CHAPTER 1

Banking 101: Understanding the Basics

After reading this chapter, you will be able to:

- Understand the origin of banking and how it has evolved.
- Explain the role of banks in the creation of money.
- Discuss the essential elements of electronic banking and funds transfers.
- Recognize the role of banks in financial intermediation.
- Describe the range of products and services offered by banks.
- Understand how financial products and services satisfy the needs of customers.

What Is a Bank?

A *bank* is defined by Merriam-Webster's online dictionary (www.merriamwebster.com) as "an establishment for the custody, loan, exchange, or issue of money, for the extension of credit, and for facilitating the transmission of funds."

While they are simple to describe, the roles of banks, bankers, and banking are—for some—not as simple to understand.

"Banking" can be defined as "the business of banking," a vibrant business that continually evolves to meet the latest financial needs and economic conditions. In order to understand how banking evolves, it is important to gain a broad understanding of financial concepts, fundamental banking functions, and the banking business in a technology-driven world.

From Barter to Payment Systems

Money is the basis of banking. And the basis of money is the need for a substitute for directly bartering for everything we need. "Barter" is defined as trading without the use of money—and it can be traced back to the very origin of civilization. Can you imagine how our economy would operate if we didn't use money? You would either have to be completely self-sufficient or have to produce a good or service that you could trade for whatever you could not produce yourself. Most of us would spend our time making almost everything we needed (including growing food, building shelter, and making clothes) or working at a specialty that others needed so we could trade for many of the necessities of life. The specialties would be few. Our technological advances would be restricted by an incredibly inefficient system of exchanging goods and services.

The development of money was a significant advance over barter as a payment system. But today we have extended the concept of payment systems way beyond the original concept of money. One of the first steps into more sophisticated payment systems was the development of checks and checking accounts.

Money is a symbol of value, and checks are a symbol of money. We give another person a check when we want to give him or her money. The other person then takes that check and sends it through the check clearing system so that the money it represents is transferred from us to him or her.

Believe it or not, prior to the age of computers, banking employees posted transactions on individual account cards. Banks had to close for business early in the afternoon so that several hours could be devoted to recording and reconciling the day's transactions.

The early computer systems used in banking seemed like a tremendous advance over manual systems. But today they seem like pocket calculators compared to the computing power that the banking industry and customers depend on and, frankly, take for granted.

Computers have changed the face and complexion of the banking business. Computers have changed how customers use banking services, how banks operate internally, and how banks interact with the rest of the financial system.

Technology has revolutionized banking and continues to do so at a fiercely accelerating speed. Computers, the Internet, mobile technology, wireless access, and other improved communication systems give banking great flexibility and efficiency. All of this growth continues to create new opportunities to reinvent banks and, in particular, banking careers.

Banking also fulfills a valuable role in society by:

- Playing a key role in financial intermediation
- Creating financial products and services that benefit businesses and consumers
- Driving a thriving financial system regulated by state and federal governments
- Facilitating the creation of money
- Being involved in the transfer of funds
- Reinventing the financial future—the future of banking

In order to understand the business of banking, it is useful to understand one of its key elements—financial intermediation.

Bank's Role in Financial Intermediation

Financial intermediation is an important role in banking. The term "financial intermediation" means accepting funds from one source (such as savings customers) and using the money to make loans or other investments. Essentially, financial intermediation means acting as a go-between for individuals or businesses that have extra money and individuals or businesses that want to borrow money.

Each person or business with extra funds could try to find a borrower on its own, but the process would be time-consuming and difficult. Can you imagine how difficult it would be to find another person who would want to borrow the exact amount of your savings for the length of time you want to lend it?

Financial intermediation is a business activity that supplies a service by pooling funds from many different sources and advancing loans and making investments. The people and businesses that supply the funds receive interest or services for allowing their funds to be pooled and loaned out or invested. The borrowers pay interest for the privilege of borrowing money they use to generate income or meet other goals.

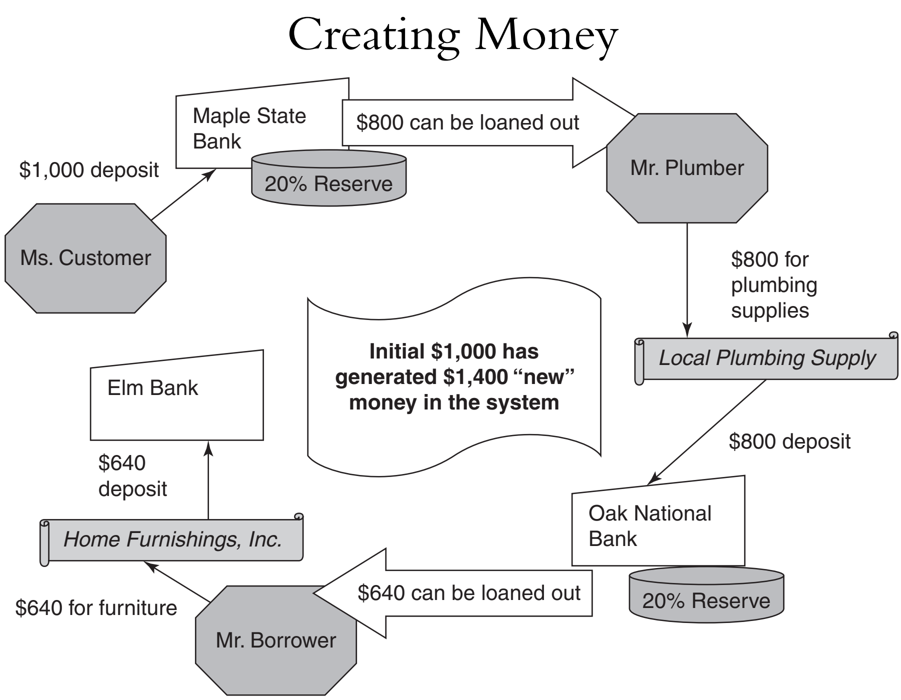
Another way to understand financial intermediation is to compare it to another type of intermediation. Consider how a blood bank operates. A blood bank finds healthy individuals and arranges for them to donate blood. The blood bank then processes the blood and makes it available to hospitals. The blood bank does not actually use the blood; it simply acts as a channel (or intermediary) between the donors and the hospitals.

Just as the blood bank functions between the donor and recipient of blood, a bank acts as an intermediary between those with extra money and those who want to borrow money. It is a financial intermediary. This is one of the unique characteristics of financial institutions, and of banks in particular—their role as financial intermediaries.

Banking and the "Creation" of Money

Banking plays the most critical role in the "creation" of money—no, not by cranking up the presses and printing money. Banks do not print currency. What we mean by the "creation of money" is this: The financial system "creates money" by expanding the supply of money through deposit and loan transactions. Exhibit 1.1 is an example of how it works.

EXHIBIT 1.1



Assume that Carol Customer puts $1,000 in a checking account at Maple State Bank. The bank must set aside part of this money as reserves and can then loan out the remainder.

The Federal Reserve System establishes reserve requirements. Reserve requirements are usually fairly low, but, for this example, assume they are 20 percent of the deposit. This would mean that $800 of the deposit could be loaned out.

Paul Plumber, a Maple Bank customer, needs to borrow money and draws on a line of credit in the amount of $800. He writes out a check for the $800 and gives it to Local Plumbing Supply to purchase materials for a bathroom-remodeling project he has been hired to complete.

(continued)

EXHIBIT 1.1 (CONTINUED)

Local Plumbing Supply deposits the check to its checking account at Oak National Bank. Oak National Bank can also lend out these funds (after setting aside a portion for reserves).

Bill Borrower, a customer of Oak National Bank, draws on his home equity line of credit in the amount of $640. He uses the funds to purchase furniture from Home Furnishings, Inc.

Home Furnishings, Inc. then deposits this money in its checking account at Elm Bank.

This cycle of deposits and loans continues to "create" additional money with each set of transactions. The initial deposit of $1,000 has generated "new" money in the amount of $1,440 in the financial system.

In addition to the creation of money, banking plays an important part in the economy by providing for payment mechanisms or methods to transfer funds. Cash is the historical basis for trading goods and services in our country, but today most consumers or businesses use other methods to transfer funds from one person or business to another.

The traditional system historically is the use of checks and checking accounts. Our payment systems, however, have evolved to include other systems such as credit cards, debit cards, paperless checks, and electronic transactions (such as payments that are automatically deducted from checking accounts) to give consumers and businesses many other alternatives to cash. With the advent of Internet banking systems, the range of choices continues to expand.

Satisfying Customers' Needs—Banking Is a Service Business

While banks play a critical role in financial intermediation and in the creation of money, banking's primary focus is the satisfaction of customers' financial needs. Banking services satisfy financial needs such as:

- Earning a return on idle funds
- Borrowing money to achieve goals

- Preventing losses
- Managing money conveniently and efficiently

To be successful, banking must meet the financial needs of customers. But most customers need assistance to wade through the bewildering array of banking products and services. Many customers are not aware of all the different services available and may not have a good understanding of whether a particular service would be useful to them. Often customers are overwhelmed at the vast array of products and services. Banking professionals are the link between these products, services, and customers.

Bankers act as interpreters between the banking products and services and help customers evaluate their financial needs. Bankers suggest services that meet those needs. An important part of the job of a banker is to promote banking products to customers in a sales consultant capacity, not as a cashier. In other words, bankers help customers select the right services for them rather than simply ringing up the sale.

High Tech versus High Touch

Banking went through revolutionary changes when computers were introduced many years ago. Today, if you are reading this book, it is quite likely that you use a computer to connect to the Internet on a regular basis, so you are already aware of the powerful effect of electronic communication in our society.

Some people would argue that technology is reducing the human element in banking ("high tech" versus "high touch"). While this is true, technology is also enriching the human interaction in banking. Technology reduces boring tasks or processing of simple transactions that aren't "high touch" anyway. What technology is doing for the high-touch side of banking is making sure that interactions between customers and banking professionals are valuable for both sides.

Customers can use automated systems such as ATMs, online banking, wireless access, and telephone banking programs to process transactions quickly and get basic information. When their needs extend beyond these mechanical aspects of banking, the banking professional is there to help with the real questions, such as which checking account would be lowest cost for the customer or which loan plan would best meet the customer's needs. Helping customers with these needs is also more rewarding and satisfying for most banking professionals.

Over the years, various banking products have been developed as an outgrowth of the bank's role in financial intermediation. Many years ago, few types of banking products and services existed—primarily checking accounts and commercial loans provided to businesses and consumers. Over time, however, the number and variety of products and services have increased dramatically.

Banking Products and Services

Let's look at these products and services a little closer. To help you understand financial intermediation and the role of the bank, we define common bank products and services, including banking deposit accounts and various types of loans and lines of credit. We also discuss various other types of accounts, such as cash management and retirement accounts.

The following categories of products and services are explained:

- Deposit and transaction accounts such as:
  - Checking accounts
  - Savings accounts
  - Certificates of deposit
  - Money market accounts
- Loans and credit accounts such as:
  - Real estate loans

    - Installment loans
    - Credit cards
    - Commercial loans
    - Construction loans
    - Agricultural loans
- Other services such as:
    - Retirement plans
    - Cash management services
    - Funds transfer services
    - Payment processing
    - Debit cards

Deposits

Traditional banking deposit products can be divided into four categories:

1. Transaction accounts
2. Savings accounts
3. Certificate accounts
4. Other

The features of these accounts vary considerably depending on the type of account, its restrictions, and the specific policies of the bank where they are offered. A common characteristic of these accounts is deposit insurance provided by the Federal Deposit Insurance Corporation (FDIC), which allows customers to conduct day-to- day business and keep their funds in a safe place.

Transaction Accounts

Transaction accounts are defined as deposit accounts on which customers can write an unlimited number of checks. These types of account include:

- Interest-earning checking accounts
- Non-interest-earning checking accounts

Customers use transaction accounts for daily expenses because the funds are easily accessed and checks are a widely accepted method of payment.

Customers may need to maintain a minimum balance in a checking account. Due to the transactional nature of these accounts, the maintenance and processing costs of these accounts are higher than other deposit accounts. Therefore, customers may need to pay monthly and other fees to use the accounts. Also, the interest paid on interest-earning checking accounts is usually a low rate.

Savings Accounts

Savings accounts are interest-earning deposit accounts that usually have few restrictions on deposits and withdrawals. Two types of savings accounts offered most frequently are regular accounts and money market deposit accounts (MMDAs).

Regular savings accounts usually pay a low rate of interest and require a minimum balance. Customers often use regular savings accounts for emergency funds and to supplement the funds maintained in a checking account. Regular savings accounts are often the first account individuals open when they begin saving money beyond their daily needs.

Money market deposit accounts offer higher rates of interest that usually fluctuate according to changes in interest rates offered on investments available from other sources. MMDAs require a higher minimum balance than regular savings accounts and customers can write only a limited number of checks each month.

With MMDAs, customers can make deposits at any time and can make unlimited withdrawals by mail or in person; however, MMDAs are not intended to operate as a checking account. As a result, there are restrictions on the number of transfers allowed per month (electronic or check). The benefit of an MMDA is a higher rate of interest with relatively easy access to the funds. Customers may use an MMDA to hold large amounts of cash temporarily between investments. For example, a customer could receive an inheritance and place the funds in an MMDA while making decisions about how else to invest it.

Certificate Accounts

The third category of deposit accounts is certificate accounts. Certificate accounts are accounts that typically require a higher minimum balance and offer higher interest rates for a fixed period of time or term. Interest rates are often fixed for the term and therefore produce a predictable return.

A critical feature of certificates is a monetary penalty on early withdrawal. If the customer redeems the certificate before the end of the agreed-upon term (the maturity date), the customer must pay a penalty (at the bank's option) that is often based on the interest rate of the account (e.g., an amount equal to 90 days of interest).

Certificates may be negotiable or nonnegotiable. Negotiable certificates can be sold and resold to other businesses or individuals. Nonnegotiable certificates can be presented for payment only by the original owner. In general, customers use these accounts to hold funds for long-term goals.

Other Types of Accounts

Banking includes other types of deposit accounts, such as holiday club accounts or vacation club accounts, but these are often variations of the accounts just described.

Loans and Other Credit Services

Loans and other credit services are an important source of income for banks. There are two major categories of loans: business and consumer.

Business loans can be secured or unsecured and are primarily classified into three categories:

1. Short term
2. Long term
3. Line of credit

Short-term business loans typically have a term of less than one year and may be used for purposes such as purchasing inventory or for a seasonal need (see Exhibit 1.2).

Long-term business loans are made for a term longer than one year and may be used for purposes such as expanding a business or purchasing equipment. They are usually repaid from business income in installments (see Exhibit 1.3).

A line of credit is essentially a preapproved credit limit against which the business borrows. A line of credit can be closed or open end. In a closed-end line of credit, the business borrows and repays the funds within a certain time limit. In an open-end line of credit, the business can borrow any amount up to the approved limit, make repayments, and borrow again up to the limit.

Loans can be secured or unsecured. A secured loan is one in which an asset, such as inventory or property, is pledged against repayment of the loan. For example, a secured line of credit used to purchase inventory can be secured by that same inventory. An unsecured line of credit used to purchase the inventory is not secured by the inventory; rather, the line of credit is granted primarily because of the good credit history of the business.

Consumer loans can be divided into two categories: installment credit and mortgage loans.

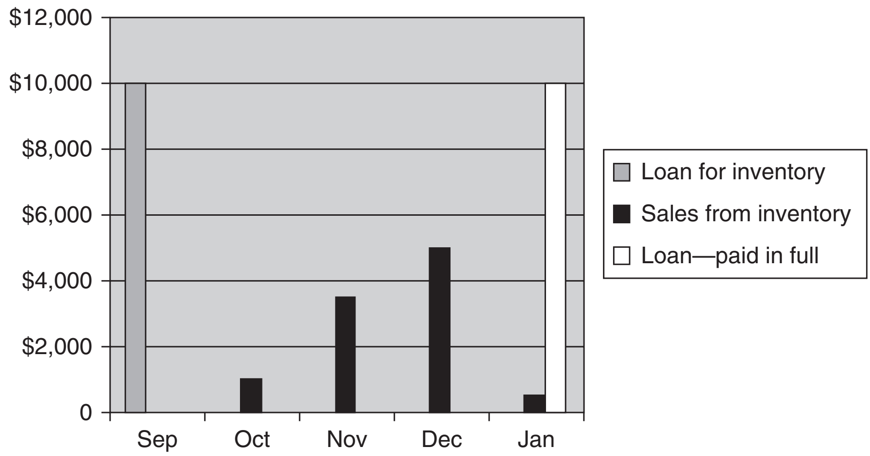
Installment credit is essentially a loan or credit account on which the payments (including interest) are made at regular intervals.

If the interest rate is fixed for a set term (such as a car loan), the payments are for a fixed amount, and the loan amount and interest are fully repaid by the end of the term.

EXHIBIT 1.2

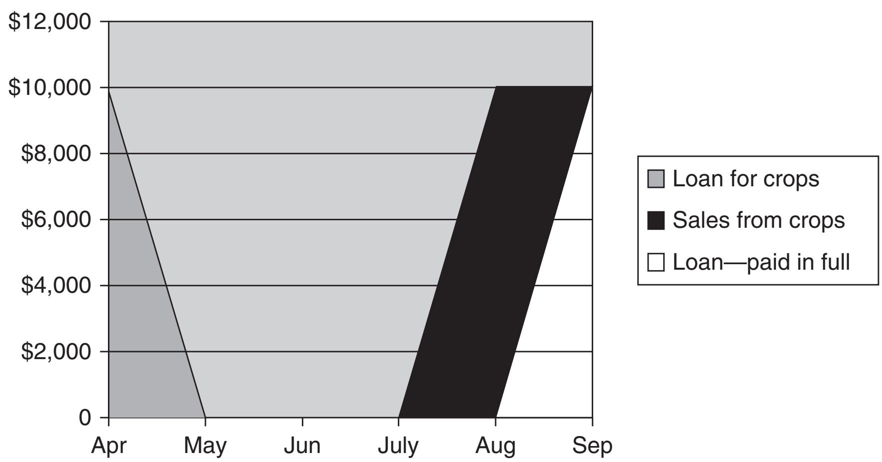
Short-term Business Loans

Example A



A business obtains a loan to purchase a large inventory shortly before the end-of-year holiday season. The items are sold during the season, and the loan is repaid in a lump sum.

Example B



A farm obtains a loan to purchase seed and fertilizer at the beginning of the growing season. The loan is repaid when the harvested crops are sold.

EXHIBIT 1.3

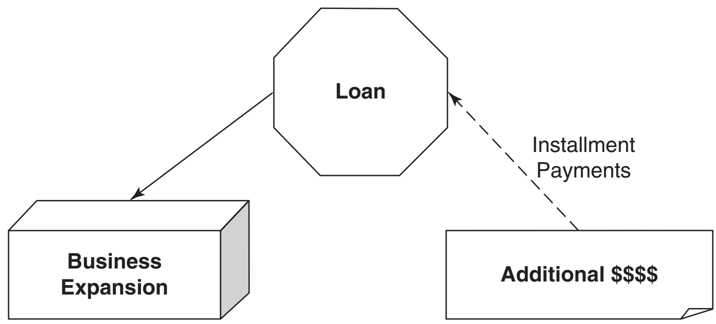
Long-term Business Loans

Example A

A business has outgrown its current location and the owner needs to build an addition or a new building. The additional income generated by the expansion of the business is a source of installment payments on the loan.

Example B

A farm needs to purchase large equipment or new grain storage facilities and finances the purchase through a long-term loan.



Installment credit can be secured or unsecured (see Exhibits 1.4 and 1.5).

Loans with real estate as the security for loan repayment are commonly called *mortgage loans*, however in some states real estate transactions are executed through a *deed of trust*. In either case, a customer usually obtains a loan to purchase real property. Loans are usually for a fixed term of 30 years with monthly payments. Interest rates can be fixed or adjustable.

A homeowner can also obtain a *home equity loan* (also commonly referred to as a second mortgage) against the portion of the home's value that he or she owns (the homeowner's equity).

Equity is determined by subtracting the outstanding balance of the loan(s) from the current value of the home. The formula is:

$$\text{Current value of home} - \text{Outstanding balance of real estate loan(s)} = \text{Equity}$$

EXHIBIT 1.4

Secured Installment Loan

Bob could have an installment car loan with a 48-month term and monthly payments of $500. At the end of the 48 months, Bob has paid back the amount loaned to him plus interest. While the loan is outstanding, the car is the security for the loan.

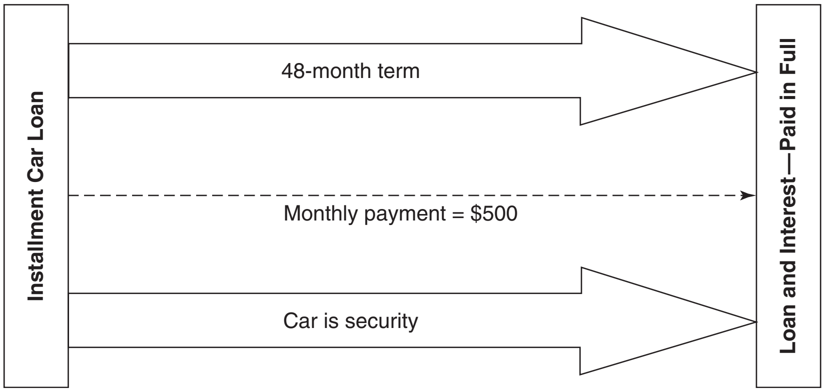
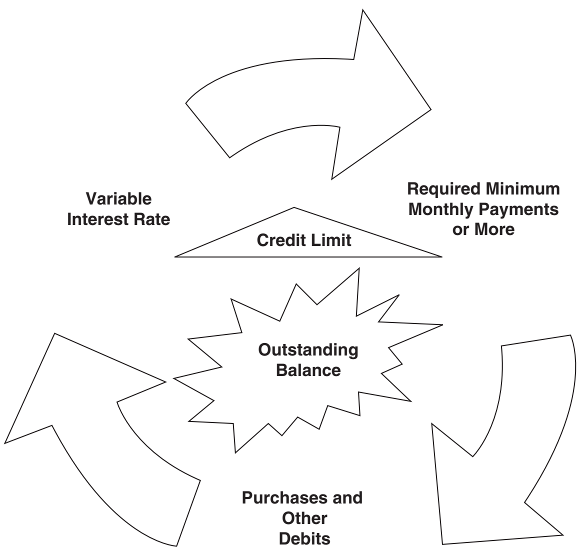


EXHIBIT 1.5

Unsecured Installment Loan

A credit card account is a type of unsecured installment credit. The interest rate and outstanding balance on these types of credit vary so the payments also vary. However, a minimum payment amount is required on a monthly basis.



IN THE REAL WORLD

Bob obtained a mortgage loan to purchase his home 20 years ago. Now he wants to remodel the kitchen, so he obtains a home equity loan.

He can borrow additional funds against the security of his home because his equity has increased above the original down payment *and* he has established a good record of making his payments promptly.

The value of Bob's home is $200,000 and the outstanding balance of the mortgage is $70,000.

Remember how to determine Bob's equity?

$200,000 – $70,000 = $130,000

Bob's equity = $130,000

Bob can obtain a home equity loan against the security of his $130,000 home equity.

Home equity loans can be closed or open end. An open-end loan is often referred to as a HELOC (home equity line of credit) and operates like other lines of credit.

Other Products and Services

Banking also includes a great variety of additional products and services that meet customers' financial needs. A few of these products and services are cash management, retirement plans, and safe deposit boxes.

Cash Management

Banking includes many services provided primarily to businesses under the umbrella term of *cash management*. Cash management is a package of banking services that help keep funds working, speed up the payment receipt process, and improve profitability.

A company can use cash management services in these ways as well as others:

- Balances in transaction accounts are kept low and other idle funds are maintained in interest-earning accounts.
- Interest-earning funds are transferred into transaction accounts only when needed to meet checks presented for payment.
- Lockbox services are used so that payments from customers are deposited more quickly to the business's deposit accounts.

A lockbox is a collection system where customers—usually of a business—send payments to a central location for the facilitation of rapid collection. Typically a bank provides the service on behalf of its customers. The bank commonly receives payment and facilitates speedy deposit into the customer's deposit accounts.

Retirement Plans

Another bank deposit vehicle is in the area of retirement plans. Most retirement plans are set up to enable individuals and businesses to save taxes on funds put aside for retirement. Different retirement plans are available, but most allow individuals to defer or reduce taxes on the amounts they save and earn through the plans.

An example of a retirement plan set up by a business for its employees is a *401(k) plan*, named after the section in the Internal Revenue Code that establishes the rules for these plans. Under these plans, employees choose to have their employer contribute a percentage of the employee's income on a pretax basis. The employee defers taxes on the contribution and its earnings until retirement. The employer may also match all or a portion of the employee's contribution to the plan.

Another popular retirement plan is an *individual retirement account* (IRA). Any individual with earned income can establish an IRA and make contributions to it up to a set limit. The earnings on the contributions are tax-deferred or tax-free depending on the type of IRA (many different variations are available). The contributions may or may not be tax-deductible depending on the type of IRA.

Options for investing IRA funds vary. Banks may offer both deposit account options and brokerage accounts (often by way of a brokerage that is a subsidiary or affiliate of the bank). With a brokerage account, the customer can invest in mutual funds, stocks, bonds, and other uninsured investments. Customers make their choice based on their risk tolerance (insured deposit accounts versus uninsured alternative investments), amount being saved, and time horizon for retirement. Most customers need to weigh many considerations when deciding on the type of IRA that is appropriate for them. Depending on their tax situation, they may need to consult a tax expert.

Safe Deposit Boxes

Another banking service that may be available to customers is a safe deposit box. Customers rent metal boxes (various sizes are available) that are stored in a vault in the bank. In these boxes, customers typically store valuable papers and small objects, such as family heirlooms. The boxes have two locks so that unauthorized access is prevented; the customer has one key and the bank has the other.

Check Clearing

Due to the historical popularity and volume of checks used every day, banking devotes significant resources to the processing of check payments. Over the years, the financial system has modernized and improved the check clearing system so that electronic debits and credits speed up the transfer of funds, even though physical checks sometimes are still used. With the passage of the Check Clearing for the 21st Century Act (Check 21) in 2003 (effective October 28, 2004), banks are able to process even more checks electronically, further reducing expenses associated with transporting paper checks.

Under Check 21, a new negotiable instrument called a *substitute check* (a specially formatted paper copy of the front and back of an original check) is allowed, permitting banks to process check information electronically and to deliver substitute checks to any banks that want to continue receiving paper checks. A substitute check is the legal equivalent of the original check and includes all the information contained on the original check. Check 21 does not require banks to accept checks in electronic form nor does it require banks to use the new authority granted by the Act to create substitute checks.

The check-clearing process is more complex than it was in the past because of the volume of transactions involved on a daily basis, not to mention changes in regulations impacting clearing and constantly changing technology. Many banks send their checks to a Federal Reserve Bank (the Fed) for check clearing. The Fed sorts the checks and conducts the process of sending the checks and handling the debits and credits.

As you can imagine, if a check written on a bank in one town is sent to a business in another town, the process becomes slow and inefficient. Until recently, banks have had to send a physical check through various intermediaries before the payment process was complete. Imagine the volume of paper that was shipped around the country for a process like this to work. Even though most checks cleared quickly, the process was still laborious.

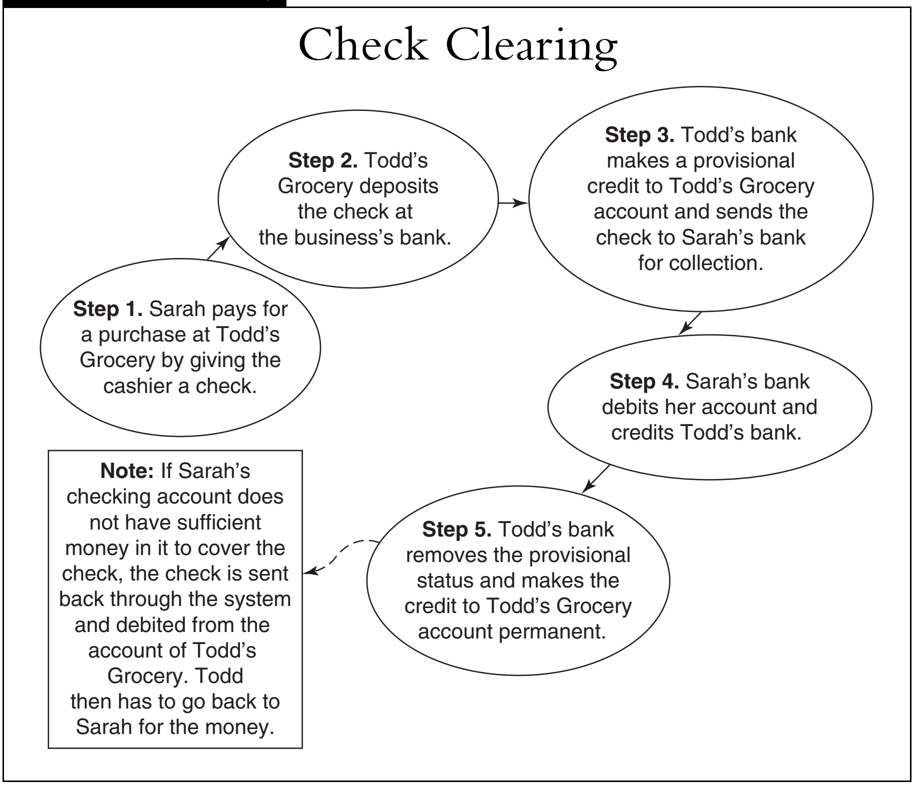
Exhibit 1.6 shows a simplistic version of how the check-clearing system works.

Electronic Transactions = Instantaneous Transfers of Funds

While check clearing is still an important payment system, banking has found cheaper and faster ways to transfer funds. Today the banking system processes more and more electronic transactions to make payments and transfer funds.

Electronic transactions allow for instantaneous transfers of funds to almost anywhere in the world. Documentation for transfers does not

EXHIBIT 1.6



have to be physically carried from one spot to another. Electronic messages supply all the information that is needed to process transfers of funds.

Customers now have access to such a variety of electronic banking services that they can execute most banking transactions remotely. Although many customers still visit bank offices, the use of electronic banking services continues to grow each year. Electronic banking services include remote terminal transactions, telephone transactions, and other electronic transactions such as those conducted via the Internet.

Remote terminals expand the reach of banking offices by allowing customers to make transactions at another location. Remote terminals are simply machines that allow customers to access accounts without the personal assistance of a bank employee.

We'll discuss four types of remote terminal transactions in this chapter:

1. Automated teller machines (ATMs)
2. Point-of-sale terminals (POS)
3. Online access
4. Telephone transactions

ATMs

A popular type of remote terminal is an automated teller machine. ATMs allow customers to conduct a variety of transactions on their accounts, such as withdrawals, deposits, loan and credit card payments, and balance and account history inquiries.

ATMs owned by banking institutions usually allow for a wide range of services. ATMs that are owned by other businesses, such as convenience stores, often are merely cash dispensers that allow only withdrawals.

ATMs have been around for decades, but their technology continues to improve. The newest types of ATMs now allow for Check 21 deposits and nonbanking purchases such as postage stamps, public transit cards, and prepaid telephone cards.

The types of security used to protect customers' accounts from unauthorized transactions on ATMs are also evolving. Currently the most frequent method of providing authorized access to a person's account is through the use of a plastic card and an access code called a *personal identification number* (PIN). The customer either selects the PIN or the card issuer assigns the PIN.

Some machines use biometrics to check identity. Biometrics is a measurement of some physical aspect of a person that can be verified to authorize a transaction. For example, a fingertip scanner can verify the person's fingerprint against a stored record, or an iris scanner checks the person's identity by scanning the iris of the eye.

Point-of-Sale Terminals

Another type of remote terminal is a point-of-sale (POS) terminal. A POS terminal is located at a merchant, and the customer uses the terminal to authorize a transfer of funds from his or her deposit account directly to the merchant's bank account.

To authorize the transaction, the customer presents a debit card, which is similar to an ATM card except that the only transactions that can be authorized are transfers from the account. Some merchants, such as supermarkets, allow customers to use a debit card to pay for merchandise and receive additional cash. Some banks offer cards that combine the functions of an ATM card and debit card.

Online Access

Financial transactions using a personal computer and the Internet are another common type of remote terminal transaction. Financial institutions establish web sites with varying degrees of transaction capability. Some web sites provide information only, such as interest rates and product features, and include an e-mail address for communication. Other information sites offer interactive features, such as on-screen financial calculators, which can help customers calculate the yield on an investment, estimate loan payments, and calculate how much money to save for retirement.

Today most banking web sites offer customers the ability to conduct transactions on their accounts and make inquiries. These programs usually require the customer to use a personal identification number to access his or her accounts. The types of transactions available usually include transfers and payments. Customers also may have the ability to download account information into money management software on their computers. Doing so speeds up account reconciliation and can make tax filing easier.

Customers who regularly use Internet banking services enjoy the convenience of accessing their accounts at any time and from the comfort of their home. They can access their checking account to see if a check has cleared and can schedule bill payments that are deducted from their accounts.

Customers can even fill out loan applications and receive online loan approvals. The approved loan amount can be credited to the customer's checking account.

Telephone Transactions

Most customers can access their accounts using automated telephone banking systems. These systems are also known as audio response systems or interactive voice response (IVR) systems.

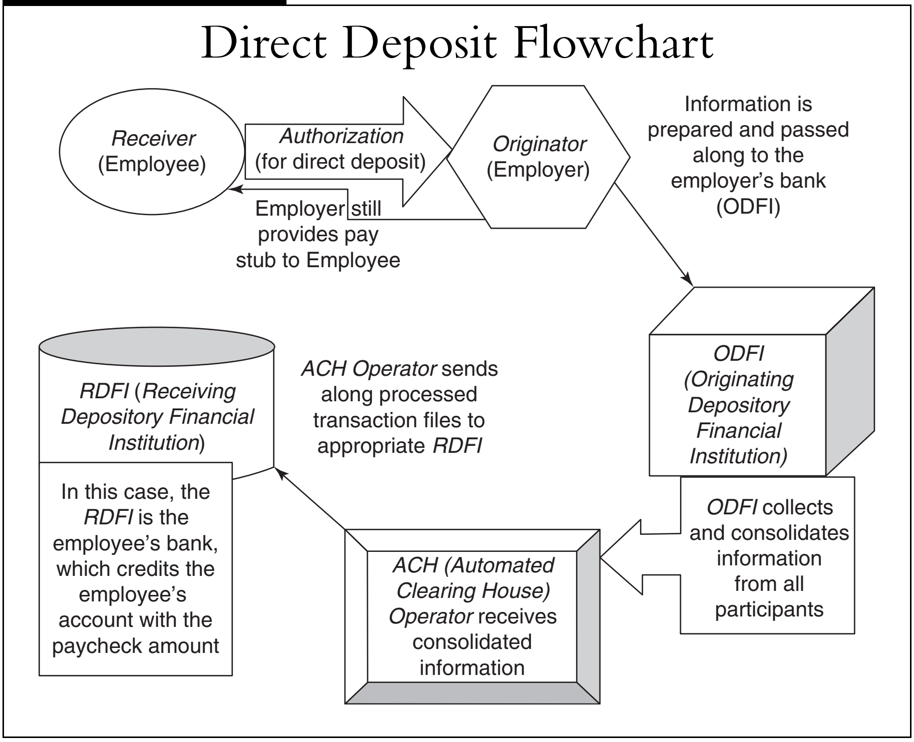
Customers call the bank and gain access to their accounts through the use of a PIN password or other identifying information. After the phone system presents a recorded list of menu options, the customer presses a number or speaks a response to proceed. Customers can authorize transfers from their accounts by pressing keys on the phone keypad or speaking a response from a list of menu options. They can also check account balances, find out if checks have cleared, make loan payments, obtain interest information, and check maturity dates on certificate accounts. Some systems also allow customers to apply for a loan.

Other Types of Electronic Transactions

Other types of electronic transactions have been available for decades. While they use electronic communication methods to transfer funds, these systems are not under the direct control of the customer. They are handled completely by the banking system after the customer makes the request. The best-known types of these electronic communication methods are automated clearinghouse (ACH) transactions and wire transfers.

Automated clearinghouses are organizations that electronically send debits and credits between member organizations, typically banks.

EXHIBIT 1.7



Typical ACH transactions include payment of utility bills, loan payments, and direct deposit of recurring payments, such as social security or payroll.

Exhibit 1.7 is an example of how a payroll direct deposit flows through an ACH system.

Once the customer requests the service and it is set up, most ACH transactions continue until canceled by the customer. ACH transactions are cheaper than check transactions for banks to process, so customers are encouraged to use them. ACH transfers are safer than sending checks through the mail because no physical object must be delivered and transactions can be tracked.

ACH transactions offer great convenience for customers because these transactions need no further maintenance once they are established. Payments and deposits recur automatically.

Wire transfers are another type of electronic banking service that customers may request. A wire transfer is an electronic movement of funds from one banking institution to another. The transfer usually takes place on the same day as it is requested. Wire transfers are a safe and quick way to move funds between banks because checks are not involved in the process.

Summary

The banking industry in the United States traces its roots back to the days of barter—trading without the use of money. While banks existed before money (originally coins) was invented, they became even more important as the notion of financial intermediaries evolved and money was accepted as a superior alternative to barter.

Over time, banks evolved to their current definition as an establishment for the custody, loan, exchange, or issue of money, for the extension of credit, and for facilitating the transmission of funds. Ever since money was first created, banks have been playing an important, if not central, role as financial intermediators.

Banks, as financial intermediators, act as the go-between for individuals and businesses that have extra money and those that wish to borrow money. By accepting funds from one source and using the money to make loans or other investments, banks help create money with each set of transactions. Customers turn to banks for many reasons: to borrow money to achieve goals, to prevent losses, to facilitate returns on idle funds, and to manage funds conveniently and efficiently.

Banks today offer a wealth of products and services including certificates of deposit, money market accounts, retirement plans, commercial loans, cash management, funds transfer services, payment processing, and, of course, checking and savings accounts. Banks also offer variations on these accounts, including holiday club accounts and vacation club accounts.

Most banks also offer business and consumer loans. Business loans include lines of credit, short-term loans, and long-term loans. A short-term loan is usually less than a year and typically used for a seasonal need. Long-term loans are longer than a year and are typically used to expand business or purchase equipment. Payments are typically from business income and paid in installments. Consumer loans are installment loans and mortgage loans. Mortgage loans are loans secured with real estate and typically used to purchase a home. Home equity loans are a second type of real estate loan and secured by the part of the real estate that belongs to the homeowner (the homeowner's equity).

To facilitate these products and services, technology plays a critical and ever-increasing role in our banking system. Online banking, ATMs, sophisticated telephone banking systems, and wireless access and other technology-enabled services help bring more and more complex services to bank customers, faster and more reliably.