

Chapter 1

OVERVIEW OF THE FINANCIAL SYSTEM

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CHAPTER PREVIEW

- 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:
 - Definition & Function of Financial System
 - Function of Financial Markets
 - Structure of Financial Markets
 - Function of Financial Intermediaries
 - Financial Intermediaries
 - Regulation of the Financial System

FINANCIAL SYSTEMS

- Financial systems are systems that show the integration of various units operating within the economy of the country including financial markets and financial institution or financial intermediaries using financial assets /securities/.
- They Provides for efficient flow of funds from saving to investment by bringing savers and borrowers together via financial markets and financial institutions.

- Financial System

Network of financial markets and financial institutions brings savers and investors together.

- Key financial services of the system

- ✓ Risk Sharing
- ✓ Provision of liquidity
- ✓ Information services



FUNCTION OF FINANCIAL MARKETS

- Allows transfers of 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
 - Households
 - Business firms
 - Government
 - Foreigners
- Borrower-Spenders
 - Business firms
 - Government
 - Households
 - Foreigners

SEGMENTS OF FINANCIAL MARKETS

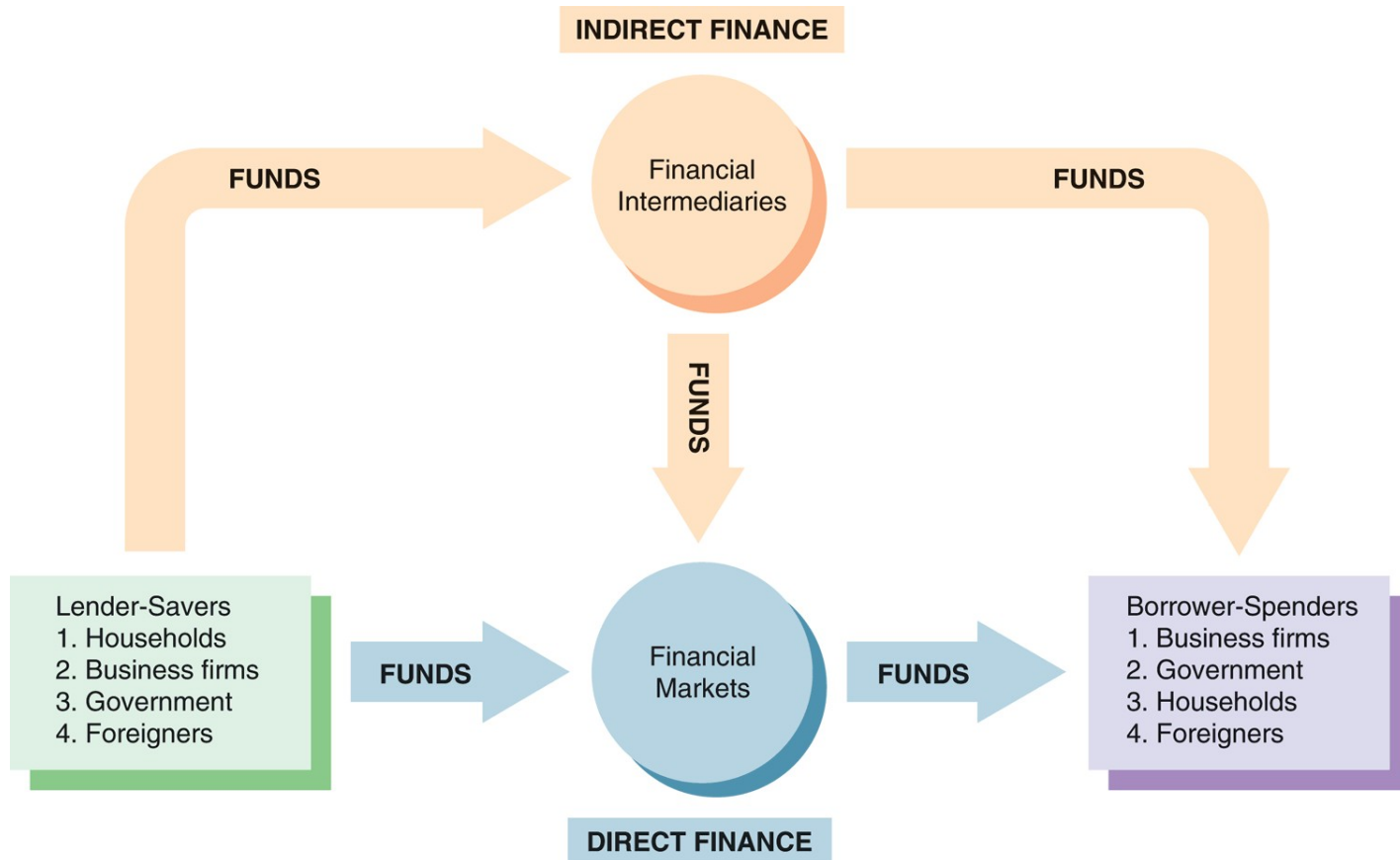
1. Direct Finance

- 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

FUNCTION OF FINANCIAL MARKETS



IMPORTANCE OF FINANCIAL MARKETS

- Financial markets are critical for producing an efficient allocation of capital, which contributes to higher production and efficiency for the overall economy, as well as economic security for the citizenry as a whole
- Financial markets also improve the lot of individual participants by providing investment returns to lender-savers and profit and/or use opportunities to borrower-spenders

WHY STUDY FINANCIAL MARKETS?

Financial markets, such as bond and stock markets, are crucial in our economy.

1. These markets channel funds from savers to investors, thereby promoting economic efficiency.
2. Market activity affects personal wealth, the behavior of business firms, and economy as a whole

WHY STUDY FINANCIAL MARKETS?

- Well functioning financial markets, such as the **bond market**, **stock market**, and **foreign exchange market**, are key factors in producing **high economic growth**.
- We will briefly examine each of these markets, key statistics, and how we will examine them throughout this course.

WHY STUDY FINANCIAL MARKETS?

DEBT MARKETS & INTEREST RATES

- Debt markets, or bond markets, allow governments, corporations, and individuals to borrow to finance activities.
- In this market, borrowers issue a security, called a bond, that promises the timely payment of interest and principal over some specific time horizon.
- The interest rate is the cost of borrowing.

WHY STUDY FINANCIAL MARKETS?

DEBT MARKETS & INTEREST RATES

- There are many different types of interest rates, including mortgage rates, car loan rates, credit card rates, etc.

WHY STUDY FINANCIAL MARKETS?

THE STOCK MARKET

- The stock market is the market where common stock (or just stock), representing ownership in a company, are traded.
- Companies initially sell stock (in the primary market) to raise money. But after that, the stock is traded among investors (secondary market).
- Of all the active markets, the stock market receives the most attention from the media. Why?

WHY STUDY FINANCIAL MARKETS?

THE FOREIGN EXCHANGE MARKET

- The foreign exchange market is where international currencies are traded and exchange rates are set.
- Although most people know little about this market, it has a **daily** volume of about \$1 trillion!

WHY STUDY FINANCIAL INSTITUTIONS?

We will also spend considerable time discussing financial institutions—the corporations, organizations, and networks that operate the so-called “marketplaces.”

1. Structure of the Financial System

- Helps get funds from savers to investors

2. Financial Crises

- The financial crises of 2007–2009 was the worst financial crisis since the Great Depression. Why did it happen?

WHY STUDY FINANCIAL INSTITUTIONS?

3. Banks and Other Financial Institutions

- Includes the role of insurance companies mutual funds, pension funds, etc.

4. Financial Innovation

- Focusing on the improvements in technology and its impact on how financial products are delivered

5. Managing Risk in Financial Institutions

- Focusing on risk management in the financial institution.

HOW WE STUDY FINANCIAL MARKETS AND INSTITUTIONS

Basic Analytic Framework

1. Simplified approach to demand for assets.
2. Basic supply & demand approach to understanding behavior in financial markets.
3. Equilibrium forces & profit seeking behavior
4. Transactions cost & asymmetric information approach to financial structure

OVERVIEW OF FINANCIAL MARKETS

Financial Market: a market in which financial assets (securities) such as stocks and bonds can be purchased or sold

- Financial markets provide for financial intermediation-financial savings (Surplus Units) to investment (Deficit Units)
- Financial markets provide payments system
- Financial markets provide means to manage risk

CLASSIFICATIONS OF FINANCIAL MARKETS

1. Debt Markets

- Short-Term (maturity < 1 year) Money Market
- Long-Term (maturity > 1 year) Capital Market

2. Equity Markets

- Common Stock

CHARACTERISTICS OF DEBT MARKETS INSTRUMENTS

◦ Debt instruments

- Buyers of debt instruments are suppliers (of capital) to the firm, not owners of the firm
- Debt instruments have a finite life or maturity date
- Advantage is that the debt instrument is a contractual promise to pay with legal rights to enforce repayment
- Disadvantage is that return/profit is fixed or limited

CHARACTERISTICS OF EQUITY MARKETS INSTRUMENTS

- Equity instruments (common stock is most prevalent equity instrument)
 - Buyers of common stock are owners of the firm
 - Common stock has no finite life or maturity date
 - Advantage of common stock is potential high income since return is not fixed or limited
 - Disadvantage is that debt payments must be made before equity payments can be made

DEBT VS. EQUITY SECURITIES

Debt Securities: Contractual obligations (IOU) of Debtor

(borrower) to Creditor (lender)

- Investor receives interest
- Capital gain/loss when sold
- Maturity date

DEBT VS. EQUITY SECURITIES

Equity Securities: Claim with ownership rights and responsibilities

- Investor receives dividends if declared
- Capital gain/loss when sold
- No maturity date—need market to sell

OVERVIEW OF FINANCIAL MARKETS

- **Broad Classifications of Financial Markets**

Money versus Capital Markets

Primary versus Secondary Markets

Organized versus Over-the-Counter Markets

MONEY VS. CAPITAL MARKETS

○ Money

- Short-Term, < 1 Year
- High Quality Issuers
- Debt Only
- Primary Market Focus
- Liquidity Market-- Low Returns

○ Capital

- Long-Term, >1Year
- Range of Issuer Quality
- Debt and Equity
- Secondary Market Focus
- Financing Investment--
Higher Returns

PRIMARY VS. SECONDARY MARKETS

9 PRIMARY

- New Issue of Securities
- Exchange of Funds for Financial Claim
- Funds for Borrower; an IOU for Lender

9 SECONDARY

- Trading Previously Issued Securities
- No New Funds for Issuer
- Provides Liquidity for Seller

ORGANIZED VS. OVER-THE-COUNTER MARKETS

○ Organized

- Visible Marketplace
- Members Trade
- Securities Listed
- New York Stock Exchange

○ OTC

- Wired Network of Dealers
- No Central, Physical Location
- All Securities Traded off the Exchanges

SECURITIES TRADED IN FINANCIAL MARKETS

- Money Market Securities
 - Debt securities Only
- Capital market securities
 - Debt and equity securities
- Derivative Securities
 - Financial contracts whose value is derived from the values of underlying assets
 - Used for hedging (risk reduction) and speculation (risk taking)

FINANCIAL MARKET EFFICIENCY

- Security prices reflect available information
- New information is quickly included in security prices
- Investors balance liquidity, risk, and return needs

FINANCIAL MARKET REGULATION

Why Government Regulation?

□ To Promote Efficiency

- High level of competition
- Efficient payments mechanism
- Low cost risk management contracts

FINANCIAL MARKET REGULATION

Why Government Regulation?

- To Maintain Financial Market Stability
 - Prevent market crashes
 - Circuit breakers
 - Federal Reserve discount window
 - Prevent Inflation - Monetary policy
 - Prevent Excessive Risk Taking by Financial Institutions

FINANCIAL MARKET REGULATION

Why Government Regulation?

- To Provide Consumer Protection
 - Provide adequate disclosure
 - Set rules for business conduct
- To Pursue Social Policies
 - Transfer income and wealth
 - Allocate saving to socially desirable areas
 - Housing
 - Student loans

ROLE OF FINANCIAL INSTITUTIONS IN FINANCIAL MARKETS

- Information processing
- Serve special needs of lenders (liabilities) and borrowers (assets)
 - By denomination and term
 - By risk and return
- Lower transaction cost
- Serve to resolve problems of market imperfection

ROLE OF FINANCIAL INSTITUTIONS IN FINANCIAL MARKETS

Types of Depository Financial Institutions

Commercial Banks
\$5 Trillion
Total Assets

Savings
Institutions
\$1.3 Trillion
Total Assets

Credit Unions
\$.5 Trillion
Total Assets

TYPES OF NONDEPOSITORY FINANCIAL INSTITUTIONS

- Insurance companies
- Mutual funds
- Pension funds
- Securities companies
- Finance companies
- Security pools

ROLE OF NONDEPOSITORY FINANCIAL INSTITUTIONS

- Focused on capital market
- Longer-term, higher risk intermediation
- Less focus on liquidity
- Less regulation
- Greater focus on equity investments

TRENDS IN FINANCIAL INSTITUTIONS

- Rapid growth of mutual funds and pension funds
- Increased consolidation of financial institutions via mergers
- Increased competition between financial institutions
- Growth of financial conglomerates

FUNCTION OF FINANCIAL INTERMEDIARIES (FIs)

- Financial Intermediaries
 1. Engage in process of indirect finance
 2. More important source of finance than securities markets
 3. Needed because of transactions costs and asymmetric information

FUNCTION OF FINANCIAL INTERMEDIARIES

- 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

FUNCTION OF FINANCIAL INTERMEDIARIES

- 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

FUNCTION OF FINANCIAL INTERMEDIARIES

- 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 to

- This process is **transformation**, because in

- assets are turned into **asset** a
 - safer investors sense

risky

assets

ASYMMETRIC INFORMATION: ADVERSE SELECTION AND MORAL HAZARD

- Adverse Selection
 1. Before transaction occurs
 2. Potential borrowers most likely to produce adverse outcome are ones most likely to seek loan and be selected

ASYMMETRIC INFORMATION: ADVERSE SELECTION AND MORAL HAZARD

- 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

ASYMMETRIC INFORMATION: ADVERSE SELECTION AND MORAL HAZARD

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

FINANCIAL INTERMEDIARIES

TABLE 1 *Primary Assets and Liabilities of Financial Intermediaries*

Type of Intermediary	Primary Liabilities (Sources of Funds)	Primary Assets (Uses of Funds)
<i>Depository Institutions (Banks)</i>		
Commercial banks	Deposits	Business and consumer loans, mortgages, U.S. government securities and municipal bonds
Savings and loan associations	Deposits	Mortgages
Mutual savings banks	Deposits	Mortgages
Credit unions	Deposits	Consumer loans
<i>Contractual Savings Institutions</i>		
Life insurance companies	Premiums from policies	Corporate bonds and mortgages
Fire and casualty insurance companies	Premiums from policies	Municipal bonds, corporate bonds and stock, U.S. government securities
Pension funds, government retirement funds	Employer and employee contributions	Corporate bonds and stock
<i>Investment Intermediaries</i>		
Finance companies	Commercial paper, stocks, bonds	Consumer and business loans
Mutual funds	Shares	Stocks, bonds
Money market mutual funds	Shares	Money market instruments

Source: Federal Reserve Flow of Funds Accounts.

SIZE OF FINANCIAL INTERMEDIARIES

TABLE 2 *Principal Financial Intermediaries*

Type of Intermediary	Value of Assets (\$ billions, end of year)			
	1970	1980	1990	2004
<i>Depository Institutions (Banks)</i>				
Commercial banks	517	1481	3334	6141
Savings and loan associations and mutual savings banks	250	792	1365	1597
Credit unions	18	67	215	643
<i>Contractual Savings Institutions</i>				
Life insurance companies	201	464	1367	3969
Fire and casualty insurance companies	50	182	533	1116
Pension funds (private)	112	504	1629	4330
State and local government retirement funds	60	197	737	2046
<i>Investment Intermediaries</i>				
Finance companies	64	205	610	1385
Mutual funds	47	70	654	4969
Money market mutual funds	0	76	498	1912

Source: <http://www.federalreserve.gov/releases/Z1/>

TYPES OF FINANCIAL INTERMEDIARIES

- Depository Institutions (Banks)
 - Commercial banks
 - Savings & Loan Associations (S&Ls)
 - Mutual Savings Banks
- Contractual Savings Institutions
 - Life insurance companies
 - Fire & casualty insurance companies
 - Pension funds, government retirement funds

TYPES OF FINANCIAL INTERMEDIARIES

- Investment Intermediaries
 - Finance companies
 - Mutual funds
 - Money market mutual funds

DEPOSITORY INSTITUTIONS (BANKS)

- Commercial banks

- 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

DEPOSITORY INSTITUTIONS (BANKS)

- S&Ls, Mutual Savings Banks and Credit Unions
 - 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

CONTRACTUAL SAVINGS INSTITUTIONS (CSIs)

- 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** invest most in liquid government securities, must receive funds from policy premiums, must corporate securities, since loss events harder to predict and are

CONTRACTUAL SAVINGS INSTITUTIONS (CSIs)

- 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

INVESTMENT INTERMEDIARIES

- **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 provide the purchase target, diversified portfolios of stocks and bonds

INVESTMENT INTERMEDIARIES

- **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

REGULATION OF FINANCIAL MARKETS

- Three Main Reasons for Regulation
 1. Increase Information to Investors
 2. Ensure the Soundness of Financial Intermediaries
 3. Improve Monetary Control

REGULATION REASON:

INCREASE INVESTOR INFORMATION

- 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

REGULATION REASON: INCREASE INVESTOR INFORMATION

- 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

REGULATION REASON: ENSURE SOUNDNESS OF FINANCIAL INTERMEDIARIES

- Because providers of funds 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, with the possible outcome of a financial panic that produces large losses for the public and causes serious damage to the economy

REGULATION REASON: ENSURE SOUNDNESS OF FINANCIAL INTERMEDIARIES (CONT.)

- 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

REGULATION: RESTRICTION ON ENTRY

○ Restrictions on Entry

- Regulators have created very 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.

REGULATION: DISCLOSURE

- Disclosure Requirements
- 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.

REGULATION: RESTRICTION ON ASSETS AND ACTIVITIES

- 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 such institution, you would want to know that your funds that the bank or other intermediary will financial be obligations to able to meet you its

REGULATION: RESTRICTION ON ASSETS AND ACTIVITIES

- 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

REGULATION: DEPOSIT INSURANCE

- The government can insure people's money held in financial intermediaries 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 \$100,000 per account

REGULATION: DEPOSIT INSURANCE

- Similar government agencies exist for other depository institutions:
 - The Savings Association Insurance Fund (part of the FDIC) provides deposit insurance for savings and loan associations, and the National Credit Union Share Insurance Fund (NCUSIF) does the same for credit unions

REGULATION: PAST LIMITS ON COMPETITION

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

REGULATION: PAST 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 does not seem to support this view, and restrictions on interest rates have been abolished

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), much regulation of these financial intermediaries is intended to improve control over the money supply
- One such regulation 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

FINANCIAL REGULATION ABROAD

- Those countries with economic systems also have financial regulation consistent with the U.S. financial 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

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