

MONEY, CREDIT & BANKING

Money, Credit, & Banking

Importance and Role

- Variations in money and credit affect economic performance.
- Banking and the financial markets are conduits between savings and investment.
- The institutional and regulatory framework facilitates the ability of financial institutions and markets to accomplish their tasks.

Money, Credit, & Banking

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- Money
- Banking & Financial Institutions
- Federal Reserve & Monetary Policy
- Credit & Financial Markets
- Regulation

Money

Money

Overview

- Functions of money
- Measures of money supply
- Money Demand
- Money Supply and Demand
- Interest Rates
- Quantity Theory of Money

Functions of Money

Importance of Money

- To understand why money is important consider the case in which all trade is barter, that is, you must trade goods and services for goods and services.
- Barter is difficult as an exchange rate must be established in every trade.
- Valuations of items will vary among buyers and sellers.

Functions of Money

Functions of Money

- Unit of Account
- Medium of Exchange
- Store of Value

Functions of Money

Unit of Account

- Allows all prices to be in one numeraire for easy comparison.
- Also allows easy calculation of wealth.

Functions of Money

Medium of Exchange

- Allows easy buying and selling thus facilitating trading.
- Lowers transaction costs since value is easily established.

Functions of Money

Store of Value

- Allows time between receipt and disbursement of funds.
- Allows funds to accumulate over time.
- Facilitates savings.

Money Supply

Definitions of Money

- M-1 (narrow)
- M-2 (broad)
- M-3

Money Supply

M-1

- Cash
- Checkable deposits
- Travelers checks

Money Supply

M-2

- M-1 +
- Savings and money market deposits
- Small denomination time deposits
- Individual and broker-dealer money market mutual funds

Money Supply

M-3

- M-2
- Large denomination time deposits
- Repurchase agreements and Eurodollar deposits
- Institution-only money market mutual funds

Money Supply

Monetary Base

- Currency in public circulation (outside banks and gov) plus bank reserves

Money Demand

Demand; motives for demanding money

- Transactions
- Asset

Money Demand

Transactions Demand for Money

- A function of income
- As income increases, transactions demand for money increases
- Example: At an income of \$20K, rent may be \$650, so you would need that much in your bank account for transactions. At \$50K you pay a mortgage of \$1,200, so more is needed in the bank account.

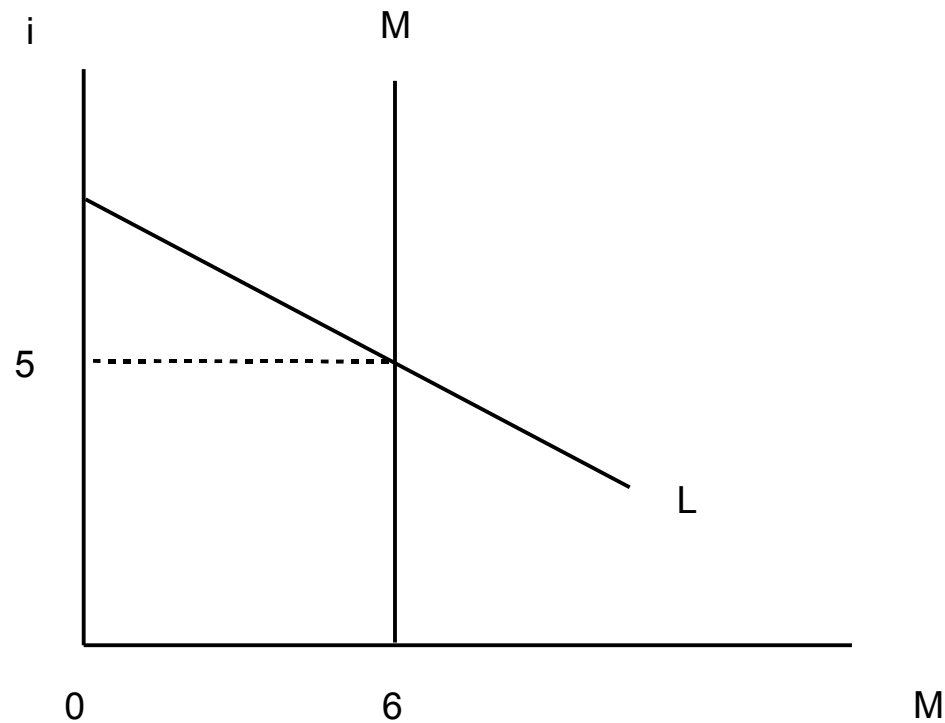
Money Demand

Asset Demand for Money

- A function of income and interest rates
- As income increases, there is more money to save, so demand increases.
- As interest rates increase, demand decreases as it is expensive to hold funds as money, invest in bonds.

Money Supply and Demand

Graph 1



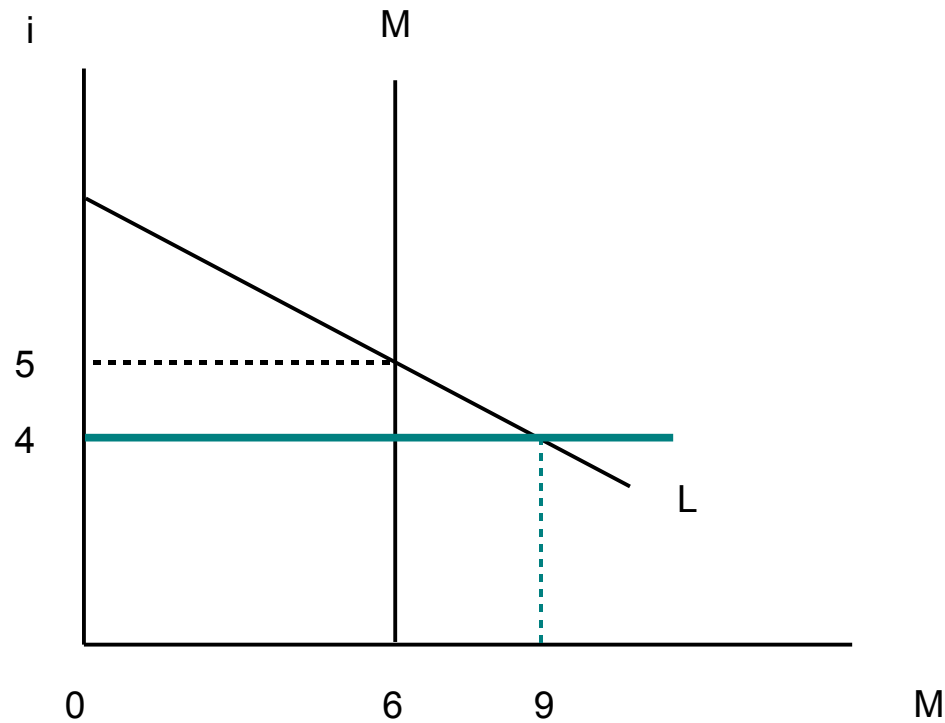
Money Supply and Demand

Notes to graph 1

- Money supply is fixed as the gov't prints money.
- While interest is not paid on cash deposits, it is paid on investments, in this case, bonds.
- Interest in these graph reflects the opportunity cost of holding money as cash.
- As interest rates on bonds increase, it costs more to hold money as cash.

Money Supply and Demand

Graph 2



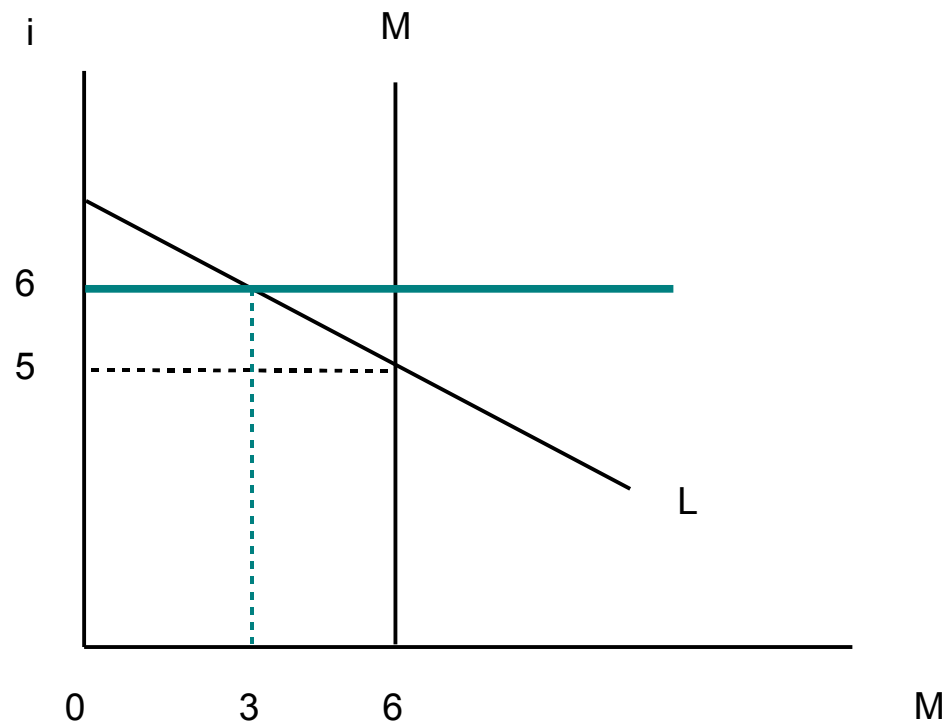
Money Supply and Demand

Notes to Graph 2

- Holding the interest rate to 4% results in money supply $<$ money demand.
- Consequently, there is a shortage of money.
- This exists as bond holders are not earning a sufficient return and prefer to hold their funds as cash.

Money Supply and Demand

Graph 3



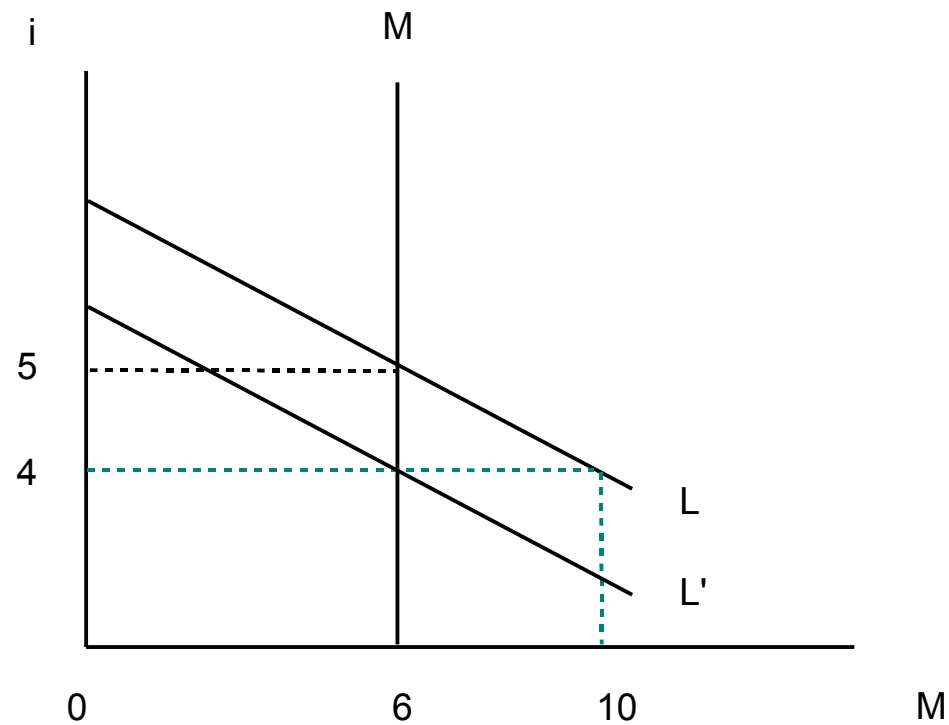
Money Supply and Demand

Notes to Graph 3

- Holding the interest rate to 6% results in money supply $>$ money demand.
- Consequently, there is a surplus of money.
- This exists as bond holders are earning a sufficient return and many would prefer to hold their funds as bonds rather than as cash.

Money Supply and Demand

Graph 4



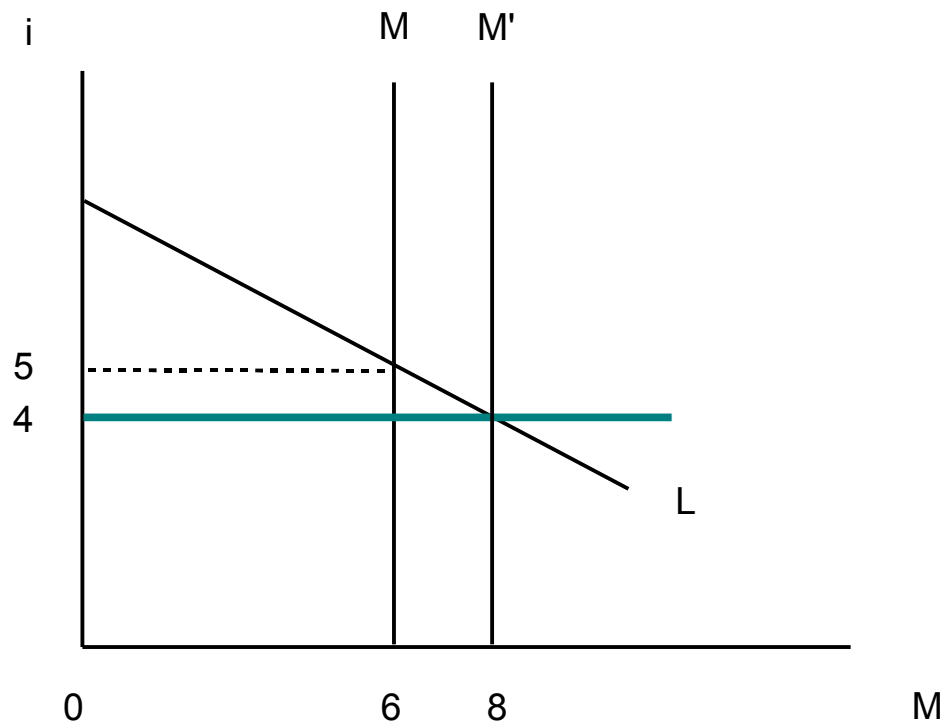
Money Supply and Demand

Notes to Graph 4

- Demand decreases
- With less funds needed as cash, they are invested in bonds. Consequently, bond prices are pushed up and bond yields fall.

Money Supply and Demand

Graph 5



Money Supply and Demand

Notes to Graph 5

- An increase in the money supply, shifts to the right.
- At the original rate, supply $>$ demand, so the interest rate declines as funds are shifted to bonds.
- As demand for bonds increase, their interest rate drops.

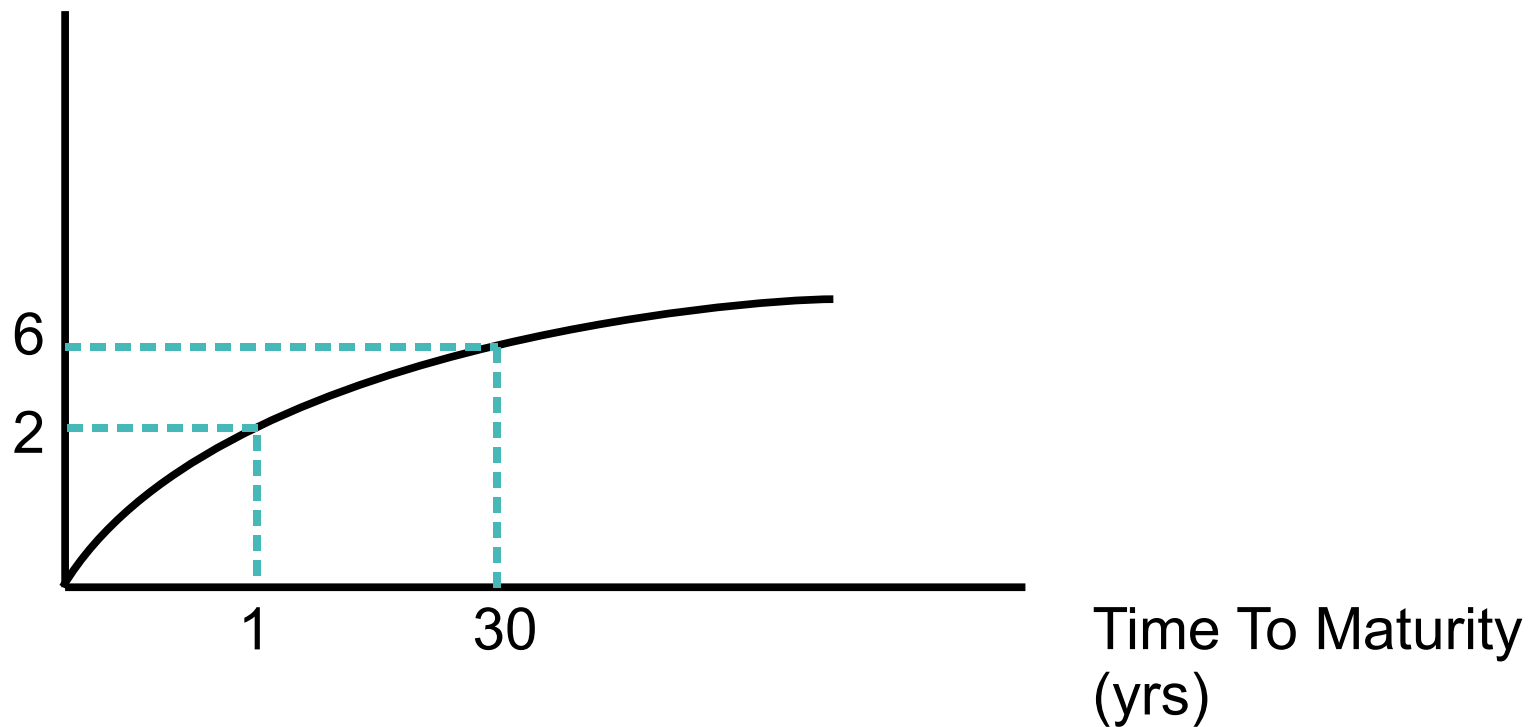
Interest Rate Structure

Term Structure: The Yield Curve

- Relationship between interest rates and term to maturity.
- Typically, short-term rates are lower than long-term rates.

Interest Rate Structure

Yield To Maturity



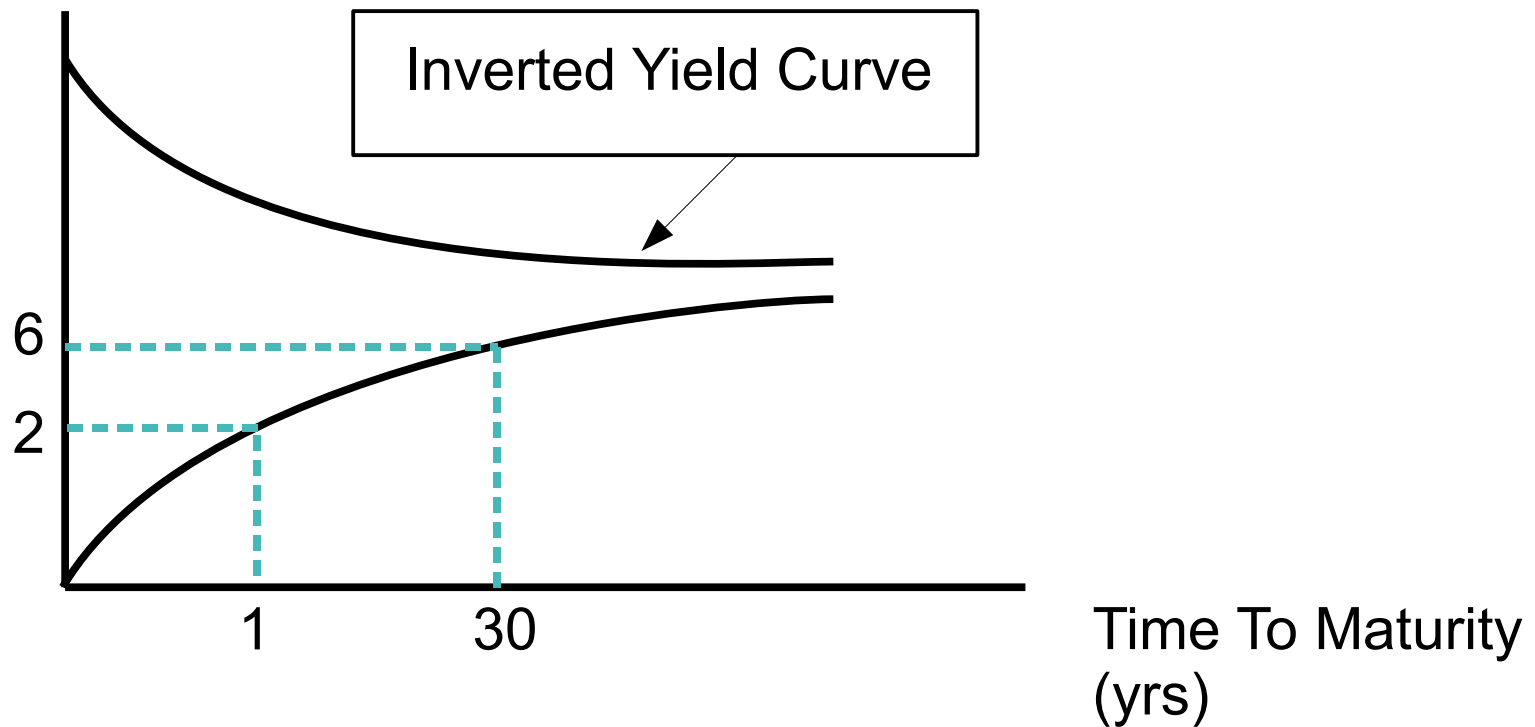
Interest Rate Structure

Notes to graph

- In this graph a one year rate is 2% and a 30 year rate is 6%.
- When the short term rates are higher than long term rates, there is an inverted yield curve.

Interest Rate Structure

Yield To Maturity



Interest Rate Structure

- The questions arises as to why short term rates are normally lower than long term rates.
- Three theories have been put forth:
 - Market Segmentation
 - Expectations
 - Liquidity Risk Premium

Interest Rate Structure

Segmented Markets Theory

- Shape of yield curve due to supply and demand forces in short, medium, and long term bonds.
- It is true that certain borrowers and lenders have preferences as to maturity but if there is a good deal, they change maturity.
- Does not explain why long-term rates are higher than short-term rates.

Interest Rate Structure

Expectations Theory

- Curve indicates interest rate expectations.
- Problem occurs because it always indicates interest rates would be rising, and they are not.
- However, clearly interest rate expectations must be embodied in the curve. The level of the curve changes.

Interest Rate Structure

Liquidity Risk Premium Theory

- As time increases, risk increases.
- Investors want to be compensated for higher risk so they demand higher return.
- This truly explains why long-term rates are higher than short-term rates.

Interest Rate

Interest Rates Components

- Nominal: current interest rate
- Real: purchasing power of that interest rate
- $\text{Nominal} = \text{real} + \text{inflation} + \text{risk}$

Interest Rate Structure

Risk

- The primary form of risk that will look at for this course will be default risk (there are other forms of risk).
- As time increases, risk increases.

Interest Rate Structure

Example

Real + Inflation + Risk = Nominal

$$3\% + 2\% = 5\%$$

$$3\% + 4\% = 7\%$$

$$3\% + 4\% + 2\% = 9\%$$

Interest Rate

Key Interest Rates

- Federal Funds Rate
- Prime Rate
- London Interbank Offer Rate (LIBOR)
- 10 yr US Treasury Bond Yield

Quantity Theory of Money

- The Quantity Theory of Money highlights the relationship between money supply, inflation, and output.
- It posits a simple relationship among:
 - Money (M)
 - Velocity of Money (V)
 - Price (P)
 - Quantity (Q)

Quantity Theory of Money

- The equation is:

$$MV = PQ$$

- Assuming that the velocity of money is constant, then $P \cdot Q$ which represents nominal GDP has to increase if money increases.
- The question becomes which component of GDP increases; P or Q . If unemployment exists, Q increases, if not, then P increases.

Banking & Financial Institutions

Banking & Financial Institutions

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- Banking
- Financial Institutions
- Fractional Reserve Banking

Banking

Economic Importance and Function

- Financial institutions act as financial intermediaries when they channel funds from savers to capital investors.
- Banks accept deposits from savers to make loans to borrowers (businesses & individuals).

Banking

Advantages of indirect finance, banking.

- Lessens asymmetric information by collecting information and monitoring activities.
 - Problem of adverse selection – borrower who want to use funds for high risk projects
 - Problem of moral hazard – after loan, borrower increases riskiness of project.
- Economies of scale – pooling savings to finance large projects

Banking

Management of Assets & Liabilities

- Banks must pay interest on deposits and other debt.
- Banks receive interest on loans.
- The difference between interest received and paid is called interest spread, also called interest margin.
- From this margin all bank expenses are paid.

Banking

Management of Assets & Liabilities

- Deposits are very short-term and liquid with average maturities of less than one year.
- Loans have much longer maturities from cars loans of 6 years to home mortgages of 30 years..

Banking

Management of Assets & Liabilities

- Banks borrow short-term and lend long-term.
- Interest rates move faster on short-term liabilities than on long-term assets causing a profitability squeeze.

Banking

Management of Assets & Liabilities

- Banks must compete with financial markets for deposits
- If interest rates rise in markets, then banks will be compelled to raise rates on deposits otherwise depositors will withdraw funds and put them directly into the market, called disintermediation.

Banking

Management of Assets & Liabilities

- Because short-term rates vary more than long-term rates, bank profits are quite variable.

Banking

Management of Assets & Liabilities

- Banks make money by converting deposits into loans but they cannot lend out 100% of deposits as they need cash for operational purposes.
- This includes having cash to meet withdrawals by customers and paying for staff, utilities, and staff.

Banking

Management of Assets & Liabilities

- The Federal Reserve (US central bank) also imposes reserve requirements which are a percent of deposits. These are called required reserves.
- This includes having cash to meet withdrawals by customers and paying for staff, utilities, and staff.

Banking

Management of Assets & Liabilities

- Reserves are cash and securities.
- Reserves beyond the legal minimum set by the Federal Reserve can be lent out. These are called excess reserves.

Banking

Structure of Banks

Assets

Cash	10
Securities	10
Loans	70
Other	10
Total	100

Liabilities

Deposits	80
Other	10
Capital	10
Total	100

Financial Institutions

Financial Institutions

Banking Firms

- Traditional model has deposits funding loans.
- Modern banks provide a wide array of financial intermediation services.
- Includes banks, savings and loans, credit unions, etc.
- Some banking firms are now financial conglomerates offering insurance and other services.

Financial Institutions

Insurance Firms

- A company that collects premiums, pays claims covering losses making a profit.
- Reserves are maintained against contingent losses.
- Funds in reserves are invested.

Financial Institutions

Insurance Firms

- Companies often specialize in lines of insurance such as auto, life, property, commercial, etc.
- Auto, property and casualty lines usually invest in short term securities.
- Life insurance companies invest in long term securities.

Financial Institutions

Mutual Funds

- A fund run by an investment company that collects funds from investors and purchases various financial instruments.
- Investments are made according to the investment objectives cited in the prospectus.
- Often used to diversify investments.
- Many 401(k) retirement plans use mutual funds.

Financial Institutions

Pension Funds

- A legal plan organized as a pool of assets into which contributions are received and out of which benefits are paid. Investments yield income which is retained in the fund.
- Invests in long term securities.

Financial Institutions

Agencies

- Firms authorized by the Federal government to issue loans, securities, and loan guarantees.
- Collectively known as Government Sponsored Enterprises (GSE), only one has a government guarantee on payment of debt, Ginnie Mae.
- Other firms are Fannie Mae, Farmer Mac, and Freddie Mac.

Financial Institutions

Agencies

- Typically, firms assist in asset securitization of mortgages. Loans are packaged and sold to investors. The difference between the interest received on the mortgages and interest paid to investors covers a servicing fee and funds the guarantee to cover principal and interest on defaults.
- All loans are mortgages except for Sallie Mae which specializes in student loans.

Financial Institutions

Finance Companies

- Companies that specialize in making consumer loans to sub prime borrowers and charge much higher interest rates.
- Often used to finance consumer purchases such as appliances, electronics, etc.

Financial Institutions

Nonfinance Companies

- Companies often issue debt to finance operations.
- Firms often finance consumer purchases.

INTERNATIONAL MONETARY FUND

- “The IMF is an international organization of 185 member countries. It was established to promote international monetary cooperation, exchange stability, and orderly exchange arrangements; to foster economic growth and high levels of employment; and to provide temporary financial assistance to countries to help ease balance of payments adjustment.”
- www.imf.org

INTERNATIONAL MONETARY FUND

- In recent years, as part of its efforts to strengthen the international financial system, and to enhance its effectiveness at preventing and resolving crises, the IMF has applied both its surveillance and technical assistance work to the development of standards and codes of good practice in its areas of responsibility, and to the strengthening of financial sectors.

INTERNATIONAL MONETARY FUND

- The work of the IMF is of three main types. Surveillance involves the monitoring of economic and financial developments, and the provision of policy advice, aimed especially at crisis-prevention. The IMF also lends to countries with balance of payments difficulties, to provide temporary financing and to support policies aimed at correcting the underlying problems; loans to low-income countries are also aimed especially at poverty reduction. Third, the IMF provides countries with technical assistance and training in its areas of expertise. Supporting all three of these activities is IMF work in economic research and statistics.

WORLD BANK

- The World Bank is a vital source of financial and technical assistance to developing countries around the world. We are not a bank in the common sense. We are made up of two unique development institutions owned by 185 member countries—the International Bank for Reconstruction and Development (IBRD) and the International Development Association (IDA).

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WORLD BANK

- Each institution plays a different but supportive role in our mission of global poverty reduction and the improvement of living standards. The IBRD focuses on middle income and creditworthy poor countries, while IDA focuses on the poorest countries in the world. Together we provide low-interest loans, interest-free credit and grants to developing countries for education, health, infrastructure, communications and many other purposes.

BANK OF INTERNATIONAL SETTLEMENTS

The Bank for International Settlements (BIS) is an international organization which fosters international monetary and financial cooperation and serves as a bank for central banks.

BANK OF INTERNATIONAL SETTLEMENTS

The BIS fulfills this mandate by acting as:

- * a forum to promote discussion and policy analysis among central banks and within the international financial community
- * a center for economic and monetary research
- * a prime counterparty for central banks in their financial transactions
- * agent or trustee in connection with international financial operations

Fractional Reserve Banking

- Bank operations have a significant impact on the economy.
- The process of making loans generates activity, particularly in the areas of business investment, consumer durables, and housing.
- Fractional reserve bankings describes the process through which expansion of the money supply via a relending process facilitates economic growth.

Fractional Reserve Banking

- Banks must hold reserves against deposits. Excess reserves are lent out.

Fractional Reserve Banking

- Let's start our example with what is called an injection, new uncirculated money coming into the system.
- The Fed prints new money, \$10K and gives to you as a reward for taking economics.
- You rush to your bank, Bank of America, and deposit it.

Fractional Reserve Banking

- Now BOA has \$10K in cash from your deposit.
- They have a 10% reserve requirement, so at the moment they need \$1K in reserves and thus have \$9K in excess reserves to lend out.
- They lend it out.

Fractional Reserve Banking

- That \$9K loan buys a boat and the boat dealer now deposits the cash into Wachovia.
- Wachovia now has \$9K in reserves and deposits. They must keep \$900 but can lend out the excess reserves of \$8,100.
- They lend it out.

Fractional Reserve Banking

- That \$8,100 loan buys a motorcycle and the motorcycle dealer now deposits the cash into Citibank.
- Citibank now has \$8,100 in reserves and deposits. They must keep \$810 but can lend out the excess reserves of \$7,290.
- They lend it out.

Fractional Reserve Banking

- At each stage of process, the amount available to lend out drops by the amount of the reserves.
- Consequently, the process is not infinite.
- The total increase in money supply is calculated by using a money multiplier times the injection.
- The money multiplier is found as $1/\text{Reserve Ratio}$.
- $1/.1 = 10 * \$10K = \$100k$ as the total increase in money supply.

Fractional Reserve Banking

- The net increase in public money supply is \$90K (\$100K - \$10K reserve).
- Since this money is lent out, the increase in credit is approx the same less the reserve, \$90K.
- Money = Credit

FEDERAL RESERVE

FEDERAL RESERVE

- The Federal Reserve Bank is the central bank of United States of America.
- It was created by an act of Congress in 1913.
- It is operated as nonprofit corporation.
- All profits go back to the Federal government.
- Only commercial banks may buy stock but stock only yields 5% dividend and does not grant voting rights.

FEDERAL RESERVE

- The Fed is not a commercial bank.
- It does not accept consumer or business deposits nor does it make consumer and business loans.

FEDERAL RESERVE

Functions of the Federal Reserve

- Act as fiscal agent for the US Federal Govt
- Conduct the nation's monetary policy
- Supervise and regulate banking institutions
- Protect the credit rights of consumers
- Maintain stability of the financial system

FEDERAL RESERVE

Structure of the Federal Reserve

- Board of Governors
- Open Market Committee
- 12 Individual Reserve Districts

Federal Reserve

Board of Governors (BOG)

- Seven individuals appointed by the President, and confirmed by the Senate.
- Duties:
 - Set reserve requirements
 - Authorize discount rate changes
 - Oversee district banks
 - Regulate activities of financial holding companies, approving mergers, etc.
 - Enforce consumer laws

Federal Reserve

Federal Open Market Committee (FOMC)

- Includes the seven members of the BOG plus five which are presidents of the individual district banks.
- Issues directives to the trading desk New York Fed.

Structure of the Federal Reserve

Individual Reserve Districts

- Each district bank has nine directors serving on a board of directors of which three are appointed by the BOG, three represent business or agriculture interests and three are elected by member banks.
- All serve three year terms.

FEDERAL RESERVE

Policy Instruments

- Federal Reserve Requirements
- Open Market Operations
- Discount Rate

FEDERAL RESERVE

Federal Reserve Requirements

- Most powerful of the policy instruments
- Directly affects money multiplier
- Increasing the reserve requirement, decreases the money multiplier causing a monetary contraction.

FEDERAL RESERVE

Open Market Operations

- Most used (daily) of policy instruments yet least known.
- Purchasing US Treasury securities puts new money into circulation, selling securities takes it out of circulation.

FEDERAL RESERVE

Discount Rate

- The rate charged on loans to banks by the Federal Reserve.
- Most public of all policy instruments
- Increasing the rate indicates a contractionary monetary policy.

Monetary Policy

Monetary Policy

How Monetary Policy Affects the Economy

- Expansionary monetary policy is conducted via open market operations.
- The increased quantity of money drives down the nominal interest rate (liquidity effect).

Monetary Policy

How Monetary Policy Affects the Economy

- Lower nominal interest rates trigger increased investment expenditures.
- Increased investment expenditures increase GDP (and subsequently, employment).

Monetary Policy

Monetary Policy Problems

- Setting Monetary Policy Goals
- Policy Lags
- Credibility
- Information

Monetary Policy

Setting Monetary Policy Goals

- Under the Humphrey-Hawkins Act of 1978, the Fed must consider both inflation and unemployment in designing monetary policy.
- Business and trade interests often have conflicting goals depending on whether they export or import.
- Political interests generally want low unemployment.
- Must decide suitable policy targets.

Monetary Policy

Setting Monetary Policy Goals

- It is difficult to target inflation and unemployment directly since each is subject to many influences.
- Focus on intermediate target variables that macroeconomic theory suggests should influence inflation and unemployment.

Monetary Policy

Policy Lags

- The time between the need for an action and the point in time that action solves that need.
- Lags are variable and unpredictable.
- Because of lags it is difficult to know if a policy is going to work or if additional changes are needed.

Monetary Policy

Components of Policy Lag

Recognition Lag

- Time between need and recognition of problem.

Response Lag

- Time between recognition of need and implementation of action to address that need.

Transmission Lag

- Time between implementation and effect of policy action.

Monetary Policy

The question arises as to what causes variability in real GDP and, of course, employment.

- If demand for money (or reserves) is the trigger that causes interest rates to change which drives investment spending and consequently GDP, then smoothing interest rates makes sense.

Monetary Policy

Information

- One of the basic problems of administering any monetary policy is the acquisition of accurate information in a timely manner.
- Another concern is that this information in its self will lead to correct decision making.

Monetary Policy

Credibility

One of the major arguments in the administration of monetary policy is the very act of policy making.

Should a rule be followed or should flexibility be preserved through discretionary policy making?

Monetary Policy

Credibility

- A policy rule is useless if no one believes it will be followed or can be (has the ability to be) followed.
- Time-inconsistency problem: policymaker has ability to renege on initial promises.
- Inflation bias: tendency for persistent inflation due to time-inconsistency problem.

Monetary Policy

The question arises as to what causes variability in real GDP and, of course, employment.

- If demand for money (or reserves) is the trigger that causes interest rates to change which drives investment spending and consequently GDP, then smoothing interest rates makes sense.

FINANCIAL MARKETS

Financial Markets

Relationship between assets and liabilities

- Every financial asset is also a financial liability.
- A loan is a liability to the borrower but an asset to the lender.
- US Treasury bonds is debt and a liability to the US Federal government but an asset to the holder.
- As a liability, payments are paid, as an asset, payments are received.

Financial Markets

- All financial instruments (loans, annuities, stocks, bonds, etc.) are contracts.
- An essential ingredient for success in exchanging financial contracts in markets is the presence of well-defined property rights and a cost effective means of enforcement via a fair legal system.

Financial Markets

Types of Markets by issuance

- Primary: only newly issued securities are sold
- Secondary: past issues of securities are traded

Financial Markets

Types of Markets by Term

- Money: markets for financial instruments with maturities less than one year.
- Capital: markets for financial instruments with maturities one year or more.

Financial Markets

Money Market Instruments

- Treasury Bills
- Commercial Paper
- Banker's Acceptances
- Certificates of Deposit
- Repurchase Agreements
- Federal Funds

Financial Markets

Treasury Bills

- Debt obligation of US Federal government with maturities one year or less, typically in 3, 6 or 12 month maturities.
- Issued on a discount basis where the difference between the purchase price and maturity value becomes the interest.

Financial Markets

Commercial Paper

- Unsecured debt instrument issued by companies in maturities up to 270 days (max allowed before registration by SEC).
- Often back by a line of credit from a bank.
- Often issued in multiples of \$100,000

Financial Markets

Commercial Paper

- Commercial paper may be directly issued or dealer placed.
- It is usually bought and sold on a discount basis, with face value being paid to holders upon maturity.

Financial Markets

Bankers Acceptances

- Bankers acceptance is a draft or bill drawn on and accepted by a banking institution (the "accepting bank") or its agent for payment by that institution on a future date specified in the instrument (most commonly about three months later).
- Funds are advanced to the drawer of the acceptance (the borrower) by the discounting of the accepted draft, either by the accepting bank or by others.

Financial Markets

Bankers Acceptances

- The accepted draft is a negotiable money-market instrument and may be sold and resold subsequent to its original discounting.
- On the maturity date, the current owner of the acceptance presents the accepted draft to the accepting bank for payment.

Financial Markets

Bankers Acceptances

- The accepting bank is obligated to pay the holder the face amount of the draft on the maturity date; the borrower is obligated to repay the funds to the bank, or or before that date.
- Bankers acceptances are often used in financing international trade.

Financial Markets

Certificates of Deposit

- It is a time deposit with a bank, generally with maturities less than one year.
- Nonwithdrawal (nonliquidable) but large denominations (\$100,000) can be negotiable (tradable).
- Low risk, insured up to \$100,000 by FDIC.

Financial Markets

Repurchase Agreements

-

Financial Markets

Federal Funds

- Funds on deposit at the Federal Reserve by banks that are borrowed and lent among banks on an overnight basis.
- The interest rate charged is known as the Federal Funds rate.

Financial Markets

Eurocurrency Markets

- Bonds, Loans, etc.
- Eurocommerical paper
- Eurocurrency deposits

Financial Markets

Capital Market Instruments

- Common Stock
- Preferred Stock
- Corporate Bonds
- Municipal Bonds
- Treasury Notes and Bonds
- Mortgage Backed Securities

Financial Markets

Common Stock

- Shares of ownership issued by firm.
- Carry voting rights.
- Shares in earnings through dividends.
- Neither dividends nor value in the event of liquidation of the firm are guaranteed.
- Transferable (tradable)
- Limited liability
- Unlimited life

Financial Markets

Common Stock

- Most common stock is traded on the New York Stock Exchange
- The other important stock exchange is the NASDAQ which is an Over-the-Counter exchange.
- Nearly all stock is traded electronically.

Financial Markets

Preferred Stock

- Shares of ownership, again with limited liability.
- No voting rights.
- Preference in liquidation and dividends of firm over that of common stock.
- Tradable
- Unlimited life

Financial Markets

Corporate Bonds

- Debt issued by firms, typically longer term.
- May be secured by collateral such as equipment, real estate, etc.
- Unsecured bonds are called debentures.
- Interest payable semi-annually
- May have other features such as callability.
- May have substantial default risk.

Financial Markets

Municipal Bonds

- Debt issued by states, cities and other government entities.
- Interest payable semi-annually, long term, may have some tax advantage. Consequently, rates are lower than corporates.
- Can have default risk.

Financial Markets

Treasury Notes and Bonds

- Debt issued by US Treasury.
- Notes have maturities from 1 to 10 years.
- Bonds have maturities 10 years or more.
- Interest payable semi-annually.
- Very low risk of default.

Financial Markets

Mortgage Backed Securities (MBS)

- Ownership in a pool of mortgages or an obligation backed by such a pool.
- Principal and interest payments are passed through to MBS certificate holder.
- It is secured by real estate.
- Payments vary depending on default rate and prepayment rate.
- Security is self-liquidating.

Financial Markets

Organization of Trading within market

- Markets are organized as an auction.
- Buyers bid for securities, Sellers post ask price.
- Difference between bid-ask is known as spread.
- Spread is wider for lesser traded or riskier securities.
- Securities that are widely and easily traded are said to be liquid.

Financial Markets

Organization of Trading within market

- Liquid securities can be quickly traded with little loss of price.
- Ill-liquid securities can be traded quickly only with a loss of price.

Financial Markets

Organization of Trading within market

- Brokers act as an agent for others.
- Dealers act for themselves.
- Not uncommon for broker-dealer combinations.

Financial Markets

Trading: Role of Specialists

- Most stock traded on an exchange are assigned to a specialist who matches buy and sell orders (may be done by computer programs).
- The specialist is charged with maintaining an orderly market which may requiring buying and selling stock to maintain liquidity and price stability.

Financial Markets

Trading: Role of Specialists

- Specialists also execute limit orders.
- Limit orders are placed by individuals to either sell or buy when a stock reaches a certain price.

Credit Markets Transactions, 2006

Borrowers	\$3,825
Open market paper	317
Treasury securities	184
Agency	340
Municipal securities	178
Corporate and foreign bonds	1,146
Bank and other loans	184
Mortgages	1,366
Consumer Credit	95

Credit Markets Transactions, 2006

Borrowers	\$3,555
Households	1,012
Businesses	753
State & Local Gov	152
Fed Gov	184
Foreign	255
Banking	102
Agency/ABS	820
Other	277

Source: Release Z1, Flow of Funds, Federal Reserve

Credit Markets Transactions, 2006

Lenders	\$3,555
Domestic nonfinancial	101
Foreign nonfinancial	826
Banking	793
Insurance	133
Pension	63
Mutual Funds	413
Agency/ABS	794
Other (finance firms)	432

Credit Markets, Balance 2006

Assets	\$44,549
Households	3,029
Businesses	466
Gov	1,644
Foreign	6,465
Banking	10,922
Insurance	3,664
Pension	1,473
Mutual Funds	3,682
Agency/GSE	7,443
Other	6,061

Credit Markets, Balance, 2006

Debt	\$44,549
Households	12,816
Businesses	8,733
Gov	6,892
Foreign	1,720
Banking	1,304
Insurance	2,648
Agency/GSE	10,202
Other	234

Credit Markets

Demand for Credit

- Major demanders are consumers, firms, and governments.
- Consumers use credit to finance purchases of homes, autos, and other consumer expenditures (via credit card debt).

Credit Markets

Demand for Credit

- Firms use credit to finance asset acquisition such as equipment and structures, to finance inventory and receivables, and acquisition of other firms.

Credit Markets

Demand for Credit

- Governments often use credit (bonds) to finance projects such as highway construction, utilities, schools, and sports facilities.
- Federal governments sometimes use debt to finance general operations.

Credit Markets

Supply of Credit

- Credit is supplied, or financed, by savings of consumers, firms, and governments.

Credit Markets

Supply of Credit

- A major source of personal savings is that for retirement.
- For business savings, it is additions to retained earnings.
- For government, is it surpluses. Deficits reduce savings.
- Government sponsored retirement plans increase savings.

Regulation

Regulation

- There are many regulators who overlap in terms of authority and powers.
- Changes to the system have constantly been made and continue to be proposed.
- Coordination among regulators has been encouraged in the light of regulatory failures in the past.

Regulation

Banking

- Federal Reserve
- FDIC
- Office of the Currency Comptroller
- Office of Thrift Supervision
- CPA's

Regulation/Banking

Federal Reserve

- Charged by Congress to maintain a sound banking system, and administer credit laws.
- Sets reserve requirements for banks.
- Focuses on bank holding companies.

Regulation/Banking

Bank Holding Companies

- Mergers, acquisitions and restructurings are subject to review and approval of the Fed.
- Of particular concern is the effect of nonbank businesses on profitability and solvency of the bank business.
- Consequently, it is this risk factor that the Fed upon which the Fed is focused.

Regulation/Banking

FDIC (Federal Deposit Insurance Corporation)

- Insures deposits, not banks.
- Charges banks a premium which is deposited into a trust fund. Premiums based on risk.
- Payouts to depositors of failed banks comes out of trust fund.

Regulation/Banking

Federal Deposit Insurance Corporation

- The FDIC in its examinations focuses on the adequacy of the loan loss reserve.
- New changes to the law were made in 2006
 - Deposits are now guaranteed to \$250,000
 - Savings and Bank Trust Funds were merged.
 - Maintain the fund level between 1.15 to 1.5% of deposits.
 - Premiums for most institutions are 2 to 10 basis points.

Regulation/Banking

Office of the Comptroller of the Currency (OCC)

- The primary regulator of federally chartered banks.
- Has some veto authority over Fed on granting of new powers to commercial banks.
- <http://www.occ.treas.gov/>

Regulation/Banking

Capital Requirements

- Set internationally by the BIS (Bank of International Settlements).
- Enforced by domestic regulators (Fed, FDIC, etc.)

Regulation/Banking

Bank of International Settlements (BIS)

- “The Bank for International Settlements (BIS) is an international organization which fosters international monetary and financial cooperation and serves as a bank for central banks.”
- Its recent focus has been on developing a set of standards for bank capitalization.

Regulation/Banking

State Regulators

- In the State of Florida we have the Comptroller's Office, now known as the Department of Financial Services.
- The Comptroller is now the Chief Financial Officer, Ms. Alex Sink.
- Under the Office of Financial Regulation is the Division of Financial Institutions;
<http://www.flofr.com/banking/index.htm>

Regulation/Banking

Accounting

- CPA's

Regulation/Securities Markets

Securities Markets

- Securities and Exchange Commission
- States
- CPA's

Regulation/Securities Markets

Securities and Exchange Commission

- States
- CPA's

Regulation/Securities Markets

Other States and CPA's

- States
- CPA's

The End