on more debt and increasing their risk. Debtors seeking bankruptcy relief will be required to submit more personal information to the bankruptcy court (including payroll stubs and tax returns) and their attorney must verify the accuracy of the information submitted.

Consumers seeking debt relief must complete a U.S. Trustee–approved credit counseling program before becoming eligible to file for bankruptcy. The hope is that some consumers who would have filed may discover instead that a counselor-prepared repayment plan would better meet their needs. If the consumer still elects to seek bankruptcy protection he or she must complete an approved course on the principles of personal financial management before the court finally discharges their debts. This provision is designed to help debt-prone consumers avoid similar problems in the future.

Key URLs
For additional information concerning the new federal bankruptcy code see the Web site maintained by the U.S. Trustees' Office at **www.usdoj.gov/ust/eo/ust_org/about_ustp.htm**. For publications in the bankruptcy area, see **www.nolo.com/**.

A *means test*—an average of a debtor's past six months of "current monthly income"—determines whether an applicant must file under either Chapter 7 or Chapter 13 of the bankruptcy code. Under the old code most individuals filing for debtor relief went the Chapter 7 route, which wipes out all or most debts and allows them to start fresh. But the new code makes it harder to qualify for this preferred form of bankruptcy. In particular, people who earn more than their state's median household income must file under Chapter 13, which requires a court-approved repayment plan.

Overall, the new bankruptcy code is expected to reduce the cost of credit for the average family borrower, particularly if it reduces the incidence of bad loans. It may also slow the growth of credit card and installment loans as consumers become more cautious and shift more of their borrowing toward housing-related loans because a bankrupt's home may be protected from seizure by creditors depending upon the terms of state law.

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Concept Check

18–14. What is home equity lending, and what are its advantages and disadvantages for banks and other consumer lending institutions?

18–15. How is the changing age structure of the population likely to affect consumer loan programs? What other forces are reshaping household lending today?

18–16. What challenges have U.S. bankruptcy laws provided for consumers and those lending money to them?

18–11 Pricing Consumer and Real Estate Loans: Determining the Rate of Interest and Other Loan Terms

A financial institution prices every consumer loan by setting an interest rate, maturity, and terms of repayment that both lender and customer find comfortable. While many consumer loans are short term, stretching over a few weeks or months, long-term loans to purchase automobiles, home appliances, and new homes may stretch from one or two years all the way out to 25 or 30 years. Indeed, in some cases, such as with automobile loans, consumer loan maturities have been extended in recent years as higher product prices have encouraged lenders to grant longer periods of loan repayment so consumers can afford the monthly payments. A loan officer will usually work with a customer, proposing different loan maturities until a repayment schedule is found that, when taking into consideration the consumer's other obligations, fits current and projected household income. Competition among credit suppliers is also a powerful factor shaping consumer loan rates today. Where lenders face intense competition for loans, interest rates tend to be driven down closer to production costs.

The Interest Rate Attached to Nonresidential Consumer Loans

The Cost-Plus Model

Many consumer loans are priced off some base or cost rate, with a profit margin and compensation for risk added. For example, the rate on a consumer installment loan may be figured from the *cost-plus model:*

$$\text{Loan rate paid by the consumer} = \text{Lender's cost of raising loanable funds} + \text{Nonfunds operating cost (including wages and salaries of lender personnel)} + \text{Premium for risk of customer default} + \text{Premium for term risk with a longer-term loan} + \text{Desired profit margin} \quad \textbf{(18–1)}$$

Lending institutions use a wide variety of methods to determine the actual loan rates they will offer to their customers. Among the more familiar methods for calculating consumer loan rates are the annual percentage rate (or APR), simple interest, the discount rate, and the add-on rate method.

Annual Percentage Rate Under the terms of the Truth-in-Lending Act, lenders must give the household borrower a statement specifying the **annual percentage rate (APR)** for a proposed loan. The APR is the internal rate of return (annualized) that equates expected total payments with the amount of the loan. It takes into account how fast the loan is being repaid and how much credit the customer will actually have use of during the life of the loan.

For example, suppose a consumer borrows $2,000 for a year, paying off the loan in 12 equal monthly installments, including $200 in interest. Each month the borrower makes

Key URL
To gather additional information on pricing consumer loans and determining customer loan payments, amortization rates, credit grades, and prepayment schedules see, for example, **www.hsh.com**.

a payment of \$183.33 in principal and interest. The periodic interest rate may be found using a financial calculator or spreadsheet such as Excel and then annualized by multiplying it by the number of payment periods in a year in order to get the APR. You are looking for the periodic rate of return associated with 12 payments of \$183.33 that have a present value (amount received at time of loan) of \$2,000. The rate calculated is 1.4974 percent per month,[1] which equates to an APR of 17.97 percent (1.4974 × 12). Providing the APR allows borrowers to *compare* a particular loan rate with the loan rates offered by other lenders. Comparing loan rates encourages individuals to shop around for credit.

For another APR example, suppose that you, as loan officer, quote your customer an APR of 12 percent on a one-year loan of \$1,000 to be repaid monthly. The customer asks, *How much will I pay in finance charges under the terms of this loan?* To provide the answer to this question, you must determine the monthly payments for a 12-month (period) loan for \$1,000 (present value) at a periodic interest rate of 1 percent (12%/12). Using a financial calculator or spreadsheet, you find that the monthly payment is \$88.85.[2] The sum of all payments over the life of the loan is \$1,066.20 (88.85 × 12) where \$1,000 is the loan principal. The total finance charge to the customer is \$1,066.20 – \$1,000 = \$66.20 over the life of the loan.

On the other hand, suppose the customer is told he or she must pay \$260 in finance charges to get a \$2,000 loan for 24 months. This means the consumer makes payments of \$94.17 (2,260/24). What APR is this customer being quoted? The periodic rate for 24 monthly payments of \$94.17 with a present value of \$2,000 is 1.002 percent.[3] The APR is the periodic rate annualized (1.002 × 12) or 12.02 percent. Clearly, this customer is being quoted a 12 percent APR.

Simple Interest In various consumer markets around the globe use is frequently made of the so-called **simple interest method.** This approach, like the APR, adjusts for the length of time a borrower actually has use of credit. If the customer is paying off a loan gradually, the simple interest approach determines the declining loan balance, and that reduced balance is then used to determine the amount of interest owed.

For example, suppose the customer asks for \$2,000 for a year at a simple interest rate of 12 percent in order to purchase some furniture. If none of the principal of this loan is to be paid off until the year ends, the interest owed by the customer is:

$$\text{Interest owed} = \text{Principal} \times \text{Rate} \times \text{Time} \quad \textbf{(18–2)}$$

or

$$I = \$2{,}000 \times 0.12 \times 1 = \$240$$

At maturity the customer will pay the lender \$2,240, or \$2,000 in principal plus \$240 in interest.

Now assume instead that the loan principal is to be paid off in four quarterly installments of \$500 each. Total payments due will be:

First quarter:	\$500 + \$2,000 × 0.12 × 1/4 = \$560
Second quarter:	\$500 + \$1500 × 0.12 × 1/4 = \$545
Third quarter:	\$500 + \$1000 × 0.12 × 1/4 = \$530
Fourth quarter:	\$500 + \$500 × 0.12 × 1/4 = \$515
Total payments due:	\$2,000 + \$150 = \$2,150

Clearly, with simple interest the customer saves on interest as the loan approaches maturity.

[1] Using a TI BAII plus financial calculator where N = 12, I/Y = ?, PV = 2,000, Pmt = – 188.33, and FV = 0, the periodic rate of return is 1.4974%.
[2] This is calculated using N = 12, I/Y = 1%, PV = 1,000, Pmt = ?, and FV = 0.
[3] 1.002 percent is obtained using N = 24, I/Y = ?, PV = –2,000, Pmt = 94.17, and FV = 0.

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The Discount Rate Method While most consumer loans allow the customer to pay off the interest owed gradually over the life of a loan, the **discount rate method** requires the customer to pay interest up front. Under this approach, interest is deducted *first,* and the customer receives the loan amount *less* any interest owed.

For example, suppose the loan officer offers a consumer $2,000 at a 12 percent loan rate. The $240 in interest ($2,000 × 0.12) is deducted from the loan principal; the borrower receives $2,000 minus $240, or $1,760. When the loan matures, however, the customer must pay back the full $2,000. The borrower's effective loan rate is $240/$1,760 or 13.6 percent.

The Add-On Loan Rate Method One of the oldest loan rate calculation methods is the **add-on method.** Any interest owed is added to the principal amount of the loan before calculating the required installment payments. For example, if the customer requests $2,000 and is offered a 12 percent add-on interest rate and a repayment plan of 12 equal monthly installments, the total payments due will be $2,000 in principal plus $240 in interest, or $2,240. Each monthly payment will be $186.67 ($2,240 ÷ 12), consisting of $166.67 in loan principal and $20 in monthly interest. Because the borrower has only about $1,000 available during the year, on average, the effective loan rate is approximately two times 12 percent or 24 percent. Only if the loan is paid off in a single lump sum at the end will the add-on rate equal the simple interest rate.

Rule of 78s A rule of thumb used to determine how much interest income a lender is entitled to accrue at any point in time from a loan that is being paid out in monthly installments is known as the **Rule of 78s.** This is particularly important when a borrower pays off a loan early and may, therefore, be entitled to a rebate of some of the interest charges. The Rule of 78s arises from the fact that the sum of the digits 1 through 12 is 78. To determine the borrowing customer's interest rebate from early repayment of an installment loan, total the digits for the months remaining on the loan and divide that sum by 78. For example, suppose a consumer requests a one-year loan to be repaid in 12 monthly installments, but is able to repay the loan after only nine months. This customer would be entitled to receive back as an interest rebate

$$\frac{1 + 2 + 3}{1 + 2 + \cdots + 11 + 12} \times 100 = \frac{6}{78} \times 100 = 7.69 \text{ percent} \quad \textbf{(18–3)}$$

of the total finance charges on the loan. The lender is entitled to keep 92.31 percent of those finance charges.

Concept Check

18–17. What options does a loan officer have in pricing consumer loans?

18–18. Suppose a customer is offered a loan at a discount rate of 8 percent and pays $75 in interest at the beginning of the term of the loan. What net amount of credit did this customer receive? Suppose you are told that the effective rate on this loan is 12 percent. What is the average loan amount the customer has available during the year?

18–19. See if you can determine what APR you are charging a consumer loan customer if you grant the customer a loan for five years, payable in monthly installments, and the customer must pay a finance charge of $42.74 per $100.

18–20. If you quote a consumer loan customer an APR of 16 percent on a $10,000 loan with a term of four years that requires monthly installment payments, what finance charge must this customer pay?

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Insights and Issues

CONSUMER LOAN RATES: RECENT SURVEYS AND WHAT THEY REVEAL

Recently the Federal Reserve Board began surveying banks and finance companies for the loan rates they quote as well as selected other loan terms for automobile loans and for personal credit. An example of the recent loan terms quoted on these different loan types is shown below.

Terms on Popular Consumer Loans (Data for February 2005)

Type of Loan and Lending Institution	Average Annual Loan Rate (in percent)	Type or Characteristic of Loan	Survey Average Values
Commercial banks:		Average maturity of loans in months:	
48-month new car loan	6.86%	New car loans	59.1 mo.
24-month personal loan	12.01	Used car loans	57.9 mo.
Credit cards:		Loan-to-value ratios:	
All accounts	12.31	New car loans	89%
Accounts assessed interest	14.13	Used car loans	98
Auto finance companies:		Amount financed in dollars:	
New car loans	4.68	New car loans	$24,290
Used car loans	9.36	Used car loans	15,453

Source: Survey by the Board of Governors of the Federal Reserve System. See the *Federal Reserve Bulletin* for the latest survey results.

Surveying the table above reveals some interesting associations between consumer loan rates and other features of a consumer loan, such as maturity, cost, and risk. We notice, for example, that credit card loans, which are among the riskiest in terms of loan default and losses due to fraud, tend to carry the highest average interest rates. Automobile loans are generally cheaper than personal loans because auto loans are secured by marketable collateral—the automobile itself—whereas many personal loans are either unsecured or have collateral pledged that is more difficult to sell.

We note also that new car loan rates tend to be lower than used car loan rates. The newer the vehicle, the easier it generally is to sell should the borrower be unable to repay, and lenders find that new car owners tend to take better care of their vehicles. Moreover, car rental companies have tended to keep their fleets for longer periods, so the supply of used cars has diminished. As a result, many used car loans are now extended for maturities that equal or exceed new car loan maturities, and lenders have been willing to extend a larger percentage of a used car's purchase price in the form of a loan.

Overall, there is evidence that consumers have recently become much more sensitive to differences in loan rates on different types of loans offered by different lenders. Indeed, even the smallest consumer borrowers with little financial education are now increasingly shopping around and learning to refinance everything from automobile, mobile home, and home mortgage loans to credit card obligations. The result is narrower spreads on consumer loans and greater consolidation among consumer lending institutions.

Interest Rates on Home Mortgage Loans

For nearly half a century, stretching from the Great Depression of the 1930s into the 1970s, most loans to finance the purchase of new homes were **fixed-rate mortgages (FRMs)**—that is, loans with a *fixed interest rate* that the borrower could rely upon. In the early 1970s, the pressure of inflation and more volatile interest rates gave rise to adjustable-rate home mortgage loans. Then in 1981, both the Comptroller of the Currency and the Federal Home Loan Bank Board authorized the offering of **adjustable-rate mortgages (ARMs)** for all federally chartered depository institutions and these flexible-rate loans, now amount to about a third of the new home loans granted each year.

The popularity of ARMs may be attributed to aggressive marketing of these loans by lenders seeking to make the yields on their earning assets more responsive to interest rate

movements. Many lending institutions have offered teaser rates that are significantly below loan rates on FRMs. Because ARMs often carry lower initial interest rates than fixed-rate mortgages, they allow more families to qualify for a home mortgage loan. Some home mortgage lenders have offered *cap rates* on ARMs. For example, the lender may agree not to raise the loan rate more than two percentage points in any given year or more than five percentage points over the life of the loan, no matter how high other interest rates go.

Whether a customer takes out an FRM or an ARM, the loan officer must determine what the initial loan rate will be and, therefore, what the monthly payments will be. Each monthly payment on a home mortgage loan reduces a portion of the principal of the loan and a portion of the interest owed on the total amount borrowed. With the majority of mortgage loan contracts today, monthly payments early in the life of the loan go mainly to pay interest. As the loan gets closer to maturity, the monthly payments increasingly are devoted to reducing the loan's principal.

Loan officers and customers may determine if a mortgage loan is affordable by figuring the required monthly payment given the interest rate the mortgage lender proposes to charge. Such problems are applications of the time value of money that would usually be calculated using a financial calculator or spreadsheet. The formula for monthly payments is:

$$\text{Customer's monthly mortgage payment} = \frac{\text{Amount of loan principal} \times \left(\frac{\text{Annual loan rate}}{12}\right) \times \left(1 + \frac{\text{Annual loan rate}}{12}\right)^{t \times 12}}{\left[\left(1 + \frac{\text{Annual loan rate}}{12}\right)^{t \times 12} - 1\right]} \tag{18–4}$$

For example, the required monthly payment for a \$50,000, 25-year mortgage loan calculated at the fixed rate of 12 percent is \$526.61.[4] The total in payments over the life of the loan is \$526.61 × 25 × 12 = \$157,983. If you subtract the \$50,000 in principal, you will find that the borrower will pay \$107,983 in interest over the life of the loan. The actual monthly payment normally will vary somewhat from year to year even with an FRM due to changes in property taxes, insurance, and other fees that typically are included in each monthly payment.

In the foregoing example we calculated the required monthly payments on a fixed-rate mortgage. We can, of course, use the same method to calculate the required monthly payment on an adjustable rate mortgage loan by simply plugging in a new interest rate each time that interest rates change. For example, assume that, as in the previous FRM example, the initial loan rate for an ARM is also 12 percent. However, after one year (i.e., 12 monthly payments) has elapsed, the mortgage loan rate rises to 13 percent. In this case the customer's monthly payments would increase to \$563.30:[5]

$$\text{Each monthly payment} = \frac{\$49{,}662.30 \times \left(\frac{0.13}{12}\right) \times \left(1 + \frac{0.13}{12}\right)^{24 \times 12}}{\left(1 + \frac{0.13}{12}\right)^{24 \times 12} - 1} = \$563.30$$

This example assumes that the loan rate increased to 13 percent beginning with the 13th monthly payment. Note that after one year the principal of the loan (which originally stood at \$50,000) had dropped to \$49,662.30 due to the monthly payments made during the first 12 months.[6] When considering whether or not to approve a customer's

[4]Using a financial calculator (TI Ball Plus), N = 25 × 12, I = 12%/12, PV = –50,000, PMT = ?, and FV = 0.
[5]Using the financial calculator once again, N = 24 × 12, I = 13%/12, PV = 49,662.30, PMT = ?, and FV = 0.
[6]The \$49,662.30 is calculated using N = 24 × 12, I = 12%/12, PV = ?, PMT = 526.61, and FV = 0.

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request for an adjustable-rate loan, the loan officer must decide whether a rise in interest rates is likely and whether the customer has sufficient budget flexibility and future earnings potential to handle the varying loan payments that can exist with an ARM.

Charging the Customer Mortgage Points

Home mortgage loan agreements often require borrowers to pay an additional charge up front called **points.** This extra charge is determined by multiplying the amount of the home mortgage loan by a specific percentage figure. For example, suppose the borrower seeks a $100,000 home loan and the lender assesses the borrower an up-front charge of two points. In this case the home buyer's extra charge would be

$$\begin{array}{c}\text{Dollar amount}\\ \text{of points}\\ \text{charged on}\\ \text{a home}\\ \text{mortgage}\\ \text{loan}\end{array} = \begin{array}{c}\text{Amount}\\ \text{of the}\\ \text{mortgage}\\ \text{loan}\end{array} \times \begin{array}{c}\text{Number}\\ \text{of points}\\ \text{charged}\\ \text{by the}\\ \text{lender}\end{array} = \$100{,}000 \times 0.02 = \$2{,}000 \qquad \textbf{(18–5)}$$

By requiring the borrower to pay something extra over and above the interest owed on his or her home loan, a lender can earn a higher effective interest rate. This extra yield can be found by deducting from the amount of the loan the dollar amount of points charged and by adding the dollar amount of points to the interest owed on the loan. In this instance the borrower has available for his or her use, not the full amount of the mortgage loan, but rather the loan amount *less* the points assessed by the lender.

Concept Check

18–21. What differences exist between ARMs and FRMs?

18–22. How is the loan rate figured on a home mortgage loan? What are the key factors or variables?

18–23. What are *points?* What is their function?

Summary

Lending to consumers has been among the most popular financial services offered by financial-service providers in recent years. Among the most important points discussed in this chapter are the following:

- Loans and other financial services extended to households represent one of the most important sources of financial-service revenues and deposits today as banks, credit unions, savings associations, and finance and insurance companies all compete aggressively for the consumer's account.
- Consumer credit represents an important supplement to business credit services, providing financial firms with a more diversified customer base and helping to reduce the exposure of lenders to the impact of business cycles when revenues expand and contract.
- Consumer lending presents special challenges to loan officers due to higher-than-average default rates related to the vulnerability of families to loss of employment, illness, and other adverse circumstances.
- The keys to successful consumer lending today center on the ability to process large volumes of credit requests quickly so the household borrower receives a fast decision

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from the lender. Automation has become a powerful force with the use of *credit-scoring systems* to mathematically evaluate each household's credit capacity and credit bureaus that give lenders quick access to consumer credit histories.

- Loans and other financial services sold to households have increasingly been shaped by federal and state laws and regulations designed to promote *(a)* fuller disclosure of contract terms and *(b)* greater fairness in the marketplace, outlawing discrimination on the basis of race, sex, religion, and other irrelevant factors. These rules serve to promote competition, encourage households to shop for credit, and, hopefully, lead to more informed household decision making.
- Real estate loans are most often directed at households seeking places to live. Real estate credit provides the financial resources to support the construction of homes, condominiums, apartments, shopping centers, office buildings, and other forms of real property. Banks and many of their competitors make both short-term mortgage credit (usually in the form of construction loans) and long-term mortgages available to businesses and households. Officers and staff of real estate lending institutions must have multiple skills in assessing property values, real estate law, and the extensive regulations that surround this field. More than any other type of loan, real-estate lending depends heavily on judging the value and outlook for a loan's collateral.
- Pricing consumer and real estate loans is challenging as several different techniques have emerged. With so many different methods available for calculating loan interest rates and other credit terms, confusion abounded for lenders and customers until the Truth in Lending Act was passed in the United States, requiring lenders to disclose the *APR* (annual percentage rate) that applies to a customer's loan, yielding a common standard to compare one proposed loan against another.
- A trend is unfolding today toward more *market-sensitive loan rates* in order to reduce interest rate risk on the part of consumer and real estate lenders, particularly in the home mortgage field where fixed-rate and adjustable-rate loans compete against each other for the customer's allegiance. In the case of adjustable-rate credit, loan officers must be especially careful in deciding whether a borrowing customer has sufficient budgetary flexibility to be able to adjust to variable loan payments, especially if interest rates are expected to rise during the life of a loan.

Key Terms

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Problems and Projects

1. The Childress family has applied for a $5,000 loan for home improvements, especially to install a new roof and add new carpeting. Bob Childress is a welder at Ford Motor Co., the first year he has held that job, and his wife sells clothing at Wal-Mart. They have three children. The Childresses own their home, which they purchased six months ago, and have an *average* credit rating, with some late bill payments. They have a telephone, but hold only a checking account with a bank and a few savings bonds. Mr. Childress has a $35,000 life insurance policy with a cash surrender value of $1,100. Suppose the lender uses the credit scoring system presented in this chapter and denies all credit applications scoring fewer than 360 points. Is the Childress family likely to get their loan?
2. Mr. and Mrs. Napper are interested in funding their children's college education by taking out a home equity loan in the amount of $24,000. Eldridge National Bank is willing to extend a loan, using the Nappers' home as collateral. Their home has been appraised at $110,000, and Eldridge permits a customer to use no more than 70 percent of the appraised value of a home as a borrowing base. The Nappers still owe $60,000 on the first mortgage against their home. Is there enough residual value left in the Nappers' home to support their loan request? How could the lender help them meet their credit needs?

eXcel

3. Justin James has just been informed by a finance company that he can access a line of credit of no more than $28,000 based upon the equity value in his home. James still owes $105,000 on a first mortgage against his home and $25,000 on a second mortgage against the home, which was incurred last year to repair the roof and driveway. If the appraised value of James's residence is $197,500, what percentage of the home's estimated market value is the lender using to determine James's maximum available line of credit?
4. What *term* in the consumer lending field does each of the following statements describe?
   a. Plastic card used to pay for goods and services without borrowing money.
   b. Loan to purchase an automobile and pay it off monthly.
   c. If you fail to pay the lender seizes your deposit.
   d. Numerical rating describing likelihood of loan repayment.
   e. Loans extended to low-credit-rated borrowers.
   f. Loan based on spread between a home's market value and its mortgage balance.
   g. Method for calculating rebate borrower receives from retiring a loan early.
   h. Lender requires excessive insurance fees on a new loan.
   i. Loan rate lenders must quote under the Truth in Lending Act.
   j. Upfront payment required as a condition for getting a home loan.
5. Which federal law or laws apply to each of the situations described below?
   a. A loan officer asks an individual requesting a loan about her race.
   b. A bill collector called Jim Jones three times yesterday at his work number without first asking permission.
   c. Sixton National Bank has developed a special form to tell its customers the finance charges they must pay to secure a loan.
   d. Consumer Savings Bank has just received an outstanding rating from federal examiners for its efforts to serve all segments of its community.
   e. Presage State Bank must disclose once a year the areas in the local community where it has made home mortgage and home improvement loans.
   f. Reliance Credit Card Company is contacted by one of its customers in a dispute over the amount of charges the customer made at a local department store.

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g. Amy Imed, after requesting a copy of her credit report, discovers several errors and demands a correction.

6. James Smithern has asked for a $3,500 loan from Beard Center National Bank to repay some personal expenses. The bank uses a credit-scoring system to evaluate such requests, which contains the following discriminating factors along with their associated point weights in parentheses:

   Credit Rating (excellent, 3; average, 2; poor or no record, 0)

   Time in Current Job (five years or more, 6; one to five years, 3)

   Time at Current Residence (more than 2 years, 4; one to two years, 2; less than one year, 1)

   Telephone in Residence (yes, 1; no, 0)

   Holds Account at Bank (yes, 2; no, 0).

   The bank generally grants a loan if a customer scores 9 or more points. Mr. Smithern has an average credit rating, has been in his current job for three years and at his current residence for two years, has a telephone, but has no account at the bank. Is James Smithern likely to receive the loan he has requested?

eXcel

7. Jamestown Savings Bank, in reviewing its credit card customers, finds that of those customers who scored 40 points or less on its credit-scoring system, 35 percent (or a total of 10,615 credit customers) turned out to be delinquent credits, resulting in total loss. This group of bad credit card loans averaged $2,700 in size per customer account. Examining its successful credit accounts Jamestown finds that 12 percent of its good customers (or a total of 3,640 customers) scored 40 points or less on the bank's scoring system. These low-scoring but good accounts generated about $1,700 in revenues each. If Jamestown's credit card division follows the decision rule of granting credit cards only to those customers scoring more than 40 points and future credit accounts generate about the same average revenues and losses, about how much can the bank expect to save in net losses?

eXcel

8. The Lathrop family needs some extra funds to put their two children through college starting this coming fall and to buy a new computer system for a part-time home business. They are not sure of the current market value of their home, though comparable four-bedroom homes are selling for about $410,000 in the neighborhood. The Van Nuys Federal and Merchants Savings Association will loan 80 percent of the property's appraised value, but the Lathrops still owe $242,000 on their home mortgage and a home improvement loan combined. What maximum amount of credit is available to this family should it elect to seek a home equity credit line?

9. San Carlos Bank and Trust Company uses a credit-scoring system to evaluate most consumer loans that amount to more than $2,500. The key factors used in its scoring system are as follows:

Borrower's length of employment in his/her present job:		Credit bureau report:	
More than one year	6 points	Excellent	8 points
Less than one year	3 points	Average	5 points
Borrower's length of time at current address:		Below average or no record	2 points
More than 2 years	8 points	Credit cards currently active:	
One to two years	4 points	One card	6 points
Less than one year	2 points	Two cards	4 points
Borrower's current home situation:		More than two cards	2 points
Owns home	7 points	Deposit account(s) with bank:	
Rents home or apartment	4 points	Yes	5 points
Lives with friend or relative	2 points	No	2 points

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The Mulvaney family has two wage earners who have held their present jobs for 18 months. They have lived at their current street address for one year, where they rent on a six-month lease. Their credit report is excellent but shows only one previous charge. However, they are actively using two credit cards right now to help with household expenses. Yesterday, they opened an account at San Carlos and deposited $250. The Mulvaneys have asked for a $4,500 loan to purchase a used car and some furniture. The bank has a cutoff score in its scoring system of 30 points. Would you make this loan for two years, as they have requested? Are there factors not included in the scoring system that you would like to know more about? Please explain.

eXcel

10. Ray Volkers wants to start his own business. He has asked his bank for a $25,000 new-venture loan. The bank has a policy of making *discount-rate* loans in these cases if the venture looks good, but at an interest rate of prime plus 2. (The prime rate is currently posted at 7 percent.) If Mr. Volker's loan is approved for the full amount requested, what net proceeds will he have to work with from this loan? What is the effective interest rate on this loan for one year?

eXcel

11. The Robbins family has asked for a 20-year mortgage in the amount of $175,000 to purchase a home. At an 11 percent loan rate, what is the required monthly payment?

eXcel

12. James Jones received an $8,000 loan last month with the intention of repaying the loan in 12 months. However, Jones now discovers he has cash to repay the loan after making just two payments. What percentage of the total finance charge is Jones entitled to receive as a rebate and what percentage of the loan's finance charge is the lender entitled to keep?

eXcel

13. The Watson family has been planning a vacation to Europe for the past two years. Stilwater Savings agrees to advance a loan of $8,500 to finance the trip provided the Watsons pay the loan back in 12 equal monthly installments. Stilwater will charge an add-on loan rate of 6 percent. How much in interest will the Watsons pay under the add-on rate method? What is the amount of each required monthly payment? What is the effective loan rate in this case?

eXcel

14. Joseph Key's request for a four-year automobile loan for $27,000 has been approved. Reston Center Bank will require equal monthly installment payments for 48 months. The bank tells Joseph that he must pay a total of $3,817 in finance charges. What is the loan's APR?

eXcel

15. Kyle Bender has asked for a 30-year mortgage to purchase a home on Long Island. The purchase price is $465,000, of which Bender must borrow $375,000 to be repaid in monthly installments. If Kyle can get this loan for an APR of 7.75 percent, how much in total finance charges must he pay?

eXcel

16. Mary Contrary is offered a $1,200 loan for a year to be paid back in equal quarterly installments of $300 each. If Mary is offered the loan at 8 percent simple interest, how much in total interest charges will she pay? Would Mary be better off (in terms of lower interest cost) if she were offered the $1,200 at 6 percent simple interest with only one principal payment when the loan reaches maturity? What advantage would this second set of loan terms have over the first set of loan terms?

eXcel

17. Buck and Sue Rogers are negotiating with their local bank to secure a mortgage loan in order to buy their first home. With only a limited down payment available to them, Buck and Sue must borrow $225,000. Moreover, the bank has assessed them one and a half

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points on the loan. What is the dollar amount of points they must pay to receive this loan? How much home mortgage credit will they actually have available for their use?

eXcel

18. Dresden Bank's personal loan department quotes Lance Angelo a finance charge of $5.25 for each $100 in credit the bank is willing to extend to him for a year (assuming the balance of the loan is to be paid off in 12 equal installments). What APR is the bank quoting Lance? How much would he save per $100 borrowed if he could retire the loan in six months?

Internet Exercises

1. What is credit scoring? Visit **www.fairisaac.com** and look for an article by Jed Graham entitled, "After Nearly 50 Years, Fair Isaac Made Point." You will find it as an article listed under News. Describe this IT company's role in credit scoring.
2. How does the Web help a consumer loan officer determine a customer's credit rating and credit history? For an example, go to **www.experian.com** and see Business Services. What products and services does this firm have to offer the banker?
3. Go to **nt.mortgage101.com/partner-scripts/1038.asp** to find the meaning of such real estate lending terms as *adjustable-rate mortgage*, *points*, and *home equity credit*. Provide the definition for each of the above terms.
4. What methods and tools are available on the Web to aid in pricing consumer loans and real estate credit? See, for example, **www.financialpowertools.com**. Use the auto loan calculator to calculate the monthly payments on a 48-month car loan given that the purchase price is $23,000; the down payment is $1,200; the trade-in value of the customer's current vehicle is $5,000, but $4,000 is still owed; nontaxable fees are $40.00, sales tax is 7 percent, and the interest rate is 5 percent.
5. Why is regulation so important in the personal loan area? For some insights regarding this issue, visit **www.hud.gov** and **www.ffiec.gov**. At **www.hud.gov/groups/lenders.cfm** find the meaning of and concerns associated with *predatory lending*. At **www.ffiec.gov** determine the purpose of the Home Mortgage Disclosure Act (HMDA).

S&P Market Insight Challenge (www.mhhe.com/edumarketinsight)

STANDARD &POOR'S

1. Savings and loan associations have focused on home mortgage loans since their inception. For an up-to-date view of S&Ls' share of today's mortgage origination market, click the Industry tab in S&P's Market Insight. A drop-down menu reveals the subindustry category Thrifts & Mortgage Finance. By choosing this category you will be able to access the S&P Industry Survey on Savings and Loans. Please download this particular survey and explore the section entitled "Industry Trend." What is happening to the thrifts' share of mortgage originations? Can you explain why?

STANDARD &POOR'S

2. Who are the leading lending institutions in making credit available to consumers (individuals and families)? S&P's Market Insight contains a significant number of major household lenders, including Household International, Capital One Financial, and Bank of America. See if you can determine the ratio of consumer loans to total loans for each of these institutions and other leading household lenders on the Insight list. Why do the consumer loan to total loan ratios differ so much among these institutions? Do they also differ in the kinds of consumer loans they make? Why? What forms of risk does consumer lending present to these particular institutions?

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REAL NUMBERS FOR REAL BANKS — Assignment for Chapter 18

YOUR BANK'S PROVISION OF CREDIT TO INDIVIDUALS AND FAMILIES

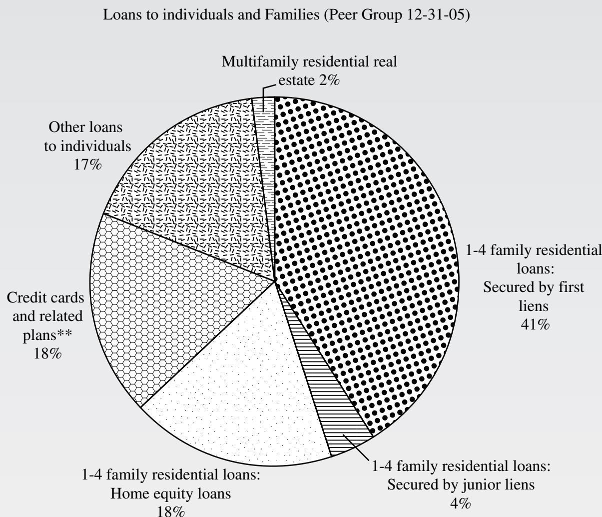
Chapter 18 explores consumer loans, credit cards, and real estate lending. In this assignment we look at how regulators categorize loans to individuals and families. We will use this information to evaluate the changing composition of your bank's retail loan portfolio across years and relative to other large banks.

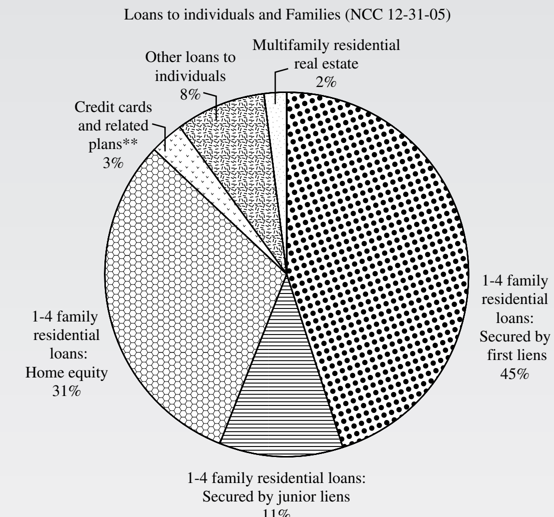
Trend and Comparative Analysis

A. **Data Collection:** In the assignment for Chapter 16, we did a breakdown of gross loans and leases based on purpose. Retail loans were allocated to either the real estate loan category or to the loans to individuals category. In this assignment we will go back to the SDI at **www3.fdic.gov/sdi/** and collect more detailed information on these loans. This entails using SDI to create a four-column report of your bank's information and peer group information across years. For Report Selection, you will access the Net Loans and Leases and 1–4 Family Residential Net Loans and Leases reports to collect percentage information as detailed below. Enter this data into the spreadsheet used for comparisons with the peer group as follows:

	A	B	C	D	E
158	Loans to Individuals and Families	BHC	Peer Group	BHC	Peer Group
159	Date	12/31/yyyy	12/31/yyyy	12/31/yyyy	12/31/yyyy
160	Multifamily residential real estate				
161	1-4 family residential loans: Secured by first liens				
162	1-4 family residential loans: Secured by junior liens				
163	1-4 family residential loans: Home equity loans				
164	Credit cards and related plans**				
165	Other loans to individuals				

B. Use the chart function in Excel and the data by columns in rows 160 through 165 to create four pie charts illustrating the breakdown of loans to individuals and families. Your pie charts should include titles and labels. For instance, the pie charts for National City Corp (NCC) and the peer group for 12/31/05 are as follows:





C. Write approximately one page about the types of loans your bank makes to individuals and families. Has the composition changed across time? How does the composition of your bank's retail loan portfolio compare to other very large banks (your peer group)? Can you make any inferences concerning credit risk and/or interest rate risk exposure? Use your pie charts as graphics and incorporate them in the discussion.

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