TOPIC 1
INTRODUCTION TO FINANCE

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FINANCIAL SYSTEM

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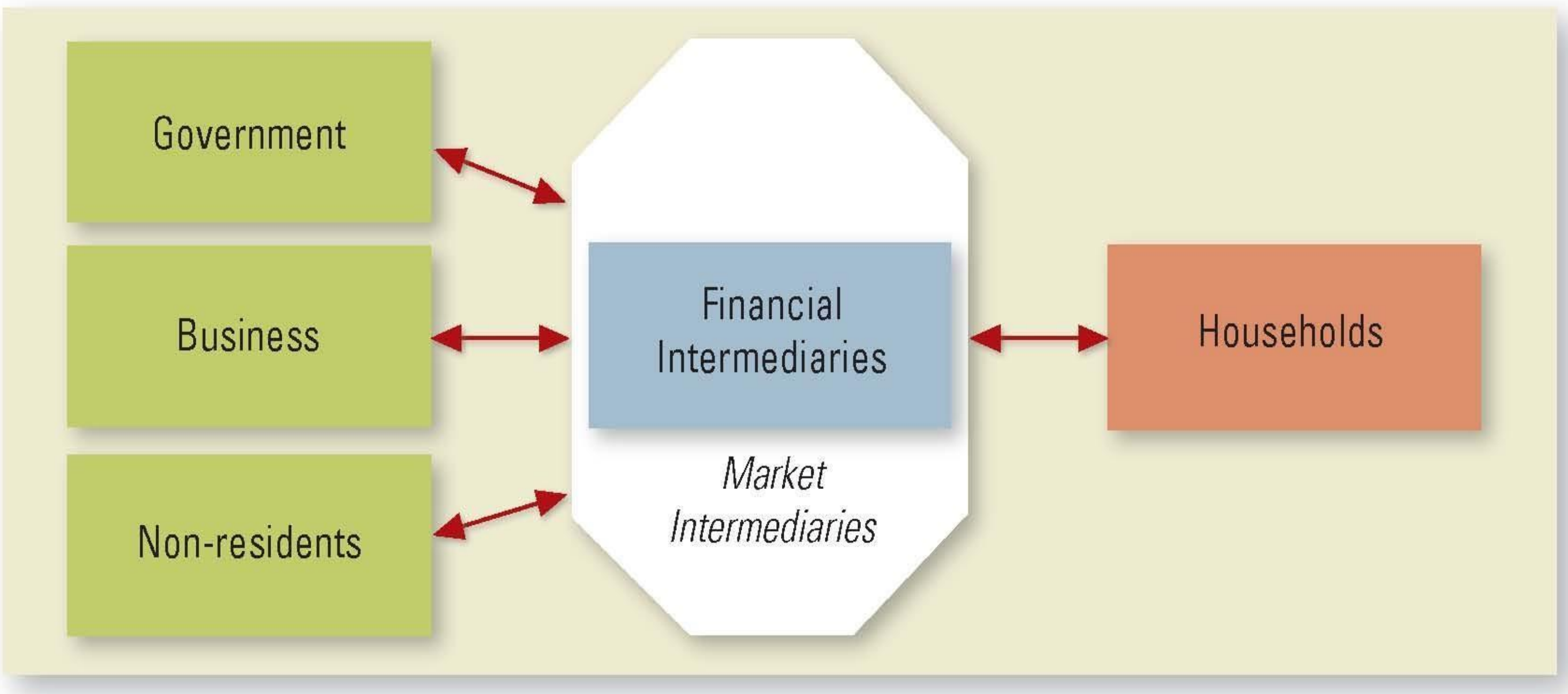
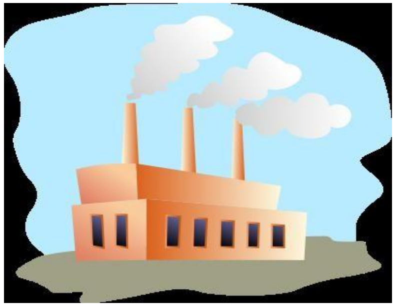
The *financial system* is the collection of institutions that facilitate the flow of funds between lenders and borrowers

STRUCTURE OF THE FINANCIAL SYSTEM

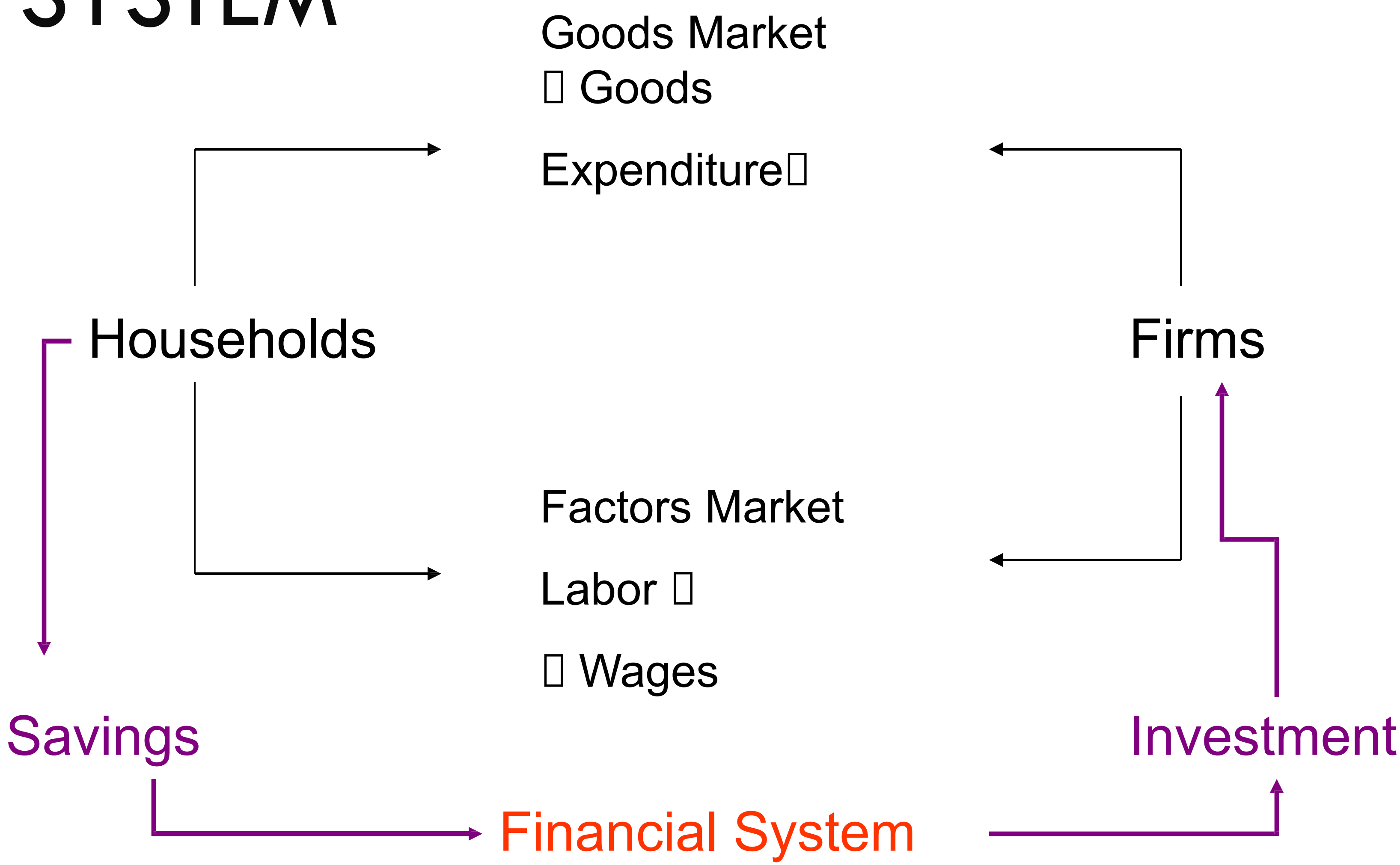


THE FINANCIAL SYSTEM: SAVINGS AND INVESTMENTS

- When people earn income, they typically don't want to consume their entire income all at once. But they may have no idea what to do with the unconsumed income.
- This unconsumed income is called ***saving***
- On the other hand, there are people who may wish to spend money on various potentially valuable projects but either have no money of their own or may wish to spend their personal funds on projects other than their own
- The money that these people need for their spending plans is called **investment**



MACROFINANCIAL SYSTEM



WHAT DOES THE FINANCIAL SYSTEM DO?

- The financial system serves multiple purposes:
  - It helps entrepreneurs find the money needed to turn business ideas into reality
     Debt finance (the entrepreneur sells *bonds* to raise money), and
     Equity finance (the entrepreneur sells *stocks* to raise money)
  - It helps entrepreneurs pursue business projects without having to personally carry too much of the risks associated with their projects (risk sharing)
  - It helps to protect lenders from irresponsible borrowers (deals with asymmetric information)
  - It helps to foster economic growth by channeling savings to the most valuable projects and cutting off funds for the less

FINANCIAL MARKETS

- Markets in which funds are transferred from people who have an excess of available funds to people who have a shortage of funds
- Promote economic efficiency by producing an efficient allocation of capital, which increases production
- Directly improve the well-being of consumers by allowing them to time purchases better

STRUCTURE OF FINANCIAL MARKETS

- Debt and Equity Markets (bonds and shares)
- Primary and Secondary Markets
- Centralized vs. and Over-the-Counter (OTC) Markets
- Money and Capital Markets
  - Money markets deal in short-term debt instruments
  - Capital markets deal in longer-term debt equity instruments

DEBT AND EQUITY MARKETS

Debt Markets

- Short-term (maturity < 1 year) – the Money Market
- Long-term (maturity > 10 year) – the Capital Market
- Medium-term (maturity >1 and < 10 years)

Equity Markets

- Pay dividends, in theory forever
- Represent an ownership claim in the firm

DEBT INSTRUMENT

- A contractual agreement by the borrower to pay the holder of the instrument fixed dollar amounts at regular intervals until a specified date (the maturity date) when a final payment is made.

COMMON STOCK

- Claims to share in the net income and the assets of the business
- Often make periodic payments called dividends
- Long-term as no maturity date
- Residual claimant

PRIMARY MARKET

- New security, bond or stock, issues sold to initial buyers by the corporation or government agency borrowing funds
- Financial institution that facilitates is investment bank
- Does underwriting securities
- Guarantees a price for the corporation's securities and then sells them to the public

SECONDARY MARKET

- Securities previously issued are bought and sold

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

- Provide liquidity, making it easy to buy and sell the securities of the companies
- Establish a price for the securities

- Security brokers and dealers are crucial to well functioning secondary markets
- Brokers are agents of investors who match buyers with sellers of securities
- Dealers link buyers and sellers by buying and selling securities at stated prices

TYPES OF SECONDARY MARKETS

- Exchanges or Auction Markets
  - Secondary markets that involve a bidding process that takes place in specific location
  - For example TSX, NYSE
- Dealer or Over-the-counter (OTC) Markets
  - Secondary markets that do not have a physical location and consist of a network of dealers who trade directly with one another.
  - For example the bond market

INTERNATIONALIZATION OF FINANCIAL MARKETS

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.
- 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.

FOLLOWING THE FINANCIAL NEWS

Foreign Stock Market Indexes

Foreign stock market indexes are published daily in the Wall Street Journal in the "Money and Investing" section of the paper.

International Stock Indexes

Region/Country	Index	Close	LATEST Net chg	LATEST % chg	YTD % chg
World	**The Global Dow**	**1804.04**	−26.17	**−1.43**	−9.1
	DJ Global Index	**213.73**	−3.70	**−1.70**	−5.8
	DJ Global ex U.S.	**180.48**	−4.71	**−2.54**	−10.2
World	**MSCI EAFE***	**1374.39**	−33.83	**−2.40**	−13.1
Americas	**DJ Americas**	**295.30**	−2.82	**−0.95**	−0.4
Brazil	**Sao Paulo Bovespa**	**59689.32**	−1151.76	**−1.89**	−13.0
Canada	**S&P/TSX Comp**	**11665.77**	−98.74	**−0.84**	−0.7
Mexico	**IPC All-Share**	**30992.76**	−143.59	**−0.46**	−3.5
Venezuela	**Caracas General**	**61899.59**	363.01	**0.59**	12.4
Europe	**Stoxx Europe 600**	**243.71**	−7.59	**−3.02**	−3.7
Euro zone	**Euro Stoxx**	**250.45**	−7.31	**−2.84**	−8.9
Belgium	**Bel-20**	**2432.85**	−52.39	**−2.11**	−3.1
France	**CAC 40**	**3511.67**	−105.65	**−2.92**	−10.8
Germany	**DAX**	**5988.67**	−167.26	**−2.72**	0.5
Israel	**Tel Aviv**	**1131.26**	...	**Closed**	−1.2
Italy	**FTSE MIB**	**19612.66**	−701.55	**−3.45**	−15.6
Netherlands	**AEX**	**321.45**	−9.55	**−2.89**	−4.1
Spain	**IBEX 35**	**9376.5**	−251.10	**−2.61**	−21.5
Sweden	**SX All Share**	**305.17**	−9.36	**−2.98**	1.9
Switzerland	**Swiss Market**	**6374.43**	−96.41	**−1.49**	−2.6
U.K.	**FTSE 100**	**5158.08**	−149.26	**−2.81**	−4.7
Asia-Pacific	**DJ Asia-Pacific**	**118.10**	−1.77	**−1.48**	−4.0
Australia	**S&P/ASX 200**	**4387.10**	−83.65	**−1.87**	−9.9
China	**Shanghai Composite**	**2587.81**	−6.98	**−0.27**	−21.0
Hong Kong	**Hang Seng**	**19578.98**	−365.96	**−1.83**	−10.5
India	**Bombay Sensex**	**16408.49**	−467.27	**−2.77**	−6.0
Japan	**Nikkei Stock Avg**	**10186.84**	−55.80	**−0.54**	−3.4
Singapore	**Straits Times**	**2774.54**	−69.81	**−2.45**	−4.2
South Korea	**Kospi**	**1630.08**	−13.16	**−0.80**	−3.1
Taiwan	**Weighted**	**7559.16**	−26.14	**−0.34**	−7.7

*Europe, Australia, Far East, U.S.-dollar terms   Sources: Thomson Reuters; WSJ Market Data Group

The first two columns identify the region/country and the market index; for example, the colored entry is for the DAX index for Germany. The third column, "CLOSE," gives the closing value of the index, which was 5988.67 for the DAX on May 20, 2010. The "NET CHG" column indicates the change in the index from the previous trading day, −167.26, and the "% CHG" column indicates the percentage change in the index, −2.72. The next column indicates the year-to-date percentage change of the index (0.5%).

BANKING AND FINANCIAL INSTITUTIONS

- **Financial Intermediaries -** institutionsthat borrow funds from people who have saved and make loans to other people
- **Banks** - institutions that accept deposits and make loans
- **Other Financial Institutions —** insurance companies, finance companies, pension funds, mutual funds and investment banks
- **Financial Innovation**

TYPES OF FIS

- Depository Institutions
- Insurance Companies
- Securities Firms and Investment Banks
- Mutual Funds
- Finance Companies
- Distinctions blurred by the Gramm-Leach- Bliley Act of 1999 that created Financial Holding Companies (FHCs).

DEPOSITORY INSTITUTIONS

- Commercial Banks: accept deposits and make loans to consumers and businesses.
- Savings Associations
  - Qualified Thrift Lender (QTL) mortgages must exceed 65% of thrift's assets.
- Savings Banks
  - Use deposits to fund mortgages & other assets.
- Credit Unions
  - Nonprofit mutually owned institutions (owned by depositors).

BANKS ARE THE MOST COMMON FINANCIAL INTERMEDIARIES

Banks convert deposits to loans and thereby increase access to capital by serving as a financial intermediary between savers and borrowers.

I. Liquidty and Payment Services

i) Money Changing

ii) Payment Services

II. Asset Transformation

i) Convenience of Denomination (unit size)

ii) Quality Transformation (better risk return characteristic)

iii) Maturity Transformation

III. Managing Risk

i) Estimating Risk on Bank Loans

ii) Managing Interest Rate and Liquidity Risk

iii) Off-Balance Sheet Operations

IV. Monitoring and Information Processing

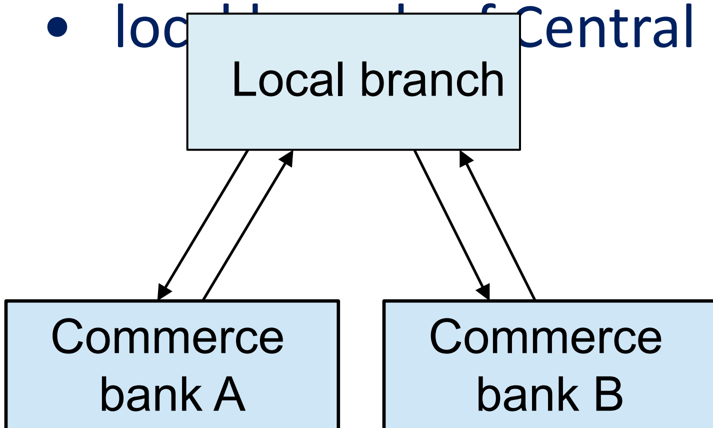
CENTRAL BANKS AS MACRO REGULATORS

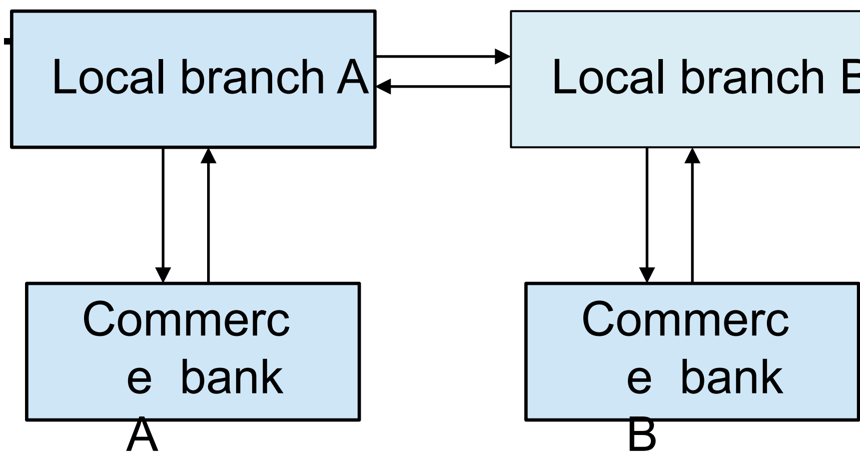
THE FEDERAL RESERVE SYSTEM:

- *The Federal Reserve system- One bank that doesn't allow you to make deposits.*
- Set up to supervise and to regulate member banks and serve the public efficiently.
- Reserved only for banks "The bank of banks."
- The U.S. is split into 12 Federal districts with a central bank in each district.

STRUCTURE OF CENTRAL BANK

- Headquarter in Moscow (Board of Directors and Departments);
- Regional Branches and National Banks (in each region);
- 776 Local Branches (clearing centers)
- Each commercial bank has the correspondent account at the
- local branch of Central Bank.





COMMERCIAL BANKING

Regulated by Law on Banks and Banking Activities (1993)

Banks may provide all kinds of banking activity:

- to lend and borrow money;
- to make money and currency transactions;
- to open and serve accounts of enterprises and natural persons;
- to invest money;
- etc

INSURANCE COMPANIES

- Insurers sell policies and collect premiums from customers based on the pricing of those policies given the probability of a claim and the size the policy and administrative fees.
- They invest the premiums so that the accumulated value in the future will grow to meet the anticipated claims of the policyholders.
- In this way, unsupportable risks (such as the death of wage earner or the burning down of a business) are shared among a large number of policyholders through the insurance company.
- Insurance allows households, business and government to engage in risky activities without having to bear the entire risk of loss themselves.

FINANCIAL INNOVATION

Financial innovations:

1. create new financial products with payoffs desired by the customers (**product innovations**),
2. provide new financial services (**process innovations**)

e.g. ATM, cash card, combo card etc.

HOW FINANCIAL INNOVATIONS IMPROVE ECONOMIC PERFORMANCE

- Completing markets: expanding opportunities for
  - risk-sharing
  - risk-pooling
  - hedging
  - Inter-temporal or spatial transfers of resources lowering transactions costs or increasing liquidity
- reducing “agency” costs caused by
  - asymmetric information between trading parties
  - principals’ incomplete monitoring of agents’ performance.

FINANCIAL SYSTEM FUNCTIONS

- Payments system for the exchange of goods.
- Mechanism for the pooling of funds for large-scale indivisible enterprises.
- Transfer of economic resources through time and across geographic regions and industries.
- Management of uncertainty and control risk.
- Provision of price information to coordinate decentralized decision-making.
- Managing “agency” costs.

PAYMENTS SYSTEM

- Decreasing the cost of processing payments for transactions
  - E.g. SWIFT, CHIPS
- Increasing the speed
- Decreasing the possibility of fraud
- Examples: Credit cards, debit cards

POOLING OF FUNDS

- Mechanism for the pooling of funds to create large-scale indivisible enterprises.
  - Creating a mechanism for pooling capital in a low- cost way and/or minimizing related agency problems.
- Example: Limited Liability Companies, hedge funds, mutual funds, private equity funds

RESOURCES TRANSFER THROUGH TIME AND SPACE

- Investors need ways of transferring savings from the present (when they are not needed) to the future (when they will be needed).
- They might also need to transfer resources through space.
- The same applies to borrowers as well.
- Examples: All securities, e.g. Bonds, Currency Swaps.

RISK MANAGEMENT

- Reducing the risk by selling the source of it. In general, adjusting a portfolio by moving from risky assets to a riskless asset to reduce risk is called hedging; this can be done either in the post cash market or in a futures or forward market.
- Examples: Securitization (Asset backed securities, Government national mortgage agencies)
- Even if aggregate risk is not reduced, the risk of an individual investor's position can be reduced by diversification
- Examples: Mutual funds, Index funds.
- Reducing the risk by buying insurance against losses. Selling part of the return distribution; the fee or premium paid for insurance substitutes a sure loss for the possibility of a larger loss. In general, the owner of any asset can eliminate the downside risk of loss and retain the upside benefit of ownership by the purchase of a put option.
- Examples: Options, Range floaters

INFORMATION FOR DECENTRALIZED DECISION-MAKING

- Decision makers need information about demand and supply and prices in their own and in other sectors of the economy. This might involve the collection of data from many individuals.
- Examples: Futures markets, stock markets

MANAGING AGENCY COSTS

- Investors and Issuers may be unwilling to trade because of concerns as to whether the other party to the trade is informed or not.
- The benefits to trade might decrease if the relationship is long-lived and there are negative incentives for the participants in the trade.
- Examples: Puttable stock, convertible debt

THE IMPACT OF GOVERNMENT ON FINANCIAL MARKETS

- The primary role of government is to promote competition, ensure market integrity (including macro credit risk protections), and manage “public good” type externalities
- As a market participant following the same rules for action as other private-sector transactors, such as with open market operations
- As an industry competitor or benefactor of innovation, by supporting development or directly creating new financial products such as index- linked bonds or new institutions such as the Government National Mortgage Association

HOW GOVERNMENTS AFFECT FINANCIAL MARKETS (1)

- As a legislator, by setting/ enforcing rules and restrictions on market participants, financial products, and markets such as margins, circuit breakers, and patents on products.
  - This can encourage financial innovation by setting and enforcing rules for property rights to innovation.
- As a negotiator, by representing its domestic constituents in dealings with other sovereigns that involve financial markets.
  - This can encourage innovations intended to promote international flows of resources
- As an unwitting intervenor, by changing general corporate regulators, taxes, and other laws or policies that frequently have significant unanticipated and unintended consequences for the financial services industry.
  - This can spur innovation to try and get around the intended effects of government legislation

HOW GOVERNMENTS AFFECT FINANCIAL MARKETS (1)

- These activities can have potential costs that can be classified as follows:
  - direct costs to participants, such as fees for using the markets or costs of filings
  - distortions of market prices and resource allocations
  - transfers of wealth among private party participants in the financial markets.
  - transfers of wealth from taxpayers to participants in the financial markets
- Financial Innovations are sometimes geared to avoidance of these regulatory costs.

THE DYNAMIC OF FINANCIAL INNOVATION

- Aggregate Trading Volume expands secularly
- Trading is increasingly dominated by institutions
- Further expansion in round-the-clock trading permits more effective implementation of hedging strategies.
- Financial services firms will increasingly focus on providing individually tailored solutions to their clients' investment and financing problems
- Sophisticated hedging and risk management will become an integrated part of the corporate capital budgeting and financial management process
- Retail customers (households) will continue to move away from direct, individual financial market participation such as trading in individual stocks or bonds and move to aggregate bundles of securities, such as mutual funds, basket-type and index securities and custom-designed securities designed by intermediaries

IMPLICATI
ONS

- Liquidity will deepen in the basket/index securities, while individual stocks will become less liquid.
- There will be less need for the traditional regulatory protections and other subsidies of the costs of retail investors trading in stocks and bonds.
- The emphasis on disclosure and regulations will tend to shift up the security-aggregation chain to the interface between investors and investment companies, asset allocators, and insurance and pension products.