Bachelor of Economics
THAMMASAT UNIVERSITY

FN 211 Financial Markets

Class 1: Introduction

Today's Outline

- Course Introduction
- Overview of **Financial System**
- **Financial Markets**
  - Function and Structure
  - International Financial Markets
- **Financial Institutions**
  - Classification of Financial Institutions
  - Function of Financial Institutions

Introduction

Wacharaphan Tanaprakob

- Education:
  - B.A. Econ (International Program) #13, Thammasat University
  - MBA (Finance), Anderson School of Management, University of California, Los Angeles (UCLA) sponsored by Fulbright scholarship

- Positions:
  - Strategic products & services development, The Stock Exchange of Thailand
  - Former Economist, the Bank of Thailand
  - Lecturer at Thammasat University

Introduction

Win Phromphaet, CFA

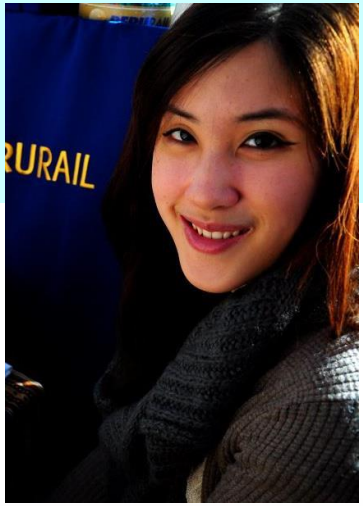
- Education:
  - B.A. Econ (International Program) #2, Thammasat University
  - MBA (Finance), Rotterdam School of Management, Erasmus University, the Netherlands, sponsored by the Royal Thai Government Scholarship
  - Chartered Financial Analyst
- Positions:
  - **Chief Investment Officer, CIMB Principal Asset Management**
  - Former Head of Investments, Social Security Office
  - Independent Director, Thai Bond Market Association
  - Director, CFA Society of Thailand
  - Lecturer at Thammasat, NIDA and ABAC
  - *www.facebook.com/wininvestingpro*
  - *Author of 'Career in Finance'*

Introduction

Chotima Sitthichaiviset

- Education:
  - B.A. Econ (International Program) #14, Thammasat University
  - B.B.A (International Program), ICN Business School, University of Nancy, France, sponsored by the UMAP scholarship
  - MFin, Judge Business School, University of Cambridge, UK, sponsored by the BOT scholarship
- Positions:
  - **The Bank of Thailand:**
    - Financial Markets Operations Group
    - Monetary Policy Group
    - Financial Institutions Policy Group
  - Lecturer at Thammasat

Introduction



Martina Watcharawaratorn

Education:

- B.A. Econ (International Program) #13, Thammasat University
- Vaxjo University, Sweden
- MBA (Finance), UCLA Anderson School of Management, sponsored by Bangkok Bank

- Positions:
  - International Banking Group, **Bangkok Bank**
  - Internship program, **Citibank Thailand**
  - International Economic Department, **Bank of Thailand**
  - TA for M.B.A class Special topic : “Doing Business in Thailand” at **UCLA Anderson**

Introduction

About You

1. Form a group of no more than 11 members
2. Select 2 positions: Group CEO and Secretary
3. CEO leads the group to pick a company in SET100 which will represent your group.
4. You are given 10 min to prepare a 2-min presentation.
5. Within 2 min, CEO will introduce the company and its industry, and all the officers (Name, nickname, high school, and something unique about him/herself). Secretary can help.
6. Take a group photo and submit to wacharaphanart@gmail.com before next class, together with name list, IDs and emails. Extra credits for 2 groups with the most memorable picture!

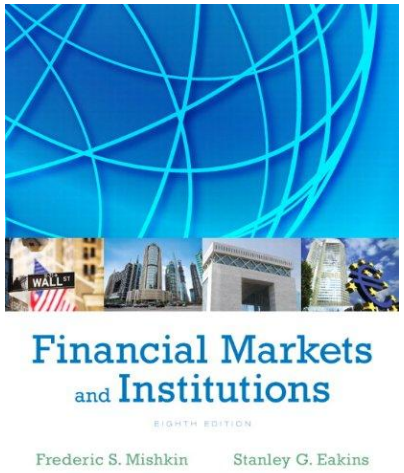
Make it fun!


GAME OF THRONES

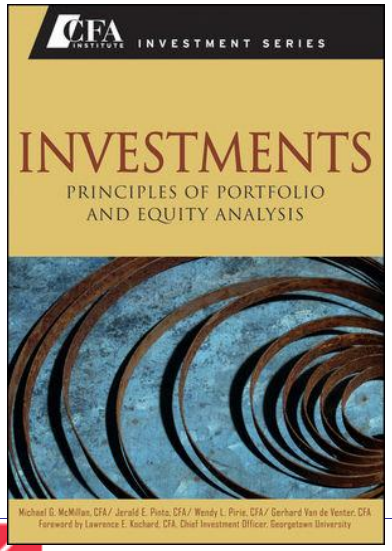

THE
Title
GROUP
at TICOR TITLE
Photography & Branding
byVargas.com


THE AVENGERS

Recommended Textbooks



- Mishkin and Eakins (2014), **Financial Markets and Institutions**, 8th Edition, Pearson.



- McMillan and Pinto (2011), **Investments: Principles of Portfolio and Equity Analysis**, 1st Edition, Wiley.

Grading

Composition

- Class Attendance and Participation 15%
- Case Studies 20%
- Midterm Exam 25%
- Final Exam 40%

Criteria

- A = 4.0 (90 – 100) Excellent
- B+ = 3.5 (85 – 89) Very Good
- B = 3.0 (80 – 84) Good
- C+ = 2.5 (70 – 79) Fair
- C = 2.0 (60 – 69) Adequate
- D+ = 1.5 (55 – 59) Poor
- D = 1.0 (50 – 54) Very Poor
- F = 0.0 (<49) Fail

Financial Calculator

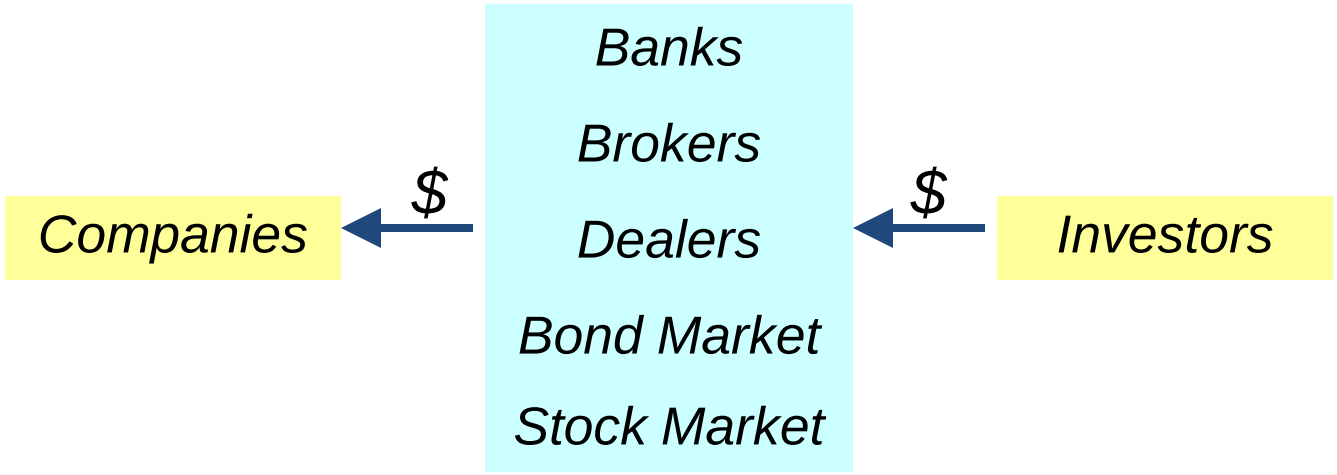
Recommended Calculators:

Texas Instruments BAII Plus *or*

Texas Instruments BAII Plus Professional:

- Highly recommended if you want to pursue your career in business or finance
- These are 2 out of 4 required models to sit for the CFA exam.
- The other 2 are HP12C and HP12C Platinum which are, for many people, more difficult to use.
- Very practical, but quite expensive
  (Around 1,700 for ordinary model and 2,500 baht for professional model at B2S)
- The Professional model has 5 more functions.
  I personally think that they do not justify a much higher price.

The World of Finance



FN 311	FN 211	FN 312
Tools for CFOs	Markets and intermediaries	Tools for investors

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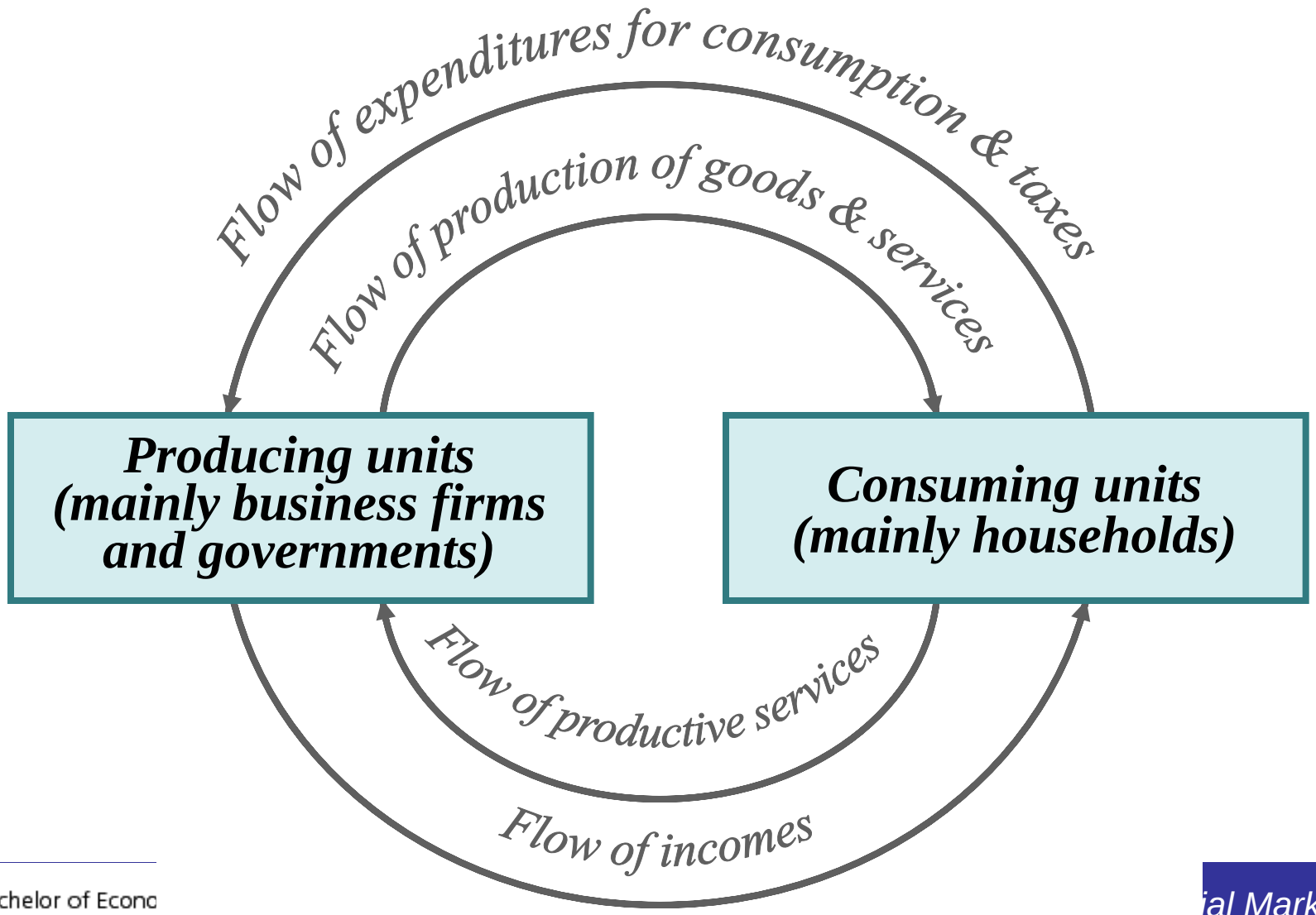
- Course Introduction
- Overview of **Financial System**
- **Financial Markets**
  - Function and Structure
  - International Financial Markets
- **Financial Institutions**
  - Classification of Financial Institutions
  - Function of Financial Institutions

Overview of Financial System

- The *financial system* is the collection of markets, institutions, laws, regulations, and techniques through which bonds, stocks, and other securities are traded, interest rates are determined, and financial services are produced and delivered around the world.

- The primary task of the financial system is to move scarce loanable funds from those who save to those who borrow to buy goods and services and to make investments in new equipment and facilities, so that the global economy can grow and the standard of living can increase.

Circular Flow of Income, Payments, and Production in the Global Economic System



Functions Performed by the Financial System

- *Savings function*. (= flow) The global system of financial markets and institutions provides a channel for the public's savings.

- *Wealth function*. The financial instruments sold in the money and capital markets provide an excellent way to store wealth (accumulated savings = stock) until funds are needed for spending.

Functions Performed by the Financial System

Wealth function:

$$W_t = \Sigma_i A_{it}$$

- Wealth is the sum of the values of all individual assets held. Wealth is built up over time by a combination of current savings plus income earned on previously accumulated wealth.

$$\Delta W_t = S_t + (r_t * W_{t-1})$$

- ΔW_t is the change in wealth in the current period
- S_t is the volume of current savings
- r_t is the average rate of return on accumulated assets
- W_{t-1} is the initial value of all accumulated wealth held

Functions Performed by the Financial System

Wealth function (Cont.)

- The portion of wealth held by society in the form of financial wealth (stocks, bonds, deposits, etc.) is substantial.

  Financial Wealth of US Households & Non-Profits in Q1, 2017

  Total Financial Assets – Debt = Net Financial Wealth

  = *USD 94.8 trillion*

- Wealth holdings represent stored purchasing power that will be used in future periods as income to finance purchases of goods and services and to increase society's standard of living. => *Pension Fund*

Functions Performed by the Financial System

Wealth function (Cont.)

- Income is created by the rate of return (r_t) that current wealth holdings (W_{t-1}) generate for their owners

$$Y_t = r_t * W_{t-1}$$

- In turn, that wealth-created income leads to both increased consumption spending (C_t) and to new savings (S_t);

$$Y_t = C_t + S_t$$

- resulting in a higher standard of living for those who hold wealth in income-generating forms.

Functions Performed by the Financial System

- *Liquidity function.* Financial markets provide liquidity for savers who hold financial instruments but are in need of money.

- *Credit function.* Global financial markets provide credit to finance consumption and investment spending.

- *Payments function.* The global financial system provides a mechanism for making payments for goods and services: checking account, credit cards, electronic payments, digital currency

Functions Performed by the Financial System

- *Risk protection function*.
  The financial markets around the world offer businesses, consumers, and governments protection against life, health, property, and income risks.

The Creation of Financial Assets

A *financial asset* is …

- a *claim* against the income or wealth of a business firm, household, or unit of government,
- represented usually by a certificate, receipt, computer record file, or other legal document,
- and usually created by or related to the lending of money.

The Creation of Financial Assets

มูลค่าหุ้นละ 2 บาท
Par Value of 2 Baht Each

ชำระค่าหุ้นเต็มมูลค่าแล้ว
Fully Paid Up

DTAC

ใบหุ้นสามัญ
Ordinary Share

ชำระอากรแล้ว
Stamp Duties Paid

บริษัท โทเทิ่ล แอ็คเซ็ส คอมมูนิเคชั่น จำกัด(มหาชน)
TOTAL ACCESS COMMUNICATION PUBLIC COMPANY LIMITED

จดทะเบียนเป็นบริษัทมหาชนจำกัด เมื่อวันที่ 1 กุมภาพันธ์ 2538
Registered as a Public Company Limited on February 1, 1995

ทะเบียนเลขที่ 0107538000037
Registration No. 0107538000037

ชื่อผู้ถือหุ้น [redacted]
Name of the Shareholder

เลขทะเบียนผู้ถือหุ้น [redacted]
Shareholder Registration No.

จำนวนหุ้น -500-
No. of Shares

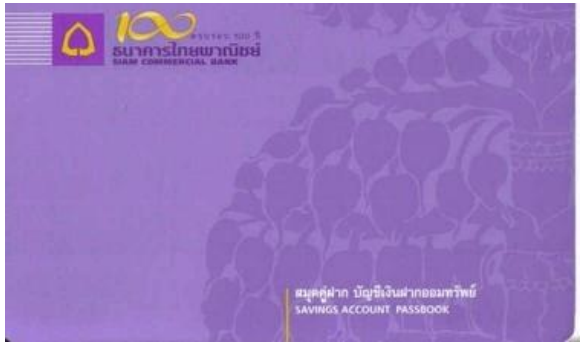
เลขที่ใบหุ้น *0554010100103 3*
Certificate No.

วันที่ออกใบหุ้น 19 มิถุนายน 2550
Date of Issuance

กรรมการ / นายทะเบียน
Director / Registrar

8552106 * DTAC

000051567



Characteristics of Financial Assets

- Financial assets are sought after because they promise *future* returns to their owners and serve as a *store of value* (purchasing power).
- Financial assets do not provide a continuing stream of services to their owners as a home, a car or washing machine would do. Their value rests on *faith* that their issuer will honor his or her contractual promise to pay.

Characteristics of Financial Assets

- They do not *depreciate* like physical goods, and their physical condition or form is usually not relevant in determining their market value.
  - *A stock certificate is not more or less valuable because of the size or quality of paper it is printed on.*
- Their cost of transportation and storage is low, such that they have little or no value as a commodity.
- Financial assets are *fungible* – they can easily be changed in form and substituted for other assets.
  - *A bond or a share of stock can be quickly converted into any other asset the holder desires.*

Different Kinds of Financial Assets

Money

- is generally accepted in payment for the purchases of goods and services. Examples include currency and checking accounts.

Bond

- is a debt security that promises to make payments periodically for a specified period of time.

Stock

- (or equities) represents a share of ownership in a corporation

Derivative

- is a financial security whose payoff is linked to another, previously issued security.

Money

Broad Money

Narrow Money

Currency *(notes and coins)* + ***Transferable deposits*** *in the banking system* +

Savings and time deposits *in the banking system*

Money Market Funds (MMFs)

Negotiated Certificate of Deposit (NCD)

Bill of Exchange (B/E) *issued by banks*

Source: Bank of Thailand

**Transferable deposits* = เงินฝากกระแสรายวัน

Bond

A Bond is a debt security that promises to make payments periodically for a specified period of time.

- An interest rate is the cost of borrowing or the price paid for rental of funds.
- Because different interest rates tend to move together, economists usually lump interest rates together and refer to "the" interest rate.
- Other debt securities include *bills, notes, accounts payable, credit card loans, mortgage loans and savings deposits.*

ASIA		Yield	1 Day	1 Month	1 Year	Time
Japan	**More Japanese Bonds**	0.24%	-1	-14	-40	02:58:33
Australia	**More Australian Bonds**	2.56%	-4	-32	-163	00:39:01
New Zealand		3.45%	-2	-30	-122	01/13/2015
Hong Kong		1.47%	0	-25	-75	00:01:26
Singapore		1.94%	-3	-25	-55	00:17:54
South Korea		2.44%	-1	-26	-121	01/13/2015
India		7.78%	+1	-9	-94	02:04:04

Change shown in basis points

Stock

- Stock or equities represent a share of ownership in a corporation. It is a security that is a claim on the earnings and assets of the corporation.
- 2 types of equities: common stock and preferred stock.
- 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, probably because it is the place where people get rich (and poor) quickly

Derivative

Derivative is a financial security whose payoff is linked to another, previously issued security.

- *It generally involves an agreement between two parties to exchange a standard quantity of an asset or cash flow at a predetermined price and a specified date in the future.*

- Futures/Forwards are contracts to buy or sell an asset on or before a future date at a price specified today.
  - *A futures contract is a standardized contract traded in an exchange,*
  - *A forward contract is a non-standardized contract written by the parties themselves.*
- Options are contracts that give the owner the right, but not the obligation, to buy or sell an asset.
- Swaps are contracts to exchange cash (flows) on or before a specified future date based on the underlying value of currencies/exchange rates, bonds/interest rates, commodities, stocks or other assets.

The Foreign Exchange Market

- *Foreign Exchange Market* is a worldwide, decentralized, *over-the-counter* market for the trading of currencies.
  - The primary purpose of the foreign exchange market is to assist international trade and investment, by allowing businesses to convert one currency to another currency.
  - It also helps determine the relative values of different currencies.
  - Average daily turnover in global fx markets is estimated at $4.0 trillion!
  - Top-3 most traded currencies are USD (87%), EUR (33%), JPY (23%)

The quotation *USD/THB = 33.25* is the price of the US dollars expressed in Thai Baht, meaning 1 dollars = 33.25 Baht. The market convention is to quote most exchange rates against the USD with the US dollar as the base currency (e.g. USDJPY, USDCAD, USDCHF).

The exceptions are the British pound (GBP), Australian dollar (AUD), the New Zealand dollar (NZD) and the euro (EUR) where the USD is the counter currency (e.g. GBPUSD, AUDUSD, NZDUSD, EURUSD)

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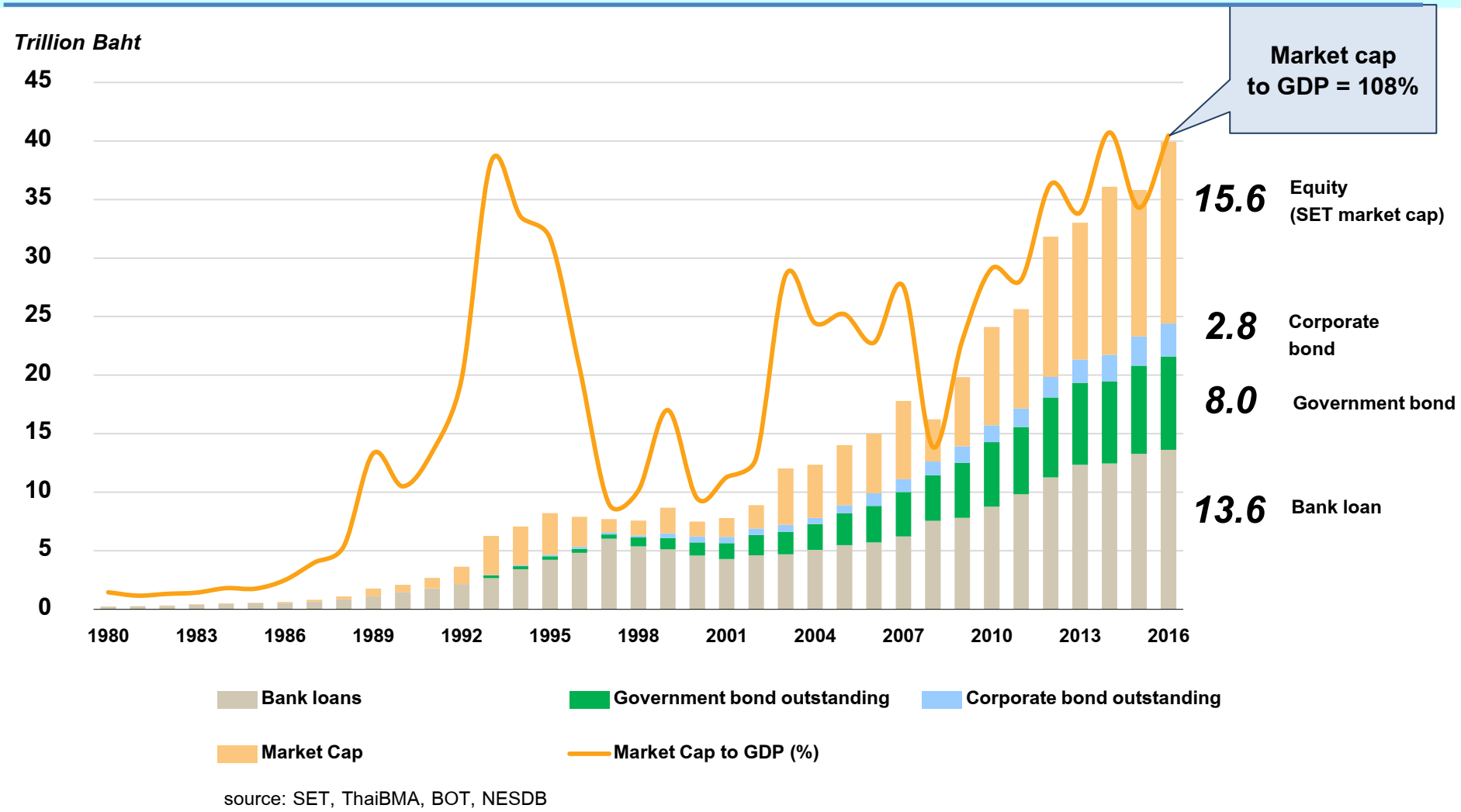
Size of the Thai Financial Markets (Trillion baht)



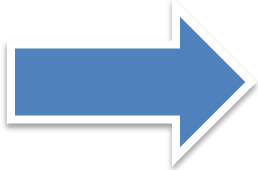
source: SET, ThaiBMA, BOT, NESDB

Function of Financial Markets

- Channels funds from person or business without investment opportunities (i.e., “Lender-Savers”) to one who has them (i.e., “Borrower-Spenders”)
- Improves economic efficiency

<u>Lender-Savers</u>

1. Households
2. Business firms
3. Government
4. Foreigners



<u>Borrower-Spenders</u>

1. Business firms
2. Government
3. Households
4. Foreigners

Function of Financial Markets

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

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

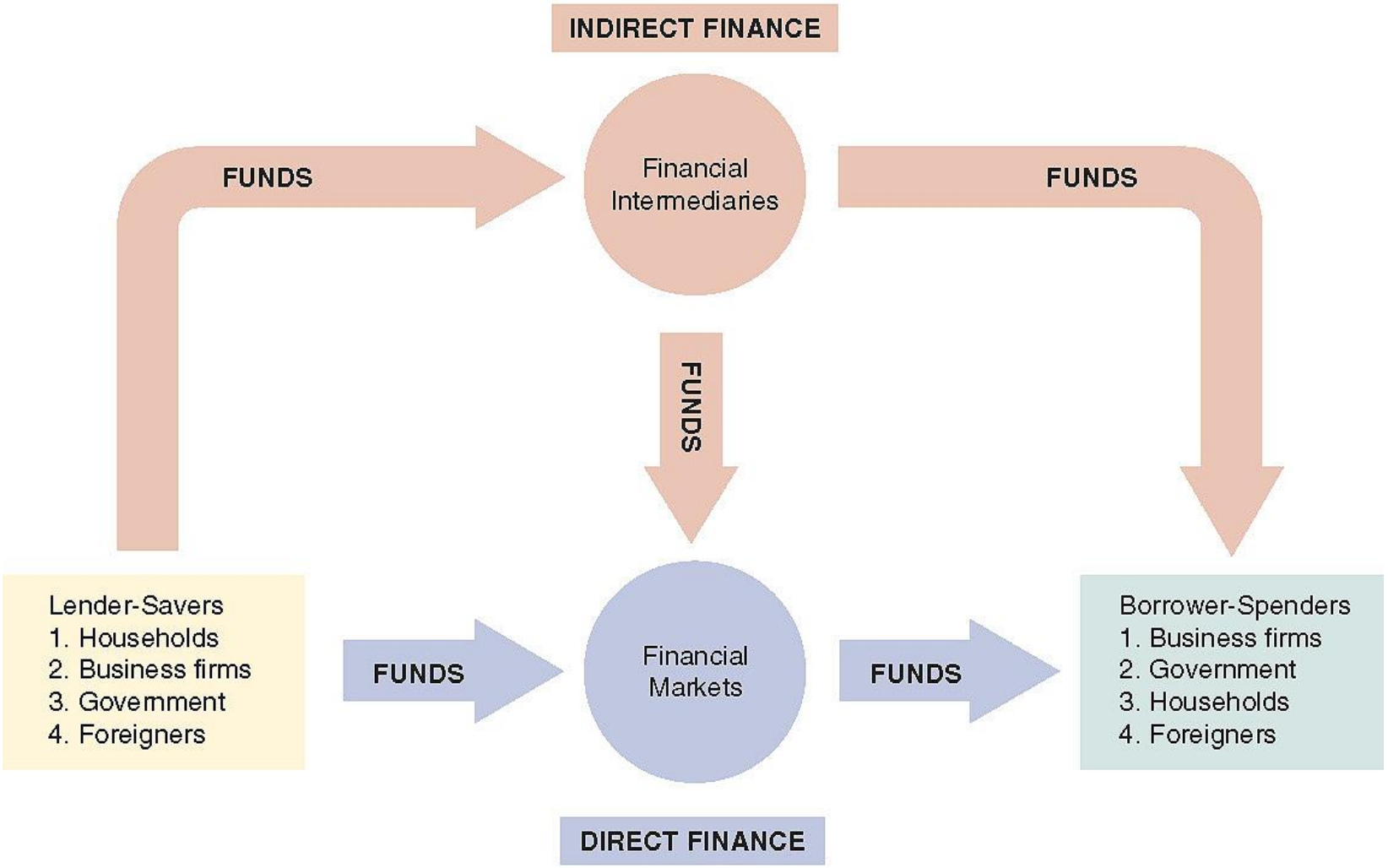
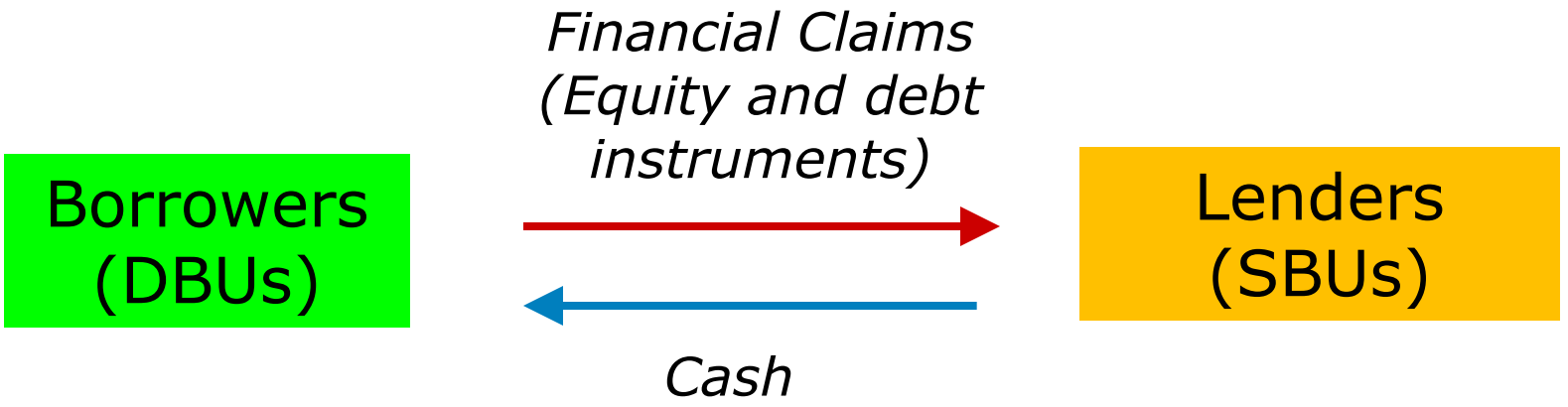


FIGURE 2.1 Flows of Funds Through the Financial System

The Evolution of Financial Transactions

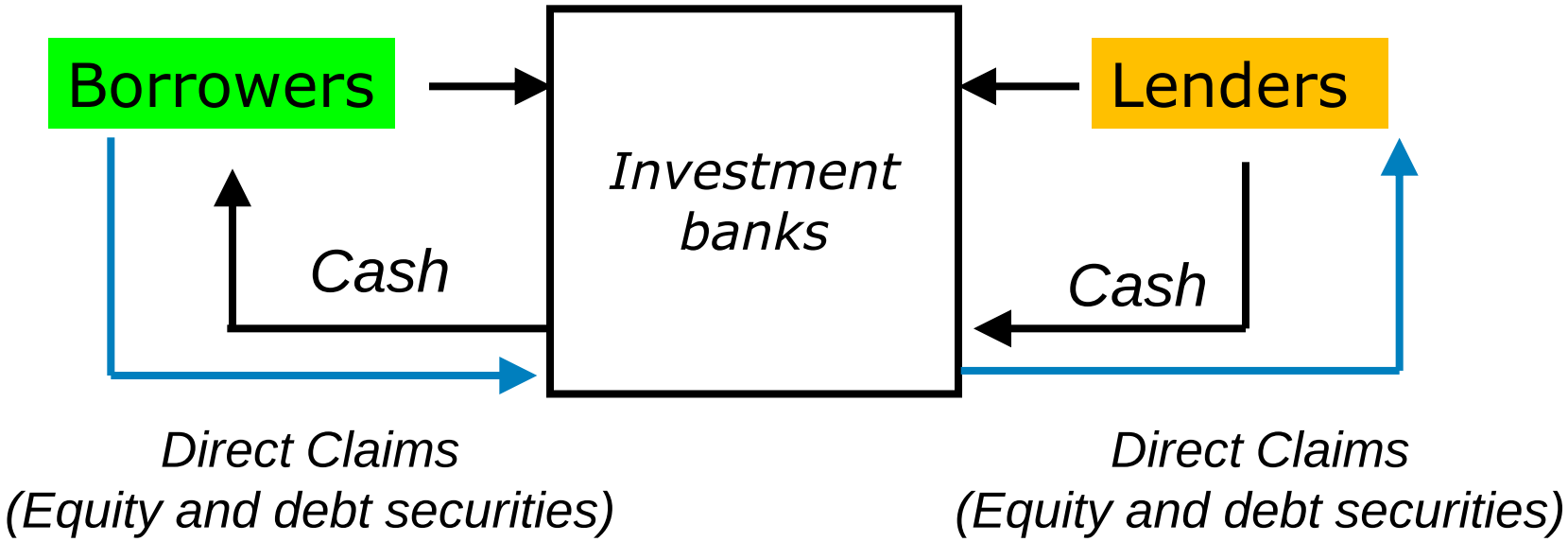
Direct Finance – Direct lending gives rise to direct claims against borrowers.



- *Both borrower and lender must desire to exchange the same amount of funds at the same time.*
- *The lender must be willing to accept the borrower's IOU, which may be risky.*
- *This incurs substantial information costs, simply to find each other.*
- *Example: **borrow money from a friend** and give him or her your IOU, purchase stocks or bonds directly from the issuing company.*

The Evolution of Financial Transactions

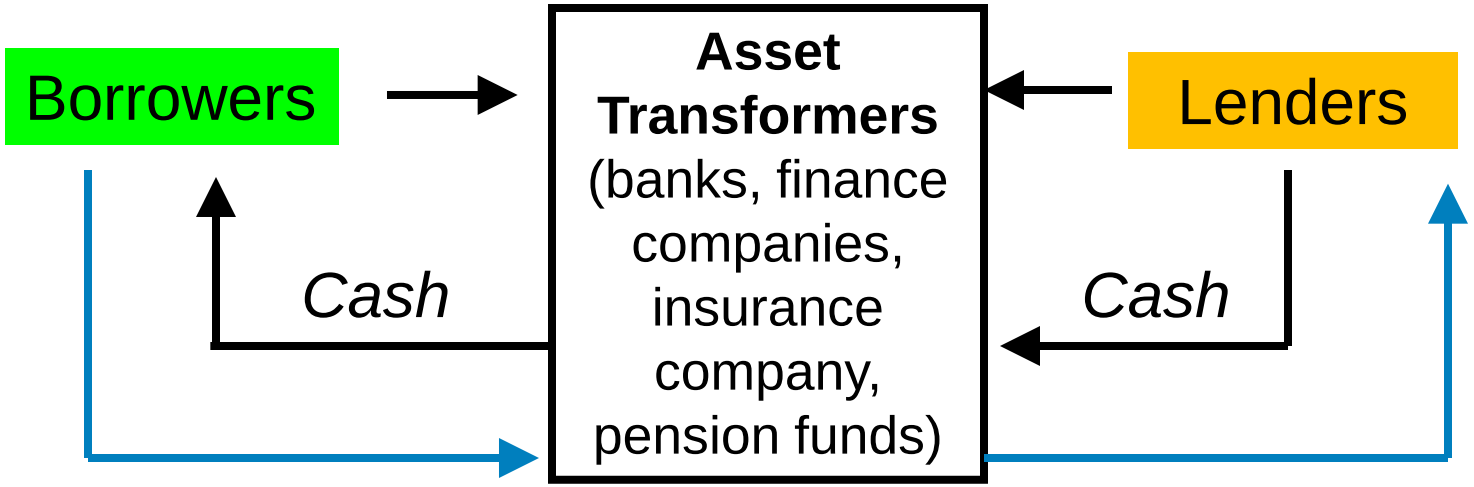
Semidirect Finance – Direct lending with the aid of market makers who assist in the sale of direct claims against borrowers.



- *Brokers – match buyers and sellers*
- *Dealers – acquire securities from sellers (take position of risk) with hope to sell to buyers later at better price.*
- *Lower information (search) cost. Lenders must be willing to take risk.*
- *Example – **buy stocks and bonds from investment banks in primary markets***

The Evolution of Financial Transactions

Indirect Finance – Financial intermediation of funds.



Direct Claims/Primary Sec.
(Equity and debt securities)

Indirect Claims/Secondary Sec.
(Deposits and insurance policies)

- *Asset transformers offering low risk, indirect claims with small denominations to lenders while granting higher risk, more illiquid investments (e.g., loans) to borrowers*
- *Example: **buy insurance policy**, deposit money at a bank*

Direct, Semi-direct or Indirect Finance?

Borrowing money from a bank
Purchasing a life insurance policy
Selling shares of stock through a broker
Lend money to a friend
Selling shares of stock to a colleague at work
purchase stock from your investment banker
Your corporation's contracting with an investment banker to help sell its bonds

Structure of Financial Markets

- The financial markets are structures through which funds flow.
  - Financial markets make possible the *exchange of current income for future income* and the *transformation of savings into investment* so that production, employment, and income can grow.
  - The suppliers of funds to the financial system can expect not only to recover their original funds but also to earn additional income as a reward for waiting and for assuming risk.

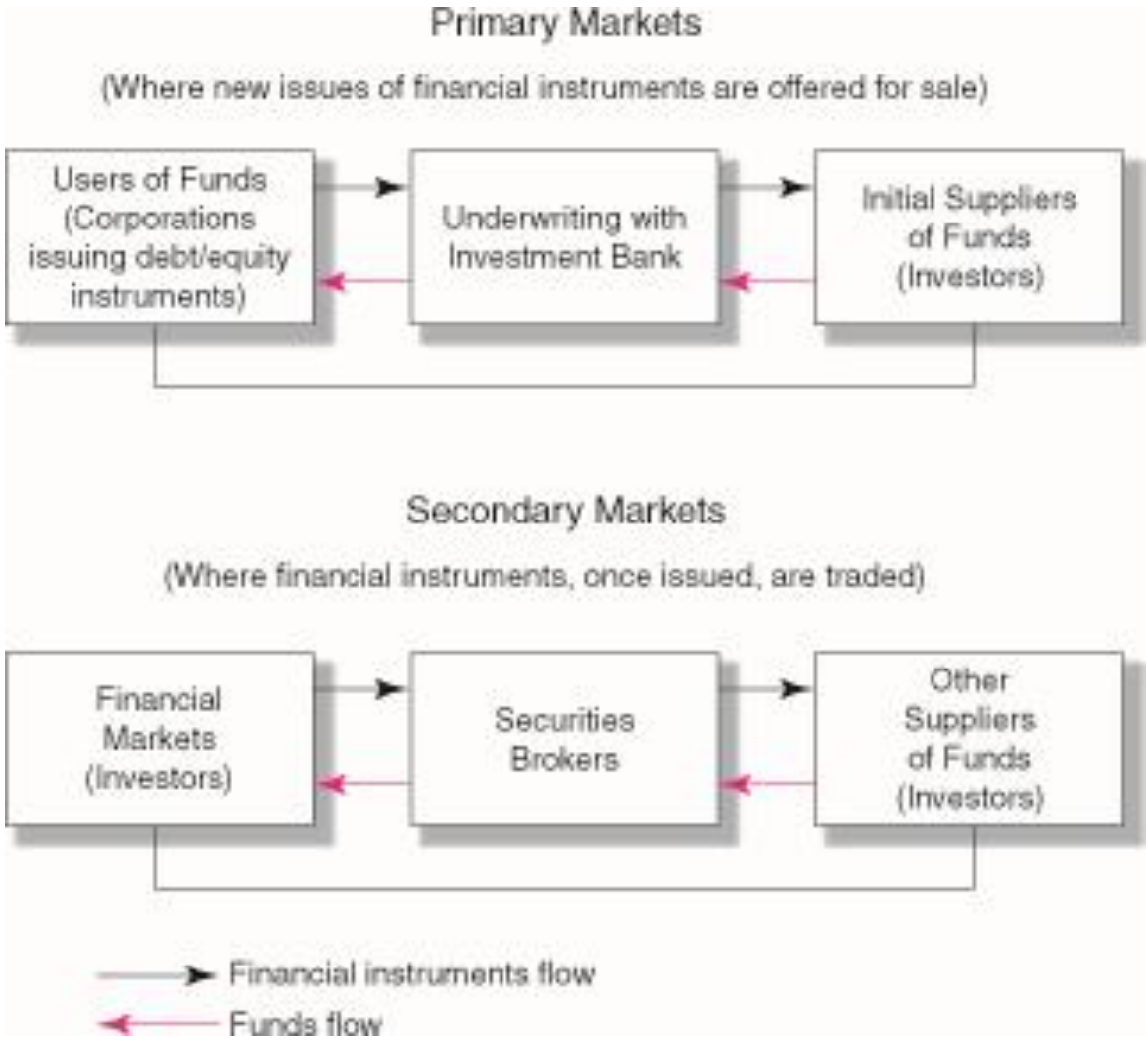
Structure of Financial Markets

Primary vs. Secondary

- *Primary markets* are markets in which users of funds (e.g., corporations and governments) raise funds by issuing financial instruments (e.g., stocks and bonds).
  - Most transactions are arranged through investment banks and can be either
    - Public Offering (initial PO or seasoned PO)
    - Private Placement

- *Secondary markets* are markets where financial instruments are traded among investors (e.g., Stock Exchange of Thailand, NYSE and NASDAQ)
  - Provide information about the current market value for the issuers.

Structure of Financial Markets



Structure of Financial Markets

Exchange vs. Over-the-counter

- *Exchange markets* are markets where trades are conducted in a central location. The market has a big computer system that match buy and sell orders.
  - We usually trade stocks + futures + options (secondary markets) in exchanges.
  - Examples are *New York Stock Exchange (NYSE), Chicago Board of Trade (CBT), the Stock Exchange of Thailand (SET), TFEX, AFET*
- *Over-the-counter markets* are markets where dealers at different locations. Buy and sell customers trade at price quoted by dealers.
  - We usually trade bonds + forwards + swaps + currencies (secondary markets) in OTC markets.
  - Examples are the *NASDAQ, the secondary bond market in the US and the secondary bond market in Thailand*

Structure of Financial Markets

Money vs. Capital Markets

- *Money markets* are markets that trade instruments with maturities of *one year of less*.
  - where individuals and institutions with temporary surpluses of funds meet the needs of those who have temporary shortages of funds.
  - *Instruments include Treasury bills, repurchase agreements, interbank loans, commercial papers, and bills of exchange.*
- *Capital markets* are markets that trade instruments with maturities of *more than one year*.
  - These securities finance long-term investments (such as factories, highways, schools, homes, etc.) by businesses, governments, and households.
  - *Instruments include mortgage loans, consumer loans, government bonds, corporate bonds and corporate stock.*

Structure of Financial Markets

Derivative Security Markets are markets in which derivative securities trade.

- *Futures and Options* are traded on exchanges
  - *Example: Thailand Futures Exchange (TFEX), Chicago Board of Trade (CBT), Chicago Mercantile Exchange (CME), New York Mercantile Exchange (NYMEX)*
- *Forwards and Swaps*, since they are not standardized, can be traded in OTC markets.

International Financial Markets

Foreign bonds

- Sold in a foreign country and are denominated in that currency's currency.
- Example: Hana Bank (from Korea) issued bond in Thailand, denominated in Thai Baht.

Eurobonds

- Denominated in one currency, but sold in a different market
- Example: Toyota issued bonds in US Dollars and sold in London.
- Over 80% of new bonds are Eurobonds.

Eurocurrency Market

- Foreign currency deposited outside of home country
- Eurodollars are U.S. dollars deposited in, say, London.
- Gives U.S. borrows an alternative source for dollars.

Primary or Secondary Market?

Google issues $300 million of new common stock.
GE issues $500 million of 5-year bonds.
Mary sells $5,000 of GM stock through her broker.
Linda buys 10 futures contracts from an exchange.
ABC Pension Fund sells $10 million of Intel stock.

Money or Capital Market?

Commercial Paper
Treasury Bills
Common Stock
Government Bonds
Repurchase Agreements

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Overview of Financial Institutions

- Institutions that perform the essential function of channeling funds from those with surplus funds to those with shortages of funds.
- Examples are banks, insurance companies, securities firms and investment banks, finance companies, mutual funds, pension funds, etc.

Classification of Financial Institutions

- *Depository institutions* derive the bulk of their loanable funds from deposit accounts sold to the public.
  - *Commercial banks, credit unions.*
- *Contractual institutions* attract funds by offering legal contracts to protect the saver against risk.
  - *Insurance companies, pension funds.*
- *Investment institutions* sell shares to the public and invest the proceeds in stocks, bonds, and other assets.
  - *Asset Management Companies who sell units of mutual funds, money market funds, etc.*

Classification of Financial Institutions

TABLE 2.1 Primary Assets and Liabilities of Financial Intermediaries

Type of Intermediary	Primary Liabilities (Sources of Funds)	Primary Assets (Uses of Funds)
Depository institutions (banks)		
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
Contractual savings institutions		
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
Investment intermediaries		
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: www.federalreserve.gov/releases/Z1/.

Depository Institutions

- Commercial Banks
  - depository institutions whose major assets are loans and major liabilities are deposits

- 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

- Life Insurance companies
  - Insure people against financial hazard following a death and sell annuities.
- Property and Casualty Insurance companies
  - Insure policy holders against loss from theft, fire, accidents, etc.
- Pension Funds
  - financial institutions that offer savings plans for retirement

Investment Institutions

- Securities firms and investment banks
  - financial institutions that underwrite securities and engage in securities brokerage and trading

- Mutual Funds
  - financial institutions that pool financial resources and invest in diversified portfolios

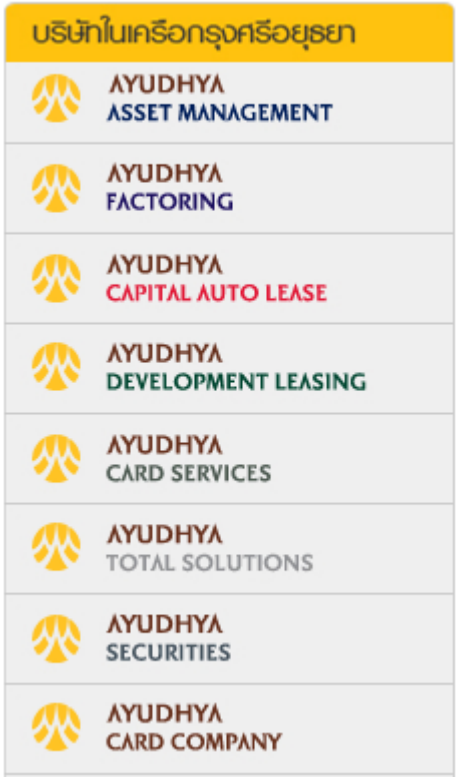
Investment Institutions

- Finance companies
  - financial institutions that make loans to individuals and businesses

- Credit Foncier
  - financial institutions that make loans to real estate businesses.

Financial Conglomerates

A Financial Conglomerate *consists of a bank, an asset management company, an insurance company, etc.*
Notice that, under each group, there is only one deposit-taking institution (which is a bank)



Function of Financial Institutions

Transactions Costs

- Reduce transactions costs by developing expertise and economies of scale (*One full-time banker can make loans to 10 companies*)

Risk Sharing

- FIs create and sell assets with lesser risk to one party in order to buy assets with greater risk from another party. This process is referred to as **asset transformation.**
- FIs also help by providing the means for individuals and businesses to **diversify** their asset holdings.

Asymmetric Information

- **Adverse Selection** (Before transaction occurs)
  - Potential borrowers most likely to produce adverse outcome are ones most likely to seek a loan (*Unhealthy people want their known medical problems covered*)
- **Moral Hazard** (After transaction occurs)
  - Hazard that borrower has incentives to engage in undesirable (immoral) activities making it more likely that won't pay loan back (*People may engage in risky activities only after being insured*)

Services Performed by Financial Institutions

- Monitoring Costs
  - FIs can hire employees with superior skills and training who will collect information and monitor the ultimate fund users on behalf of the fund suppliers.
  - This helps alleviate the free-rider problem that exists when small fund suppliers leave it to each other to collect information and monitor a fund user.
  - In an economic sense, fund suppliers have appointed FI as a delegated monitor to act on their behalf.

- Liquidity and Price Risk
  - FIs act as asset transformer by issuing secondary securities which are very liquid, with low risk of default, to make loans or buy stocks and bonds which are less liquid and has higher risk of default.

Services Performed by Financial Institutions

- Maturity Intermediation
  - FIs have ability to provide long-term loans while still raising funds with short-term liability contracts such as deposits.

- Denomination Intermediation
  - FIs issue secondary securities which have small denomination for small savers and, in turn, make loans or buy stocks and bonds in large denomination.

- Money Supply Transmission
  - Since bank deposits are a significant component of the money supply, FIs play a key role in the transmission of monetary policy from the central bank.

Services Performed by Financial Institutions

- Credit Allocation
  - Policy makers may want to finance particular sectors (BAAC for farmers, GHB for home buyers, SME Bank for SMEs, etc.)

- Intergenerational Wealth Transfers
  - life insurance companies and pension funds provide savers with the ability to transfer wealth from their youth to old age as well as from one generation to the next.

- Payment Services
  - Check-clearing and wire transfer services

Factors Tying All Financial Markets Together

- *Credit, the Common Commodity.* Borrowers can switch from one market to another, seeking the most favorable credit terms wherever they can be found. This helps bring the credit costs in the different markets into balance with one another.
- *Speculation and Arbitrage.*
  - Speculators are risk seekers who are willing to gamble their funds even when the probability of success is low. They help level out the prices of securities
    - *Buy underpriced securities with hope that prices will go up*
  - Arbitrageurs make profit when prices of securities in different markets appear to be out of line with each other. They help maintain consistent prices between markets.
    - *Long underpriced securities and short overpriced securities with hope that prices will converge*

Bank-Dominated Versus Security-Dominated Financial Systems

- Lesser-developed financial systems are often *bank-dominated financial systems*, in which banks and other similar institutions dominate in supplying credit and attracting savings.

- The more mature systems today are becoming *security-dominated financial systems*, in which traditional intermediaries play lesser roles and growing numbers of borrowers sell securities to the public to raise the funds they need.