

***Financial Markets and Institutions 9th edition***  
***Mishkin Solutions Manual***

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# Chapter 2

## Overview of the Financial System

### Function of Financial Markets

#### Structure of Financial Markets

- Debt and Equity Markets
- Primary and Secondary Markets
- Exchanges and Over-the-Counter Markets
- Money and Capital Markets

#### Internationalization of Financial Markets

- International Bond Market, Eurobonds, and Eurocurrencies
  - Global Box: Are U.S. Capital Markets Losing Their Edge?
- World Stock Markets

#### Function of Financial Intermediaries: Indirect Finance

- Transaction Costs
  - Following the Financial News*: Foreign Stock Market Indexes
  - Global Box: The Importance of Financial Intermediaries Relative to Securities Markets: An International Comparison
- Risk Sharing
- Asymmetric Information: Adverse Selection and Moral Hazard
- Economies of Scope and Conflicts of Interest

#### Types of Financial Intermediaries

- Depository Institutions
- Contractual Savings Institutions
- Investment Intermediaries

#### Regulation of the Financial System

- Increasing Information Available to Investors
- Ensuring the Soundness of Financial Intermediaries
- Financial Regulation Abroad

## ■ Overview and Teaching Tips

Chapter 2 is an introductory chapter that contains the background information on the structure and operation of financial markets that is needed in later chapters of the book. This chapter allows the instructor to branch out to various choices of later chapters, thus allowing different degrees of coverage of financial markets and institutions.

The most important point to transmit to the student is that financial markets and financial intermediaries are crucial to a well-functioning economy because they channel funds from those who do not have a productive use for them to those who do. Some instructors will want to teach this chapter in detail, and those who focus on international issues will want to spend some time on the section “Internationalization of Financial Markets.” However, those who slant their course to public policy issues may want to give this chapter a more cursory treatment. No matter how much class time is devoted to this chapter, We have found that it is a good reference chapter for students. You might want to tell them that if in later chapters they do not recall what particular financial intermediaries do and who regulates them, they can refer back to this chapter, especially to tables, such as Tables 2.1 and 2.3.

## ■ Answers to End-of-Chapter Questions

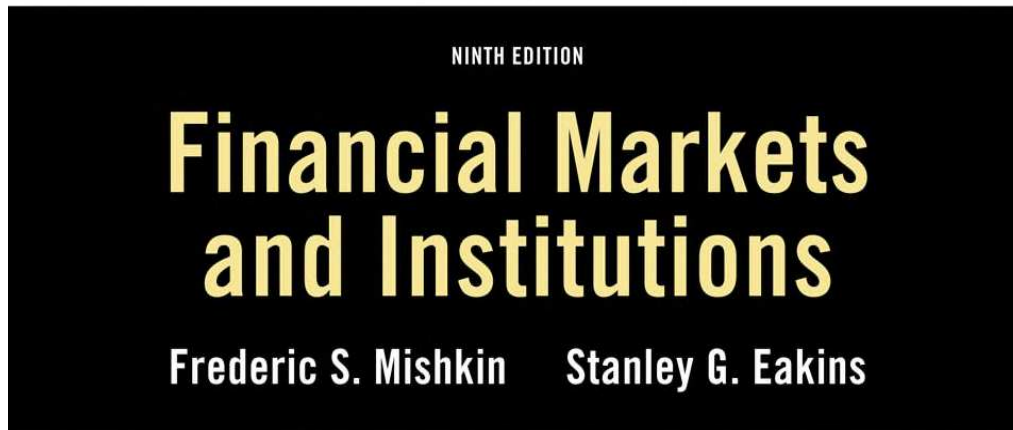
1. Examples of how financial markets allow consumers to better time their purchases include:

- The purchase of a durable good, like a car or furniture.
- Paying for tuition.
- Paying the cost of repairing a flooded basement.

In all three cases, consumers were able to pay for a good or service (education or the reparation of a flooded basement) without having to wait to save enough and only then being able to afford such goods and services.

2. Yes, I should take out the loan, because I will be better off as a result of doing so. My interest payment will be \$4,500 (90% of \$5,000), but as a result, I will earn an additional \$10,000, so I will be ahead of the game by \$5,500. Since Larry’s loan-sharking business can make some people better off, as in this example, loan sharking may have social benefits. (One argument against legalizing loan sharking, however, is that it is frequently a violent activity.)
3. Yes, because the absence of financial markets means that funds cannot be channeled to people who have the most productive use for them. Entrepreneurs then cannot acquire funds to set up businesses that would help the economy grow rapidly.
4. The principal debt instruments used were foreign bonds which were sold in Britain and denominated in pounds. The British gained because they were able to earn higher interest rates as a result of lending to Americans, while the Americans gained because they now had access to capital to start up profitable businesses such as railroads.
5. If the Yen denominated bond is sold in Tokyo, then it is not considered a Eurobond. If the bond is sold in New York, then it is considered a Eurobond.
6. You would rather hold bonds, because bondholders are paid off before equity holders, who are the residual claimants.

7. Because you know your family member better than a stranger, you know more about the borrower's honesty, propensity for risk taking, and other traits. There is less asymmetric information than with a stranger and less likelihood of an adverse selection problem, with the result that you are more likely to lend to the family member.
8. Maria cannot participate in a hedge fund since this type of mutual fund requires minimum contributions of \$100,000 and sometimes more. This type of financial intermediary is targeted to specific savers that have a less cautious perception of risks, using the collected funds to buy assets that earn high returns, but are quite risky.
9. Loan sharks can threaten their borrowers with bodily harm if borrowers take actions that might jeopardize paying off the loan. Hence borrowers from a loan shark are less likely to engage in moral hazard.
10. They might not work hard enough while you are not looking or may steal or commit fraud.
11. Yes, because eliminating moral hazard requires enforcement even if there is no information asymmetry. Even if you know that a borrower is taking actions that might jeopardize paying off the loan, you must still stop the borrower from doing so. Because that may be costly, you may not spend the time and effort to reduce moral hazard, and so moral hazard remains a problem.
12. True. If there are no information or transaction costs, people could make loans to each other at no cost and would thus have no need for financial intermediaries.
13. Because the costs of making the loan to your neighbor are high (legal fees, fees for a credit check, and so on), you will probably not be able to earn 5% on the loan after your expenses even though it has a 10% interest rate. You are better off depositing your savings with a financial intermediary and earning 5% interest. In addition, you are likely to bear less risk by depositing your savings at the bank rather than lending them to your neighbor.
14. Financial intermediaries benefit because they can earn profits on the spreads between the returns they earn on risky assets and the payments they make on the assets they have sold. Households and firms benefit because they can now own assets that have lower risk.
15. This is a topic for which there is no clear answer. On one side, it would be beneficial to have financial regulations that are identical in all countries to avoid financial markets participants to migrate their business to countries with fewer regulations. On the other side, all countries are different and designing a common set of financial regulations seems to be a rather difficult task. Most countries would want to maintain at least part of their regulations, so consensus is difficult to reach.



# Financial Markets and Institutions, 9e

## Chapter 2 Overview of the Financial System



ALWAYS LEARNING

PEARSON



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 38.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 29.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  |       |
| 18,248,700 | 21,174 | 7,390  | 28.1  |
| 15,674,700 | 28,257 | 404    | 19.1  |
|            | 559    | 28,488 |       |

## Chapter Preview (1 of 3)

- Suppose you want to start a business manufacturing a household cleaning robot, but you have no funds.
- At the same time, Walter has money he wishes to invest for his retirement.
- If the two of you could get together, perhaps both of your needs can be met. But how does that happen?



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| 15,674,700 | 28,257 | 404    | 19.1  |
|            | 559    | 28,488 |       |

## Chapter Preview (2 of 3)

- As simple as this example is, it highlights the importance of financial markets and financial intermediaries in our economy.
- We need to acquire an understanding of their general structure and operation before we can appreciate their role in our economy.



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| 18,248,700 | 21,174 | 7,380  | 28.00 |
| 15,674,700 | 28,257 | 404    | 28.00 |
|            | 559    | 28,488 |       |

## Chapter Preview (3 of 3)

In this chapter, we examine the role of the financial system in an advanced economy. We study the effects of financial markets and institutions on the economy, and look at their general structure and operations. Topics include:

- Function of Financial Markets
- Structure of Financial Markets
- Internationalization of Financial Markets
- Function of Financial Intermediaries: Indirect Finance
- Types of Financial Intermediaries
- Regulation of the Financial System



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| 1,663,400  | 13,880 | 8,510  | 20.00 |
| 18,248,700 | 21,174 | 7,590  | 19.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
|            | 559    | 20,400 |       |

# Function of Financial Markets

- Channels funds from person or business without investment opportunities (i.e., “Lender-Savers”) to one who has them (i.e., “Borrower-Spenders”)
- Improves economic efficiency



# Financial Markets Funds Transferees

## Lender-Savers

1. Households
2. Business firms
3. Government
4. Foreigners

## Borrower-Spenders

1. Business firms
2. Government
3. Households
4. Foreigners



|            |        |        |       |
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# Segments of Financial Markets

## 1. Direct Finance

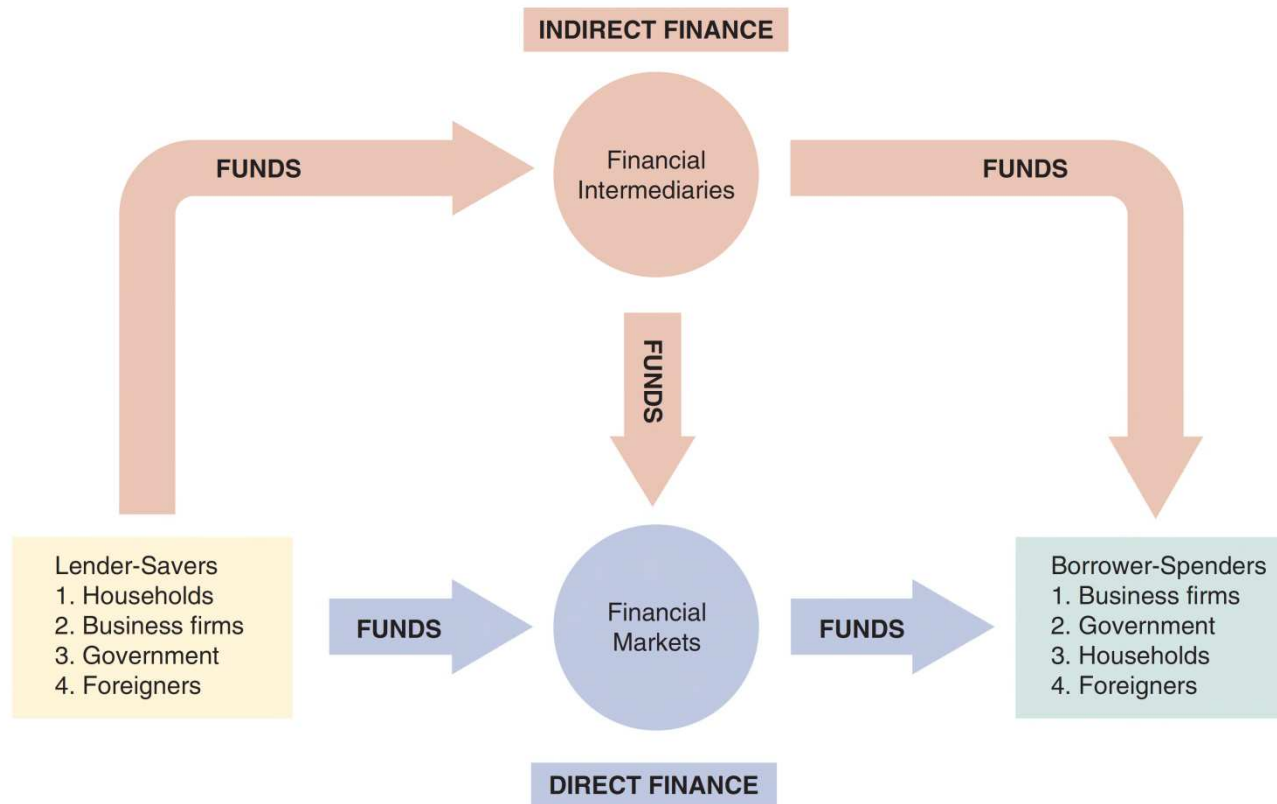
- Borrowers borrow directly from lenders in financial markets by selling financial instruments which are claims on the borrower's future income or assets

## 2. Indirect Finance

- Borrowers borrow indirectly from lenders via financial intermediaries (established to source both loanable funds and loan opportunities) by issuing financial instruments which are claims on the borrower's future income or assets

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| 1,663,400  | 13,880 | 8,510  | 20.00 |
| 18,248,700 | 21,174 | 7,580  | 10.00 |
| 15,674,700 | 28,257 | 404    | 10.00 |
| 559        | 20,400 |        |       |

**Figure 2.1** Flows of Funds Through the Financial System



|            |        |        |       |
|------------|--------|--------|-------|
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| 559        | 20,400 |        |       |

## Importance of Financial Markets (1 of 2)

- This is important. For example, if you save \$1,000, but there are no financial markets, then you can earn no return on this - might as well put the money under your mattress.
- However, if a carpenter could use that money to buy a new saw (increasing her productivity), then she is willing to pay you some interest for the use of the funds.



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## Importance of Financial Markets (2 of 2)

- Financial markets are critical for producing an efficient allocation of capital, allowing funds to move from people who lack productive investment opportunities to people who have them.
- Financial markets also improve the well-being of consumers, allowing them to time their purchases better.



# Structure of Financial Markets (1 of 5)

It helps to define financial markets along a variety of dimensions (not necessarily mutually exclusive). For starters...



|            |        |        |       |
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|            | 559    | 28,488 |       |

# Structure of Financial Markets (2 of 5)

## 1. Debt Markets

- Short-Term (maturity  $< 1$  year)
- Long-Term (maturity  $> 10$  year)
- Intermediate term (maturity in-between)
- Represented \$39.7 trillion at the end of 2015.

## 2. Equity Markets

- Pay dividends, in theory forever
- Represents an ownership claim in the firm
- Total value of all U.S. equity was \$35.7 trillion at the end of 2015.



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| 559        | 20,400 |        |       |

# Structure of Financial Markets (3 of 5)

## 1. Primary Market

- New security issues sold to initial buyers
- Typically involves an investment bank who underwrites the offering

## 2. Secondary Market

- Securities previously issued are bought and sold
- Examples include the NYSE and Nasdaq
- Involves both brokers and dealers (do you know the difference?)



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## Structure of Financial Markets (4 of 5)

Even though firms don't get any money, per se, from the secondary market, it serves two important functions:

- Provides liquidity, making it easy to buy and sell the securities of the companies
- Establishes a price for the securities (useful for company valuation)



# Structure of Financial Markets (5 of 5)

We can further classify secondary markets as follows:

## 1. Exchanges

- Trades conducted in central locations (e.g., New York Stock Exchange, CBT)

## 2. Over-the-Counter Markets

- Dealers at different locations buy and sell
- Best example is the market for Treasury Securities



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# Classifications of Financial Markets

We can also classify markets by the maturity of the securities:

1. Money Market: Short-Term  
(maturity  $< 1$  year)
2. Capital Market: Long-Term  
(maturity  $> 1$  year) plus equities (no maturity)



|            |        |        |       |
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# Internationalization of Financial Markets

(1 of 4)

The internationalization of markets is an important trend. The U.S. no longer dominates the world stage.

- International Bond Market & Eurobonds
  - Foreign bonds
    - Denominated in a foreign currency
    - Targeted at a foreign market
  - Eurobonds
    - Denominated in one currency, but sold in a different market
    - Now larger than U.S. corporate bond market
    - Over 80% of new bonds are Eurobonds



|            |        |        |       |
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# Internationalization of Financial Markets

(2 of 4)

- Eurocurrency Market
  - Foreign currency deposited outside of home country
  - Eurodollars are U.S. dollars deposited, say, London.
  - Gives U.S. borrows an alternative source for dollars.
- World Stock Markets
  - U.S. stock markets are no longer always the largest—at one point, Japan's was larger



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# Internationalization of Financial Markets

(3 of 4)

As the next slide shows, the number of international stock market indexes is quite large. For many of us, the level of the Dow or the S&P 500 is known. How about the Nikkei 225? Or the FTSE 100? Do you know what countries these represent?

# Internationalization of Financial Markets

(4 of 4)

## > FOLLOWING THE FINANCIAL NEWS

### Foreign Stock Market Indexes

Foreign stock market indexes are published daily in newspapers and Internet sites such as [www.finance.yahoo.com](http://www.finance.yahoo.com).

The most important of these stock market indices are:

**Dow Jones Industrial Average (DJIA)** An index of the 30 largest publicly traded corporations in the United States maintained by the Dow Jones Corporation.

**S&P 500** An index of 500 of the largest companies traded in the United States maintained by Standard & Poor's.

**Nasdaq Composite** An index for all the stocks that trade on the Nasdaq stock market, where most of the technology stocks in the United States are traded.

**FTSE 100** An index of the 100 most highly capitalized UK companies listed on the London Stock Exchange.

**DAX** An index of the 30 largest German companies trading on the Frankfurt Stock Exchange.

**CAC 40** An index of the largest 40 French companies traded on Euronext Paris.

**Hang Seng** An index of the largest companies traded on the Hong Kong stock markets.

**Strait Times** An index of the largest 30 companies traded on the Singapore Exchange.

|            |        |        |       |
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# Global Perspective: Relative Decline of U.S. Capital Markets (1 of 2)

- The U.S. has lost its dominance in many industries: automobiles and consumer electronics, to name a few.
- A similar trend appears at work for U.S. financial markets, as London and Hong Kong compete. Indeed, many U.S. firms use these markets over the U.S.



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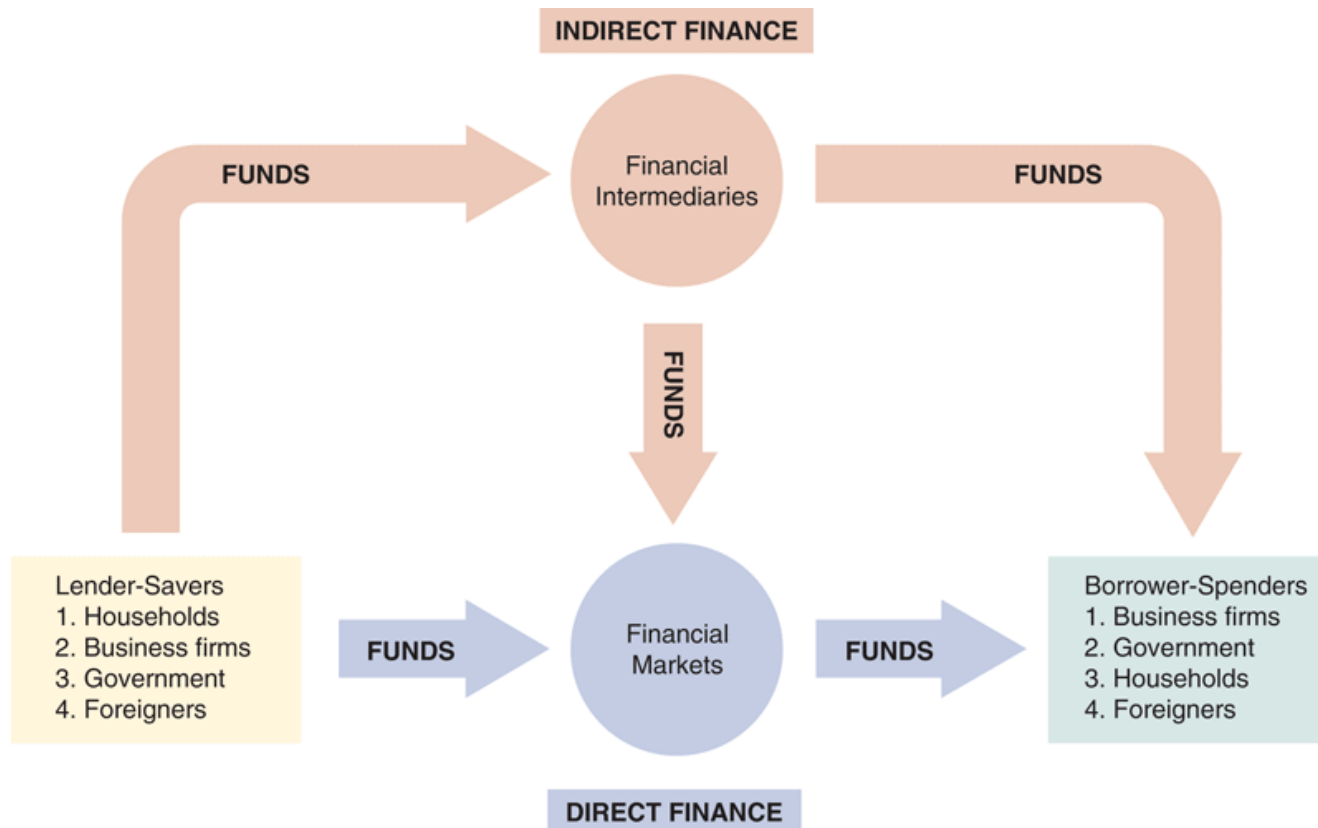
# Global Perspective: Relative Decline of U.S. Capital Markets (2 of 2)

Why?

1. New technology in foreign exchanges
2. 9-11 made U.S. regulations tighter
3. Greater risk of lawsuit in the U.S.
4. Sarbanes-Oxley has increased the cost of being a U.S.-listed public company

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# The top part of Figure 2.1—indirect finance.



The arrows show that funds flow from lender-savers to borrower-spenders via two routes: *direct finance*, in which borrowers borrow funds directly from financial markets by selling securities, and *indirect finance*, in which a financial intermediary borrows funds from lender-savers and then uses these funds to make loans to borrower-spenders.



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|            | 559    |        |       |

# Function of Financial Intermediaries: Indirect Finance (1 of 4)

Instead of savers lending/investing directly with borrowers, a financial intermediary (such as a bank) plays as the middleman:

- the intermediary obtains funds from savers
- the intermediary then makes loans/investments with borrowers



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# Function of Financial Intermediaries: Indirect Finance (2 of 4)

- This process, called financial intermediation, is actually the primary means of moving funds from lenders to borrowers.
- More important source of finance than securities markets (such as stocks)
- Needed because of transactions costs, risk sharing, and asymmetric information



|            |        |           |        |       |       |
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|            | 559    | 20,488    |        |       |       |

# Function of Financial Intermediaries: Indirect Finance (3 of 4)

- Transactions Costs
  1. Financial intermediaries make profits by reducing transactions costs
  2. Reduce transactions costs by developing expertise and taking advantage of economies of scale



|            |        |        |       |
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| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,860 | 8,510  | 20.9  |
| 18,248,700 | 21,174 | 7,590  | 19.9  |
| 15,674,700 | 28,257 | 414    | 19.48 |
|            | 559    |        |       |

# Function of Financial Intermediaries: Indirect Finance (4 of 4)

- A financial intermediary's low transaction costs mean that it can provide its customers with **liquidity services**, services that make it easier for customers to conduct transactions
  1. Banks provide depositors with checking accounts that enable them to pay their bills easily
  2. Depositors can earn interest on checking and savings accounts and yet still convert them into goods and services whenever necessary

|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,966,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,580  | 28.00 |
| 15,674,700 | 28,257 | 414    | 19.00 |
| 559        | 28,488 |        |       |

# Global: The Importance of Financial Intermediaries Relative to Securities Markets

- Studies show that firms in the U.S., Canada, the U.K., and other developed nations usually obtain funds from financial intermediaries, not directly from capital markets.
- In Germany and Japan, financing from financial intermediaries exceeds capital market financing 10-fold.
- However, the relative use of bonds versus equity does differ by country.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,966,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,860 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,590  | 28.00 |
| 15,674,700 | 28,257 | 404    | 1.78  |
|            | 559    | 28,488 | 28.00 |

# Function of Financial Intermediaries: Indirect Finance (1 of 4)

- Another benefit made possible by the FI's low transaction costs is that they can help reduce the exposure of investors to risk, through a process known as **risk sharing**
  - FIs create and sell assets with lesser risk to one party in order to buy assets with greater risk from another party
  - This process is referred to as **asset transformation**, because in a sense risky assets are turned into safer assets for investors



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 7.78  |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,860 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,380  | 1.78  |
| 15,674,700 | 28,257 | 404    | 1.78  |
|            | 559    | 28,488 | 1.78  |

# Function of Financial Intermediaries: Indirect Finance (2 of 4)

- Financial intermediaries also help by providing the means for individuals and businesses to **diversify** their asset holdings.
- Low transaction costs allow them to buy a range of assets, pool them, and then sell rights to the diversified pool to individuals.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.56 |
| 2,966,900  | 2,364  | 1,475  | 20.00 |
| 534,000    | 1,057  | 53,083 | 20.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,860 | 8,510  | 20.00 |
| 18,248,700 | 21,174 | 7,380  | 19.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
|            | 559    |        |       |

# Function of Financial Intermediaries: Indirect Finance (3 of 4)

- Another reason FIs exist is to reduce the impact of **asymmetric information**.
- One party lacks crucial information about another party, impacting decision-making.
- We usually discuss this problem along two fronts: adverse selection and moral hazard.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.50 |
| 2,965,900  | 2,364  | 1,475  | 20.00 |
| 534,000    | 1,057  | 53,083 | 1.70  |
| 2,023,900  | 79,633 | 3,947  | 1.70  |
| 1,663,400  | 13,860 | 8,510  | 20.00 |
| 18,248,700 | 21,174 | 7,580  | 19.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
|            | 559    | 20,400 |       |

# Function of Financial Intermediaries: Indirect Finance (4 of 4)

- Adverse Selection
  1. Before transaction occurs
  2. Potential borrowers most likely to produce adverse outcome are ones most likely to seek a loan
  3. Similar problems occur with insurance where unhealthy people want their known medical problems covered



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.50 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 20.00 |
| 2,023,900  | 79,633 | 3,947  | 1.70  |
| 1,663,400  | 13,860 | 8,510  |       |
| 18,248,700 | 21,174 | 7,580  | 20.0  |
| 15,674,700 | 28,257 | 404    | 10.0  |
|            | 559    |        |       |

# Asymmetric Information: Adverse Selection and Moral Hazard (1 of 2)

- Moral Hazard
  1. After transaction occurs
  2. Hazard that borrower has incentives to engage in undesirable (immoral) activities making it more likely that won't pay loan back
  3. Again, with insurance, people may engage in risky activities only after being insured
  4. Another view is a **conflict of interest**



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.56 |
| 2,965,900  | 2,364  | 1,475  | 20.00 |
| 534,000    | 1,057  | 53,083 | 20.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,860 | 8,510  | 20.00 |
| 18,248,700 | 21,174 | 7,580  | 19.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
|            | 559    |        |       |
|            |        | 20,488 |       |

# Asymmetric Information: Adverse Selection and Moral Hazard (2 of 2)

Financial intermediaries reduce adverse selection and moral hazard problems, enabling them to make profits. How they accomplish this is covered in many of the chapters to come.

|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,880 | 8,510  |       |
| 18,248,700 | 21,174 | 7,380  |       |
| 15,674,700 | 28,257 | 404    |       |
|            | 559    | 28,488 |       |

# Economies of Scope and Conflicts of Interest

- FIs are able to lower the production cost of information by using the information for multiple services: bank accounts, loans, auto insurance, retirement savings, etc. This is called **economies of scope**.
- But, providing multiple services may lead to **conflicts of interest**, perhaps causing one area of the FI to hide or conceal information from another area (or the economy as a whole). This may actually make financial markets less efficient!



**Table 2.1 Primary Assets and Liabilities of Financial Intermediaries (1 of 3)**

| Type of Intermediary                   | Primary Liabilities<br>(Sources of Funds) | Primary Assets<br>(Uses of Funds)                                                       |
|----------------------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------|
| <b>Depository Institutions (banks)</b> |                                           |                                                                                         |
| Commercial banks                       | Deposits                                  | Business and consumer loans, mortgages, U.S. government securities, and municipal bonds |
| S&L associations                       | Deposits                                  | Mortgages                                                                               |
| Mutual savings banks                   | Deposits                                  | Mortgages                                                                               |
| Credit unions                          | Deposits                                  | Consumer loans                                                                          |



**Table 2.1 Primary Assets and Liabilities of Financial Intermediaries (2 of 3)**

| Type of Intermediary                       | Primary Liabilities<br>(Sources of Funds) | Primary Assets<br>(Uses of Funds)                                          |
|--------------------------------------------|-------------------------------------------|----------------------------------------------------------------------------|
| <b>Contractual savings institutions</b>    |                                           |                                                                            |
| Life insurance companies                   | Premiums from policies                    | Corporate bonds and mortgages                                              |
| Fire and casualty insurance companies      | Premiums from policies                    | Municipal bonds, corporate bonds and stock, and U.S. government securities |
| Pension funds, government retirement funds | Employer and employee contributions       | Corporate bonds and stock                                                  |



**Table 2.1 Primary Assets and Liabilities of Financial Intermediaries (3 of 3)**

| Type of Intermediary             | Primary Liabilities<br>(Sources of Funds) | Primary Assets<br>(Uses of Funds)                               |
|----------------------------------|-------------------------------------------|-----------------------------------------------------------------|
| <b>Investment intermediaries</b> |                                           |                                                                 |
| Finance companies                | Commercial paper, stocks, bonds           | Consumer and business loans                                     |
| Mutual funds                     | Shares                                    | Stocks, bonds                                                   |
| Money market mutual funds        | Shares                                    | Money market instruments                                        |
| Hedge funds                      | Partnership participation                 | Stocks, bonds, loans, foreign currencies, and many other assets |



**Table 2.2 Principal Financial Intermediaries and Value of Their Assets (\$ billions) (1 of 3)**

| Type of Intermediary                                          | 1990  | 2000  | 2010   | 2015   |
|---------------------------------------------------------------|-------|-------|--------|--------|
| <b>Depository institutions (banks)</b>                        |       |       |        |        |
| Commercial banks, savings and loans, and mutual savings banks | 4,779 | 7,687 | 15,580 | 17,368 |
| Credit unions                                                 | 215   | 441   | 912    | 1,146  |



**Table 2.2 Principal Financial Intermediaries and Value of Their Assets (\$ billions) (2 of 3)**

| Type of Intermediary                        | 1990  | 2000  | 2010  | 2015  |
|---------------------------------------------|-------|-------|-------|-------|
| <b>Contractual savings institutions</b>     |       |       |       |       |
| Life insurance companies                    | 1,367 | 3,136 | 5,176 | 6,350 |
| Fire and casualty insurance cos             | 533   | 862   | 1,242 | 1,591 |
| Pension funds (private)                     | 1,629 | 4,355 | 4,527 | 8,517 |
| State and local government retirement funds | 737   | 2,293 | 2,661 | 5,641 |



**Table 2.2 Principal Financial Intermediaries and Value of Their Assets (\$ billions) (3 of 3)**

| Type of Intermediary                    | 1990 | 2000  | 2010  | 2015   |
|-----------------------------------------|------|-------|-------|--------|
| <b>Contractual savings institutions</b> |      |       |       |        |
| Finance companies                       | 610  | 1,140 | 1,439 | 1,474  |
| Mutual funds                            | 654  | 4,435 | 7,935 | 12,843 |
| Money market mutual funds               | 498  | 1,812 | 2,755 | 2,716  |



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,880 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,380  | 19.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
| 559        | 28,488 |        |       |

## Types of Financial Intermediaries (1 of 2)

- Depository Institutions (Banks): accept deposits and make loans. These include commercial banks and thrifts.
- Commercial banks (about 5,000 at end of 2015)
  - Raise funds primarily by issuing checkable, savings, and time deposits which are used to make commercial, consumer and mortgage loans
  - Collectively, these banks comprise the largest financial intermediary and have the most diversified asset portfolios



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 38.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 29.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  |       |
| 18,248,700 | 21,174 | 7,390  | 28.7  |
| 15,674,700 | 28,257 | 404    | 19.48 |
|            | 559    |        |       |

## Types of Financial Intermediaries (2 of 2)

- Thrifts: S&Ls & Mutual Savings Banks and Credit Unions (around 900 of each)
  - Raise funds primarily by issuing savings, time, and checkable deposits which are most often used to make mortgage and consumer loans, with commercial loans also becoming more prevalent at S&Ls and Mutual Savings Banks
  - Mutual savings banks and credit unions issue deposits as shares and are owned collectively by their depositors, most of which at credit unions belong to a particular group, e.g., a company's workers

|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 38.54 |
| 2,965,900  | 2,364  | 1,475  | 39.00 |
| 534,000    | 1,057  | 53,083 | 39.00 |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,880 | 8,510  | 38.50 |
| 18,248,700 | 21,174 | 7,380  | 38.50 |
| 15,674,700 | 28,257 | 404    | 38.50 |
| 559        | 28,488 |        |       |

## Contractual Savings Institutions (CSIs) (1 of 2)

- All CSIs acquire funds from clients at periodic intervals on a contractual basis and have fairly predictable future payout requirements.
  - **Life Insurance Companies** receive funds from policy premiums, can invest in less liquid corporate securities and mortgages, since actual benefit pay outs are close to those predicted by actuarial analysis
  - **Fire and Casualty Insurance Companies** receive funds from policy premiums, must invest most in liquid government and corporate securities, since loss events are harder to predict



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 1.78  |
| 2,023,900  | 79,633 | 3,847  | 1.78  |
| 1,663,400  | 13,880 | 8,510  | 1.78  |
| 18,248,700 | 21,174 | 7,580  | 1.78  |
| 15,674,700 | 28,257 | 404    | 1.78  |
| 559        | 28,488 |        |       |

## Contractual Savings Institutions (CSIs) (2 of 2)

- All CSIs acquire funds from clients at periodic intervals on a contractual basis and have fairly predictable future payout requirements.
  - **Pension and Government Retirement Funds** hosted by corporations and state and local governments acquire funds through employee and employer payroll contributions, invest in corporate securities, and provide retirement income via annuities



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,086  | 38.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 29.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  |       |
| 18,248,700 | 21,174 | 7,390  | 28.7  |
| 15,674,700 | 28,257 | 404    | 19.48 |
|            | 559    |        |       |

## Types of Financial Intermediaries (1 of 3)

- **Finance Companies** sell commercial paper (a short-term debt instrument) and issue bonds and stocks to raise funds to lend to consumers to buy durable goods, and to small businesses for operations.
- **Mutual Funds** acquire funds by selling shares to individual investors (many of whose shares are held in retirement accounts) and use the proceeds to purchase large, diversified portfolios of stocks and bonds.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,380  | 19.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
| 559        | 28,488 |        |       |

## Types of Financial Intermediaries (2 of 3)

- **Money Market Mutual Funds** acquire funds by selling checkable deposit-like shares to individual investors and use the proceeds to purchase highly liquid and safe short-term money market instruments.
- **Hedge Funds** are a type of mutual fund requiring large investments (\$100,000 or more), long holding periods, and are subject to few regulations. These funds invest across almost all asset classes.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.50 |
| 2,965,900  | 2,364  | 1,475  | 20.00 |
| 534,000    | 1,057  | 53,083 | 1.70  |
| 2,023,900  | 79,633 | 3,947  | 1.70  |
| 1,663,400  | 13,880 | 8,510  | 1.70  |
| 18,248,700 | 21,174 | 7,580  | 1.70  |
| 15,674,700 | 28,257 | 404    | 1.70  |
|            | 559    | 20,400 | 1.70  |

## Types of Financial Intermediaries (3 of 3)

- **Investment Banks** advise companies on securities to issue, underwriting security offerings, offer M&A assistance, and act as dealers in security markets.



**Table 2.3 Principal Regulatory Agencies of the U.S. Financial System (1 of 3)**

| Regulatory Agency                             | Subject of Regulation                                        | Nature of Regulations                                                                                                                         |
|-----------------------------------------------|--------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| Securities and Exchange Commission (SEC)      | Organized exchanges and financial markets                    | Requires disclosure of information; restricts insider trading                                                                                 |
| Commodities Futures Trading Commission (CFTC) | Futures market exchanges                                     | Regulates procedures for trading in futures markets                                                                                           |
| Office of the Comptroller of the Currency     | Federally chartered commercial banks and thrift institutions | Charters and examines the books of federally chartered commercial banks and thrift institutions; imposes restrictions on assets they can hold |



**Table 2.3 Principal Regulatory Agencies of the U.S. Financial System (2 of 3)**

| Regulatory Agency                           | Subject of Regulation                   | Nature of Regulations                                                                                                                                             |
|---------------------------------------------|-----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| National Credit Union Administration (NCUA) | Federally chartered credit unions       | Charters and examines the books of federally chartered credit unions and imposes restrictions on assets they can hold                                             |
| State banking and insurance commissions     | State-chartered depository institutions | Charter and examine the books of state-chartered banks and insurance companies; impose restrictions on assets they can hold; and impose restrictions on branching |



**Table 2.3 Principal Regulatory Agencies of the U.S. Financial System (3 of 3)**

| Regulatory Agency                            | Subject of Regulation                                                 | Nature of Regulations                                                                                                                                     |
|----------------------------------------------|-----------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Federal Deposit Insurance Corporation (FDIC) | Commercial banks, mutual savings banks, savings and loan associations | Provides insurance of up to \$250,000 for each depositor at a bank; examines the books of insured banks; and imposes restrictions on assets they can hold |
| Federal Reserve System                       | All depository institutions                                           | Examines the books of commercial banks that are members of the system; sets reserve requirements for all banks                                            |



# Regulation of Financial Markets

## Main Reasons for Regulation

1. Increase Information to Investors
2. Ensure the Soundness of Financial Intermediaries



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,860 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,380  | 28.00 |
| 15,674,700 | 28,257 | 414    | 28.00 |
|            | 559    | 28,488 |       |

# Regulation Reason: Increase Investor Information (1 of 2)

- Asymmetric information in financial markets means that investors may be subject to adverse selection and moral hazard problems that may hinder the efficient operation of financial markets and may also keep investors away from financial markets.
- The Securities and Exchange Commission (SEC) requires corporations issuing securities to disclose certain information about their sales, assets, and earnings to the public and restricts trading by the largest stockholders (known as insiders) in the corporation.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.50 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.75  |
| 1,663,400  | 13,860 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,580  | 28.00 |
| 15,674,700 | 28,257 | 414    | 19.00 |
|            | 559    | 28,488 | 19.00 |

## Regulation Reason: Increase Investor Information (2 of 2)

- Such government regulation can reduce adverse selection and moral hazard problems in financial markets and increase their efficiency by increasing the amount of information available to investors. Indeed, the SEC has been particularly active recently in pursuing illegal insider trading.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  |       |
| 18,248,700 | 21,174 | 7,580  | 28.00 |
| 15,674,700 | 28,257 | 414    |       |
|            | 559    | 28,488 |       |

# Regulation Reason: Ensure Soundness of Financial Intermediaries (1 of 2)

- Providers of funds (depositors, like you) to financial intermediaries may not be able to assess whether the institutions holding their funds are sound or not.
- If they have doubts about the overall health of financial intermediaries, they may want to pull their funds out of both sound and unsound institutions, which can lead to a financial panic.
- Such panics produces large losses for the public and causes serious damage to the economy.



|            |        |        |        |
|------------|--------|--------|--------|
| 83,300     | 174    | 2,036  | 28,488 |
| 2,966,900  | 2,364  | 1,475  |        |
| 534,000    | 1,057  | 53,083 | 28,000 |
| 2,023,900  | 79,633 | 3,947  | 7,700  |
| 1,663,400  | 13,860 | 8,510  |        |
| 18,248,700 | 21,174 | 7,580  | 10,000 |
| 15,674,700 | 28,257 | 404    |        |
|            | 559    |        |        |

# Regulation Reason: Ensure Soundness of Financial Intermediaries (2 of 2)

- To protect the public and the economy from financial panics, the government has implemented six types of regulations:
  - Restrictions on Entry
  - Disclosure
  - Restrictions on Assets and Activities
  - Deposit Insurance
  - Limits on Competition
  - Restrictions on Interest Rates



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 20.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,860 | 8,510  |       |
| 18,248,700 | 21,174 | 7,580  | 20.0  |
| 15,674,700 | 28,257 | 404    | 19.48 |
|            | 559    |        |       |

# Regulation: Restriction on Entry

- Restrictions on Entry
  - Regulators have created tight regulations as to who is allowed to set up a financial intermediary
  - Individuals or groups that want to establish a financial intermediary, such as a bank or an insurance company, must obtain a charter from the state or the federal government
  - Only if they are upstanding citizens with impeccable credentials and a large amount of initial funds will they be given a charter



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.56 |
| 2,965,900  | 2,364  | 1,475  | 20.00 |
| 534,000    | 1,057  | 53,083 | 20.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  | 20.00 |
| 18,248,700 | 21,174 | 7,580  | 19.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
|            | 559    | 20,400 |       |

# Regulation: Disclosure

- There are stringent reporting requirements for financial intermediaries
  - Their bookkeeping must follow certain strict principles
  - Their books are subject to periodic inspection
  - They must make certain information available to the public



|            |        |        |        |
|------------|--------|--------|--------|
| 83,300     | 174    | 2,056  | 38.54  |
| 2,965,900  | 2,364  | 1,475  | 29.00  |
| 534,000    | 1,057  | 53,083 | 7.78   |
| 2,023,900  | 79,633 | 3,947  | 1.78   |
| 1,663,400  | 13,860 | 8,510  | 28.1   |
| 18,248,700 | 21,174 | 7,580  | 19.1   |
| 15,674,700 | 28,257 | 414    | 19.488 |
| 559        |        |        |        |

# Regulation: Restriction on Assets and Activities (1 of 2)

- There are restrictions on what financial intermediaries are allowed to do and what assets they can hold
- Before you put your funds into a bank or some other similar institution, you want to know that your funds are safe and that the financial intermediary will be able to meet its obligations to you



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 38.54 |
| 2,965,900  | 2,364  | 1,475  | 38.00 |
| 534,000    | 1,057  | 53,083 | 38.00 |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,860 | 8,510  | 38.00 |
| 18,248,700 | 21,174 | 7,580  | 38.00 |
| 15,674,700 | 28,257 | 404    | 38.00 |
| 559        | 28,488 |        |       |

# Regulation: Restriction on Assets and Activities (2 of 2)

- One way of doing this is to restrict the financial intermediary from engaging in certain risky activities
- Another way is to restrict financial intermediaries from holding certain risky assets, or at least from holding a greater quantity of these risky assets than is prudent



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  | 28.0  |
| 18,248,700 | 21,174 | 7,380  | 19.0  |
| 15,674,700 | 28,257 | 404    | 19.0  |
| 559        | 28,488 |        |       |

## Regulation: Deposit Insurance (1 of 2)

- The government can insure people's deposits to a financial intermediary from any financial loss if the financial intermediary should fail
- The Federal Deposit Insurance Corporation (FDIC) insures each depositor at a commercial bank or mutual savings bank up to a loss of \$250,000 per account



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 38.54 |
| 2,965,900  | 2,364  | 1,475  | 29.00 |
| 534,000    | 1,057  | 53,083 | 1.78  |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,880 | 8,510  | 28.1  |
| 18,248,700 | 21,174 | 7,580  | 19.1  |
| 15,674,700 | 28,257 | 404    | 19.1  |
|            | 559    | 28,488 |       |

## Regulation: Deposit Insurance (2 of 2)

- Similar government agencies exist for other depository institutions:
  - The National Credit Union Share Insurance Fund (NCUSIF) provides insurance for credit unions



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 7.78  |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,880 | 8,510  | 28.1  |
| 18,248,700 | 21,174 | 7,380  | 19.1  |
| 15,674,700 | 28,257 | 404    | 19.1  |
| 559        | 28,488 |        |       |

## Regulation: Limits on Competition

- Evidence is weak showing that competition among financial intermediaries promotes failures that will harm the public. However, such evidence has not stopped the state and federal governments from imposing many restrictive regulations.
- In the past, banks were not allowed to open branches in other states, and in some states banks were restricted from opening additional locations.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  |       |
| 18,248,700 | 21,174 | 7,580  | 28.1  |
| 15,674,700 | 28,257 | 404    |       |
|            | 559    | 28,488 |       |

# Regulation: Restrictions on Interest Rates

- Competition has also been inhibited by regulations that impose restrictions on interest rates that can be paid on deposits
- These regulations were instituted because of the widespread belief that unrestricted interest-rate competition helped encourage bank failures during the Great Depression
- Later evidence did not support this view, and restrictions on interest rates have been abolished



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,860 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,380  | 28.00 |
| 15,674,700 | 28,257 | 414    | 19.00 |
|            | 559    | 28,488 |       |

# Regulation Reason: Improve Monetary Control

- Because banks play a very important role in determining the supply of money (which in turn affects many aspects of the economy), regulation of these financial intermediaries is intended to improve control over the money supply
- One example is **reserve requirements**, which make it obligatory for all depository institutions to keep a certain fraction of their deposits in accounts with the Federal Reserve System (the Fed), the central bank in the United States
- Reserve requirements help the Fed exercise more precise control over the money supply



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 1.78  |
| 1,663,400  | 13,880 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,380  | 19.00 |
| 15,674,700 | 28,257 | 414    | 19.00 |
| 559        | 28,488 |        |       |

# Financial Regulation Abroad

- Those countries with similar economic systems also implement financial regulation consistent with the U.S. model: Japan, Canada, and Western Europe
  - Financial reporting for corporations is required
  - Financial intermediaries are heavily regulated
- However, U.S. banks are more regulated along dimensions of branching and services than their foreign counterparts



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 20.50 |
| 2,965,900  | 2,364  | 1,475  | 20.00 |
| 534,000    | 1,057  | 53,083 | 20.00 |
| 2,023,900  | 79,633 | 3,947  | 1.70  |
| 1,663,400  | 13,880 | 8,510  | 20.00 |
| 18,248,700 | 21,174 | 7,580  | 10.00 |
| 15,674,700 | 28,257 | 404    | 10.00 |
| 559        | 20,400 |        |       |

## Chapter Summary (1 of 3)

- **Function of Financial Markets:** We examined the flow of funds through the financial system and the role of intermediaries in this process.
- **Structure of Financial Markets:** We examined market structure from several perspectives, including types of instruments, purpose, organization, and time horizon.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,965,900  | 2,364  | 1,475  |       |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  |       |
| 18,248,700 | 21,174 | 7,580  | 28.1  |
| 15,674,700 | 28,257 | 404    | 19.1  |
|            | 559    | 28,488 |       |

## Chapter Summary (2 of 3)

- Internationalization of Financial Markets: We briefly examined how debt and equity markets have expanded in the international setting.
- Function of Financial Intermediaries: We examined the roles of intermediaries in reducing transaction costs, sharing risk, and reducing information problems.



|            |        |        |       |
|------------|--------|--------|-------|
| 83,300     | 174    | 2,056  | 28.54 |
| 2,966,900  | 2,364  | 1,475  | 28.00 |
| 534,000    | 1,057  | 53,083 | 28.00 |
| 2,023,900  | 79,633 | 3,947  | 7.78  |
| 1,663,400  | 13,880 | 8,510  | 28.00 |
| 18,248,700 | 21,174 | 7,580  | 28.00 |
| 15,674,700 | 28,257 | 404    | 19.00 |
| 559        | 28,488 |        |       |

## Chapter Summary (3 of 3)

- **Types of Financial Intermediaries:** We outlined the numerous types of financial intermediaries to be further examined in later chapters.
- **Regulation of the Financial System:** We outlined some of the agencies charged with the oversight of various institutions and markets.