



CHAPTER 1

An Overview of Financial Markets and Institutions

Financial system

Surplus and deficit spending units

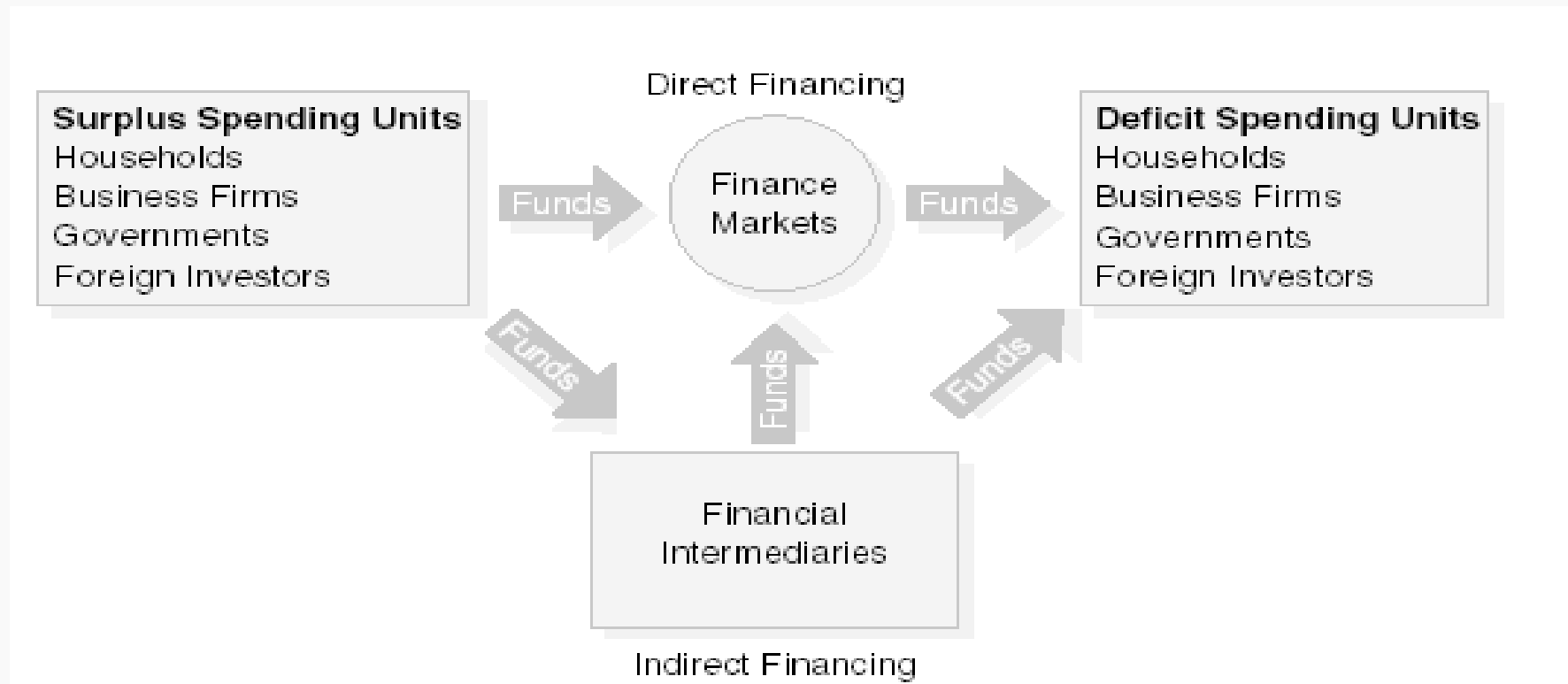
The Financial System

- Financial System - Provides for efficient flow of funds from saving to investment by bringing savers and borrowers together via financial markets and financial institutions.
 - Financial markets - markets for *financial instruments*, also called *financial claims* or *securities*.
 - Financial institutions (or intermediaries) - facilitate flows of funds from savers to borrowers.
- Agents
 - Households - supply labor, demand products, and save for the future.
 - Businesses - demand labor, supply products, and invest in productive assets.
 - Governments collect taxes and provide public goods (education, defense).
- *Surplus spending units (SSUs)* have income for that exceeds spending, resulting in *savings*. Also called *saver*, *lender*, or *investor*.
 - Most SSUs are households.
- *Deficit spending units (DSUs or borrowers)* have spending exceeds income.
 - Most DSUs are businesses or governments.

Exhibit 1.1 – Transfer of Funds

EXHIBIT 1.1

Transfer of Funds from Surplus to Deficit Spending Units



The role of the financial system—financial institutions and markets—is to facilitate the flow and efficient allocation of funds throughout the economy. The greater the flow of funds, the greater the accommodation of individuals’ preferences for spending and saving. An efficient and sound financial system is a necessary condition to having a highly advanced economy like the one in the United States.

Financial claims and Financing

- SSU's *claim* against DSU is liability to DSU and asset to SSU.
 - One's liability is another's asset: Payable by one is receivable by another.
 - Assets arising this way are "*financial assets.*"
 - Financial system balances- total financial assets equal total financial liabilities.
 - Financial claims arise from direct financing
- Direct Financing – DSU/SSUs exchange money and financial claims directly.
 - Preferences of both must match as to -
 - Amount / Maturity / Risk / Liquidity (marketability)
 - Marketability- Ease with which financial asset may be bought and sold.
 - Marketability gives SSU choices
 - Match maturity of claim to planned investment period; OR
 - Buy claim with shorter maturity, then reinvest.

Direct Financing

- Direct Financing –
 - efficient for large transactions if preferences match.
 - “Wholesale” markets; Transactions \$1M or more.
 - DSUs receive funds quickly; SSUs earn timely returns on savings.
 - *Private placements* are simplest.
 - DSU sells whole security issue to one investor or investor group.
 - Fast and relatively low transactions costs.

- Players in direct financing
 - *Investment bankers* “underwrite” new issues of securities.
 - Buy securities from DSUs and sell to SSUs to buy at higher price.
 - Profit from difference is *underwriting spread*
 - *Brokers and dealers* bring buyers and sellers of direct claims together.
 - Brokers buy or sell at best possible price for their clients.
 - Dealers “make markets” by carrying inventories of securities
 - buy at “bid price;” sell at “ask price
 - “Bid-ask spread” is dealer’s gross profit

Indirect Financing

- Indirect financing - useful if SSU and DSU have difference in preferences for Amount / Maturity / Risk / Liquidity (marketability) .
- Indirect financing -
 - Financial intermediaries “transform” claims:
 - raise funds by issuing claims to SSUs;
 - use funds to buy claims issued by DSUs.
 - Claims can have unmatched characteristics:
 - SSU has claim against intermediary;
 - Intermediary has claim against DSU.
- Common intermediaries
 - Commercial Banking - Take deposits and make loans – Depositors are SSUs. Borrowers are DSUs.
 - Insurance Co - Issue policies, collect premiums, invest in stocks and bonds. Policyholders are SSUs; Businesses or governments are DSUs.

Financial intermediaries transform claims

SSU		Financial Intermediary		DSU	
Assets	Liabilities	Assets	Liabilities	Assets	Liabilities
-Money to financial intermediary		+Money from SSU	+Indirect claim to SSU	+Money from financial intermediary	+Direct claim to financial intermediary
		-Money to DSU			
+Indirect claim from financial intermediary		+Direct claim from DSU			

Financial intermediation

- Benefits of intermediation – lower cost of financial services.
 - 3 sources of comparative advantage relative to SSU's
 - Economies of scale; Transaction cost control; Risk management.
 - Competition among financial intermediaries pulls interest rates down
 - Makes financing less costly / economy more productive.
- FI's perform 5 basic services as they transform claims.
 - Denomination Divisibility – pool savings of small SSUs.
 - E.g., Banks pool deposits to buy large denominations.
 - Currency Transformation – buy/sell claims in various FX denominations.
 - E.g., Allow manufacturer to hedge risk FX will fall in value.
 - Maturity Flexibility – Offer ranges of maturities to both DSUs and SSUs.
 - E.g, Banks offer CD to SSU and invest in long-term claims of DSU.
 - Credit Risk Diversification – Assume/diversify credit risks of DSUs.
 - E.g., Mutual funds allow SSU's to invest in diversified pools.
 - Liquidity – Give SSUs and DSUs different choices about when, to what extent, and for how long to commit to financial relationships.

4 Major types of financial intermediaries (1/3)

- (1) Deposit-type or “Depository” Institutions
 - Commercial Banks
 - Largest single class of financial institution
 - Issue variety of deposit products - checking, savings, time deposits
 - Carry diversified portfolios of loans, leases, government securities
 - May offer trust or underwriting services
 - Thrift Institutions - resemble commercial banks but focus more on real estate loans, savings deposits, and time deposits.
 - Savings & Loan Associations; Savings Banks
 - Credit Unions - mutual ownership -“owned” by depositors or “members”
 - “Common bond”- members must share some meaningful common association
 - Not-for-profit and tax - exempt

4 Major types of financial intermediaries (2/3)

- (2) Contractual Savings Institutions - Contractual Institutions bring long-term savers and borrowers together.
 - Life Insurance Companies - insure against lost income at death.
 - Policyholders pay premiums, which are invested in stocks, bonds, and mortgages. Investment earnings cover costs and reward risks of insurance company.
 - Casualty Insurance Companies - cover property against loss or damage.
 - Sources and uses of funds resemble life insurers, but casualty claims are not as predictable; so more assets in short-term, marketable investments.
 - Pension Funds – help workers pay for retirement.
 - Workers and/or employers make contributions, which are pooled and invested in stocks, bonds, and mortgages
 - Net of administrative costs, investment earnings are reinvested and compounded

4 Major types of financial intermediaries (3/4)

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- (3) Investment Funds - help small investors share the benefits of large investments.
 - Mutual Funds provide intermediated access to various capital markets. Shareholders' money is pooled and invested in stocks, bonds, or other securities according to some objective
 - Money Market Mutual Funds (“MMMMFs”) are uninsured substitutes for deposit accounts. Pay investors interest, and allow limited check-writing
- (4) “Other” Institutions –
 - Finance Companies - Make loans but do not take deposits; raise loanable funds in commercial paper market and from shareholders
 - Federal Agencies - Issue “agency securities” backed by government and lend at sub-market rates for favored social purposes

EXHIBIT 1. *Exhibit 1.2—Major Financial Intermediaries*
Size and Growth of Major Financial Intermediaries

Intermediary	Rank	2005		1980		Annual Growth Rate%
		Total Assets (\$billion)	% of Total	Total Assets (\$billion)	% of Total	
Commercial banks	1	9,324.1	24.6	1,482	35.1	7.6
Mutual funds	2	6,048.9	15.9	513	12.1	10.4
Private pension funds	3	5,120.3	13.5	62	1.5	19.3
Life insurance companies	4	4,350.7	11.5	464	11.0	9.4
Government-sponsored enterprises	5	2,805.4	7.4	195	4.6	11.3
State and local government pension	6	2,701.5	7.1	76	1.8	15.4
Money market funds	7	2,006.9	5.3	197	4.7	9.7
Finance companies	8	1,856.9	4.9	197	4.7	9.4
Savings institutions	9	1,789.4	4.7	792	18.6	3.3
Casualty insurance companies	10	1,250.4	3.3	182	4.3	8.0
Credit unions	11	685.7	1.8	68	1.6	9.7
Total		37,940.2	100.0	4,228	100.0	9.2
GDP		12,455.8		2,796		6.2

Commercial banks are the largest and most important financial intermediaries in the U.S. economy. Mutual funds and money market funds, however, are the fastest growing. The rapid growth of financial intermediaries, especially those involved in investment, reflects the tremendous wealth generated by the U.S. economy, the growing proportion of funds being channeled into the intermediation market, and the interest in wealth accumulation.

Source: Board of Governors, Federal Reserve System, Flow of Funds Accounts (<http://www.federalreserve.gov/releases/>).

Exhibit 1.3—

EXHIBIT 1.3 Primary Assets and Liabilities of Financial Intermediaries

Major Financial Intermediaries: Sources & Uses of Funds

Type of Intermediary	Assets (Direct Securities Purchased)	Liabilities (Indirect Securities Sold)
Deposit-type institutions		
Commercial banks	Business loans Consumer loans Mortgages	Checkable deposits Time and savings deposits Borrowed funds
Thrift institutions	Mortgages	NOW accounts and savings deposits
Credit unions	Consumer loans	Share accounts Time and savings deposits
Contractual savings institutions		
Life insurance companies	Corporate bonds Corporate stock	Life insurance policies
Casualty insurance companies	Municipal bonds Corporate bonds Corporate stock	Casualty insurance policies
Private pension funds	Corporate stock Government securities Corporate bonds	Pension fund reserves
State and local government pension funds	Corporate stock Government securities Corporate bonds	Pension fund reserves
Investment funds		
Mutual funds	Corporate stock Government securities Corporate bonds	Shares in fund
Money market funds	Money market securities	Shares in fund
Other financial institutions		
Finance companies	Consumer loans Business loans	Commercial paper Bonds
Federal agencies	Government loans	Agency securities

This exhibit presents a summary of the most important assets and liabilities issued by the financial institutions discussed in this book. Notice that deposit-type institutions hold liability accounts that are payable upon demand. This makes liquidity management a high priority for these firms.

Source: Board of Governors, The Federal Reserve System, Flow of Funds Accounts.

Financial Markets - trading

- Primary and Secondary
 - Primary markets are where financial claims are initiated. DSUs receive funds, claims are first issued
 - Secondary markets are where financial claims are resold and repriced
 - Trading sets prices and yields of widely held securities

- Organized and Over-the-Counter
 - Organized Exchanges - physical location, relatively exclusive.
 - Physical trading floor and facilities available to members of exchange, for securities listed on exchange.
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 - OTC Markets: virtual, relatively inclusive.
 - Decentralized network available to any licensed dealer willing to buy access and obey rules, for wide range of securities.

Financial markets – by type of asset

- Spot and Futures
 - Spot Markets: immediate pricing, immediate delivery
 - Futures or Forward Markets: immediate pricing, promise of future delivery
 - Futures standardized amounts, forms, dates; trade on exchanges
- Options – Rights (to buy or sell) in underlying securities or commodities. Options on listed securities and commodities trade on organized exchanges
 - Puts – right to sell an underlying asset on or before a specified date.
 - Calls – right to buy an underlying asset on or before a specified date.
- Foreign Exchange - any currency is convertible to another at some exchange rate .
- International and Domestic - allows participants to diversify. Examples:
 - *Eurodollars* - US dollars deposited outside U.S (in London).
 - *Eurobonds* - bonds issued outside US but denominated in \$US
- Money and Capital Markets (next slides)
 - Short-term debt; long-term debt; Equities (stock).

Money and Capital Markets

- Money markets - wholesale markets for very short-term debt instruments.
 - Short maturities (usually 90 days or less)
 - High liquidity (active secondary markets)
 - Low risk (and consequently low yield)
 - Dealer/OTC more than organized exchange

- Money market examples –
 - Treasury Bills – short-term debt issued by U.S. Treasury.

 - Negotiable Certificates of Deposit – term deposits offered by banks.

 - Commercial Paper – short-term debt issued by corporations.

 - Federal Funds (“Fed Funds”) - borrow of reserves by a bank in need of reserves from a bank with excess reserves.

 - Other – bankers acceptances, repurchase agreements (repos).

- Capital markets: long-term financial claims typically used to finance “capital goods”. (Capital goods are real assets held long-term to produce wealth—land, buildings, equipment, etc.)
- Capital Markets have
 - Long maturities (5 to 30 years)
 - Less liquidity - secondary markets active but more volatile
 - Higher risk in most cases (with higher potential return)
 - Traded “wholesale” and “retail” on organized exchanges and in OTC markets.
- Examples:
 - Common stock – ownership in corporate firms.
 - Bonds – long-term instruments of debt.
 - Corporate bonds
 - Municipal bonds
 - Mortgages

EXHIBIT 1.5**Selected Capital Market Instruments Outstanding (December 2005)**

Instrument	\$Billions
U.S. government securities	
Treasury notes	2,361
Treasury bonds	517
Inflation-indexed notes and bonds	329
State and local government bonds	1,844
Corporate bonds	8,358
Corporate stock (at market value)	18,277
Mortgages	12,146

Capital market instruments are used to finance real assets that produce income and wealth. They are bought and sold in the direct credit markets and typically have maturities greater than 1 year.

Source: Board of Governors, Federal Reserve System, Flow of Funds Accounts (<http://www.federalreserve.gov/releases/>); Monthly Statement of the Public Debt of the United States.

Risks of Financial Institutions

- Credit or default risk: risk that a DSU may not pay as agreed
- Interest rate risk: fluctuations in a security's price or reinvestment income caused by changes in market interest rates
- Liquidity risk: risk that a financial institution may be unable to disburse required cash outflows, even if essentially profitable
- Foreign exchange risk: effect of exchange rate fluctuations on profit of financial institution
- Political risk: risk of government or regulatory action harmful to interests of financial institution.