Introduction to U.S. Financial Markets and Instruments

Federal Reserve Bank of New York

Central Banking Seminar
Preparatory Workshop in Financial Markets, Instruments and Institutions

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Financial Markets channel funds from those who have savings, but no productive uses for them, to those who have productive investments, but insufficient funds to carry them out. In other words, financial markets move funds from those who "save" to those who "spend" on productive capital.

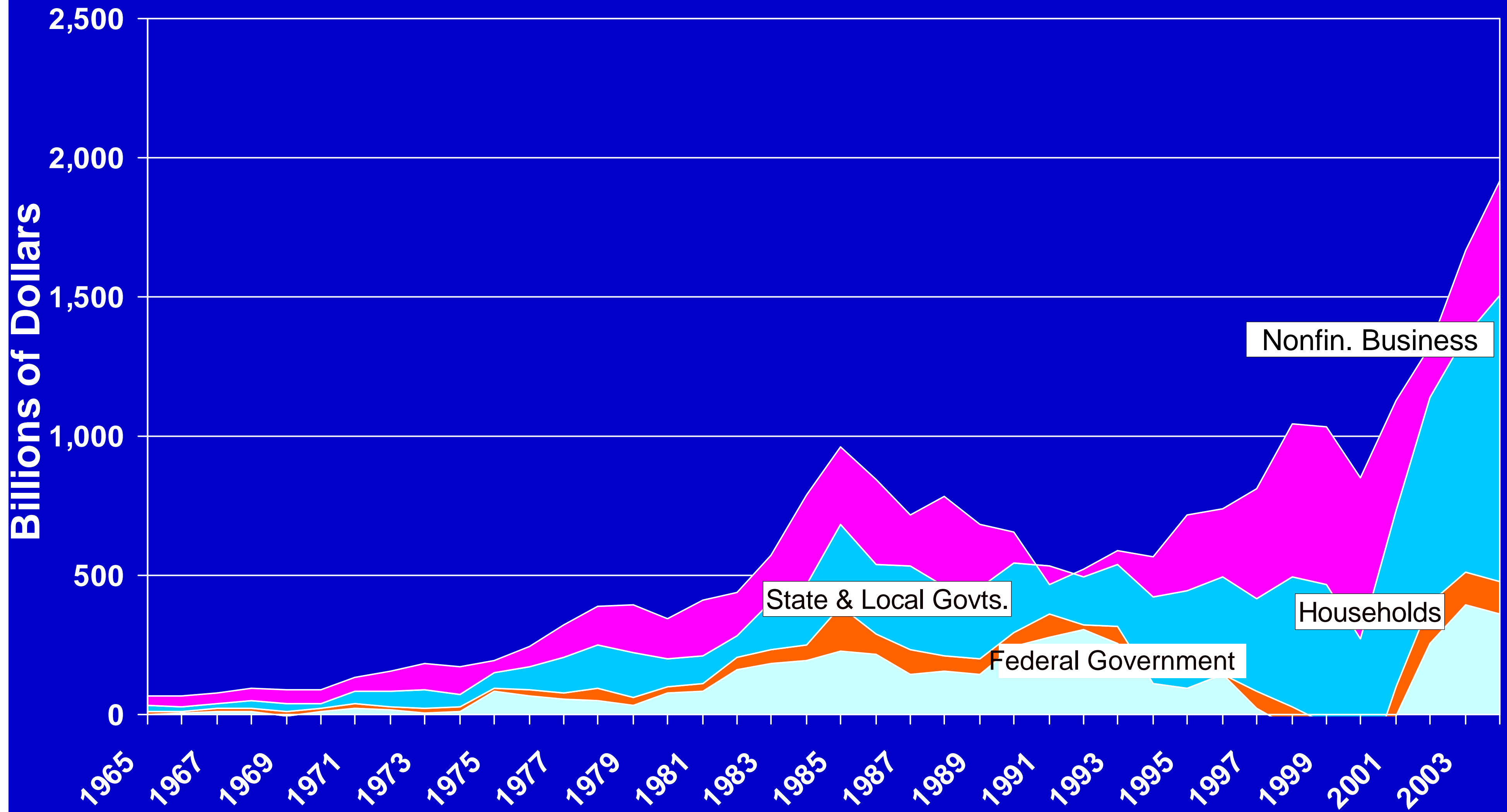
Savers = Investors & Lenders:
(in order of importance)

- Households
- Businesses
- Foreigners
- Government

Spenders = Borrowers:

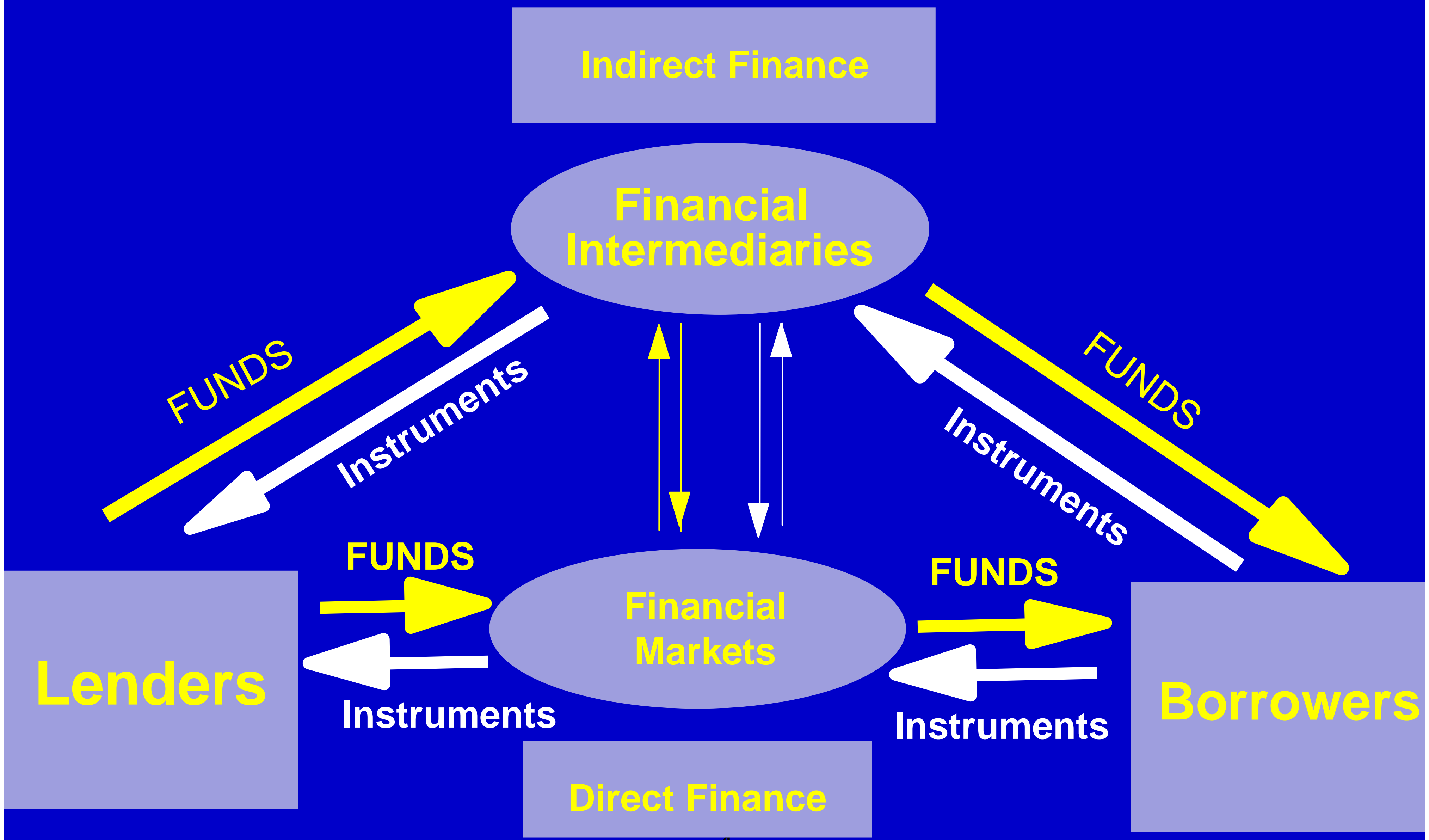
- Households
- Government
- Businesses
- Foreigners

U.S. Credit Market Borrowing by Sector



Source: Federal Reserve Board Flow of Funds

Flow of Funds Through the Financial System



Workshop Topics

Intermediaries

- Types
- Function and operations

Instruments

- Types (e.g., equity versus debt)
- Pricing issues

Markets

- Primary markets
- Secondary markets (exchanges, OTC)

Overarching theme: How does the structure of the financial system address the critical issues faced by participants?

- Risk
- Asymmetric information

Asymmetric Information Problems in Finance

Adverse Selection:

— Firms and individuals with the highest risk projects to finance have the greatest incentive to conceal the riskiness of their projects and seek out investors and lenders.

— As a result, investors and lenders are more likely to select the highest risk projects that will produce adverse outcomes.

Moral Hazard:

— Once a transaction has taken place, individuals and firms who have received funds have an incentive to use these funds for projects more risky than the lenders and investors would like.

Types of Financial Instruments/Markets

Equity (Stock):

— A claim of ownership, usually of a business

— A share of a firm's assets and future income

— Holders may receive periodic payments called dividends

— Equity has voting rights: Shareholders elect the firm's directors and vote on certain matters affecting the firm

— Shareholders may sue firm directors and officers in cases of frau

— Returns to equity are often characterized as "risky"

Types of Financial Instruments/Markets

Debt:

— A legal contract in which a borrower receives funds today and agrees to repay a lender at a specified interest rate or dollar amount on a regular basis until a specified date (maturity)

— Examples:

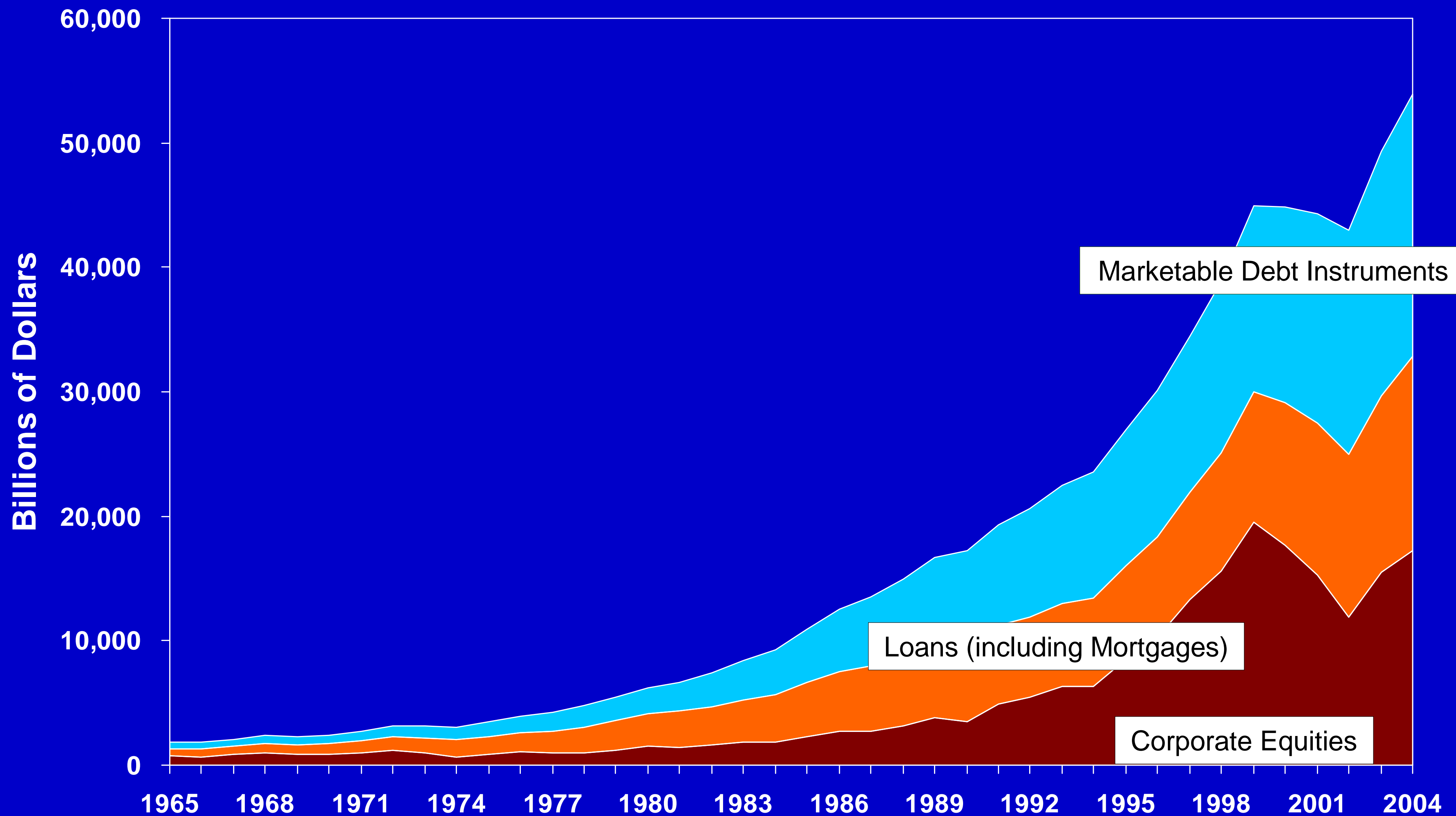
- Marketable debt: corporate bonds, commercial paper, US Treasury bills, notes, & bonds, mortgage-backed securities
- Intermediated debt: bank loans, automobile loans, home & commercial mortgages

— Debt may feature additional covenants restricting issuer behavior and various options to protect the lender or the borrower

— Secured versus unsecured

— Control rights in the event of private contract breach (default)

U.S. Credit and Stock Market Values



Source: Federal Reserve Board Flow of Funds

Issuance and Primary Markets: (How do firms "meet" investors?)

Both stock and marketable debt are offered for direct sale to vestors.

Only governments and large, well established businesses sually raise funds directly from the market. *Why?*

Primary market transactions are managed by investment banks.

— Stocks: Initial Public Offerings (IPOs)

— Corporate debt: New issuance of corporate bonds and commercial paper

— US Treasury Debt auctioned by Federal Reserve

Who buys in the primary market?

— Mutual funds, pension funds, other financial intermediaries such as insurance companies, on behalf of households and businesses

— US Treasury Debt auctioned (mostly) to a list of large financial intermediaries called primary dealers

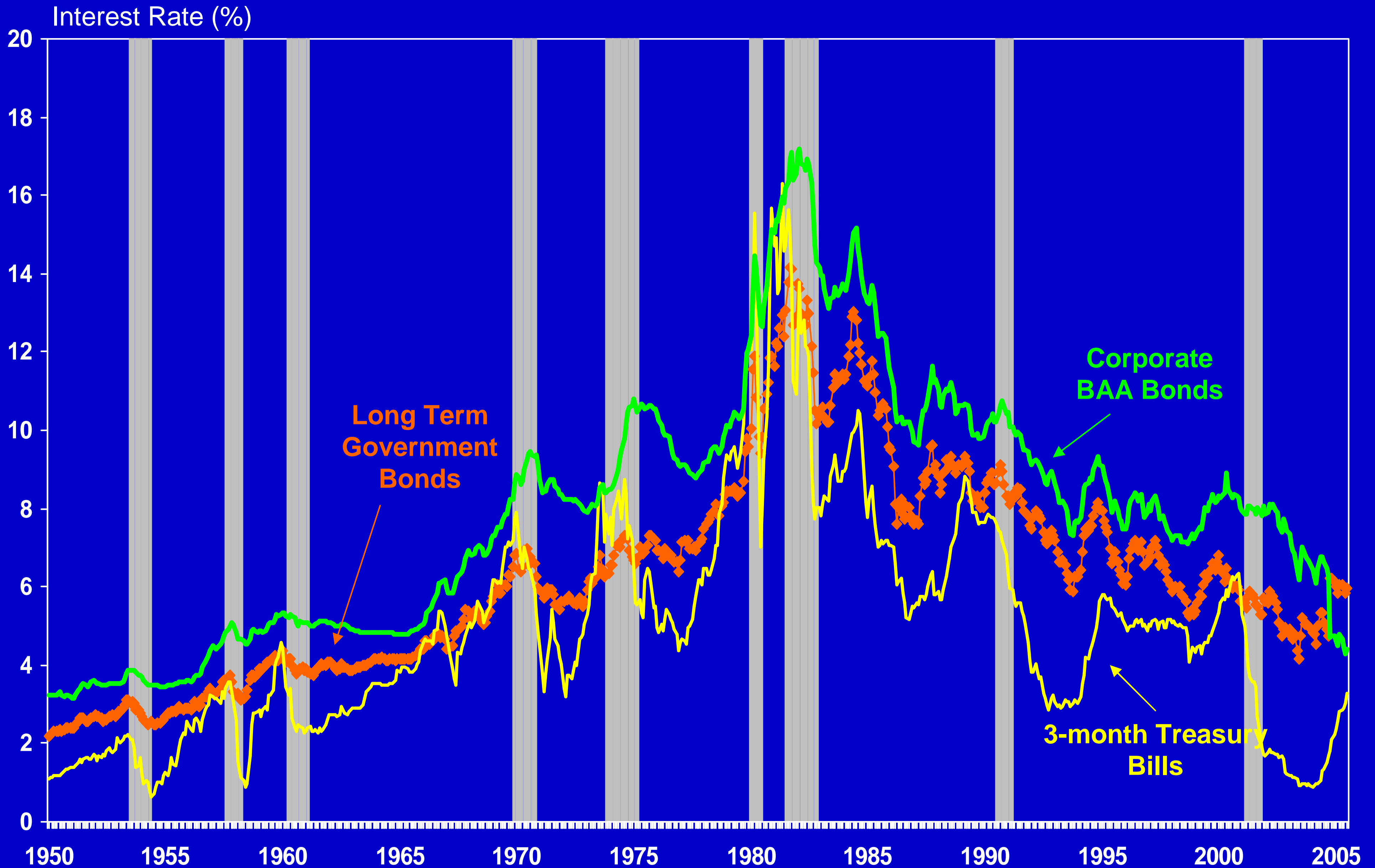
Secondary Markets

■ Buying and selling of marketable securities (debt and equity) after issuance.

■ Prices of stock and bonds move over time according to supply and demand for a particular security. Thus, prices can vary widely from those in primary market.

■ For debt instruments, the total rate of return earned by a secondary market buyer depends on the price of the debt on the days it is purchased and sold. The total rate of return varies over time and may bear no relationship to the interest rate on the debt at issuance (interest rate or price risk).

Stock Prices: S&P 500 Index


Interest Rates on Selected U.S. Bonds
Interest Rate (%)
20
18
16
14
12
10
8
6
4
2
0
1950
1955
1960
1965
1970
1975
1980
1985
1990
1995
2000
2005
Long Term Government Bonds
Corporate BAA Bonds
3-month Treasury Bills
Source: Moodys and USECON

Types of Secondary Markets

■ Exchanges: Many stocks (and commodities and derivatives) are traded on exchanges.

— Provide centralized location for trading
— Limit membership with high entrance fees
— Impose strict trading rules and restrictions on borrowing (margin requirements)
— Guaranteed liquidity, "market making" and settlement

— Examples:

- New York Stock Exchange (NYSE)
- American Stock Exchange (AMEX)
- Chicago Mercantile Exchange (CME)
- Chicago Board of Trade (CBOT)

Types of Secondary Markets

- Over-the-Counter (OTC)

  — Most debt instruments in the U.S. are traded through networks of brokers/dealers and large financial firms.
  — Trading is done in one-to-one transactions between the broker/dealer and a customer.
  — Settlement of sales is handled by individual financial institutions.

- Hybrids: NASDAQ

- Who buys in the secondary market?
  — Almost anyone, although usually through a financial intermediary

Other Markets

- Foreign Exchange (FX)

  — Converts funds in one country's currency into another country's currency
  — A foreign exchange rate is the price of one currency in terms of another, for example, the number of Japanese Yen needed to buy one U.S. dollar
- Financial Derivatives

  — Include options, futures, forwards, and swaps

  — Value is "derived" from the value of some other security (called the "underlying" security)

  — Structure varies widely, but typically designed to replicate only part of the risk of the underlying security

  — Critical risk management tools vs. “weapons of mass destructior

What's Coming Next:

- Financial Institutions
  - — What kinds of institutions?
  - — Why do modern financial systems need both markets and institutions?
- Analytical work on interest rates, expected rate of return, risk, and the term structure of interest rates
- Issues in corporate governance and disclosure
- Derivatives
- More detailed analysis of markets and instruments
  - — Debt, equity, and FX markets