

# Overview of the financial system

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**EE431 Semester 1/2017**

**Week 1 / Lecture 1 - 2**

# Agenda

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What does financial system do?

Structure of financial system

Some facts of financial structure

# What does financial system do?

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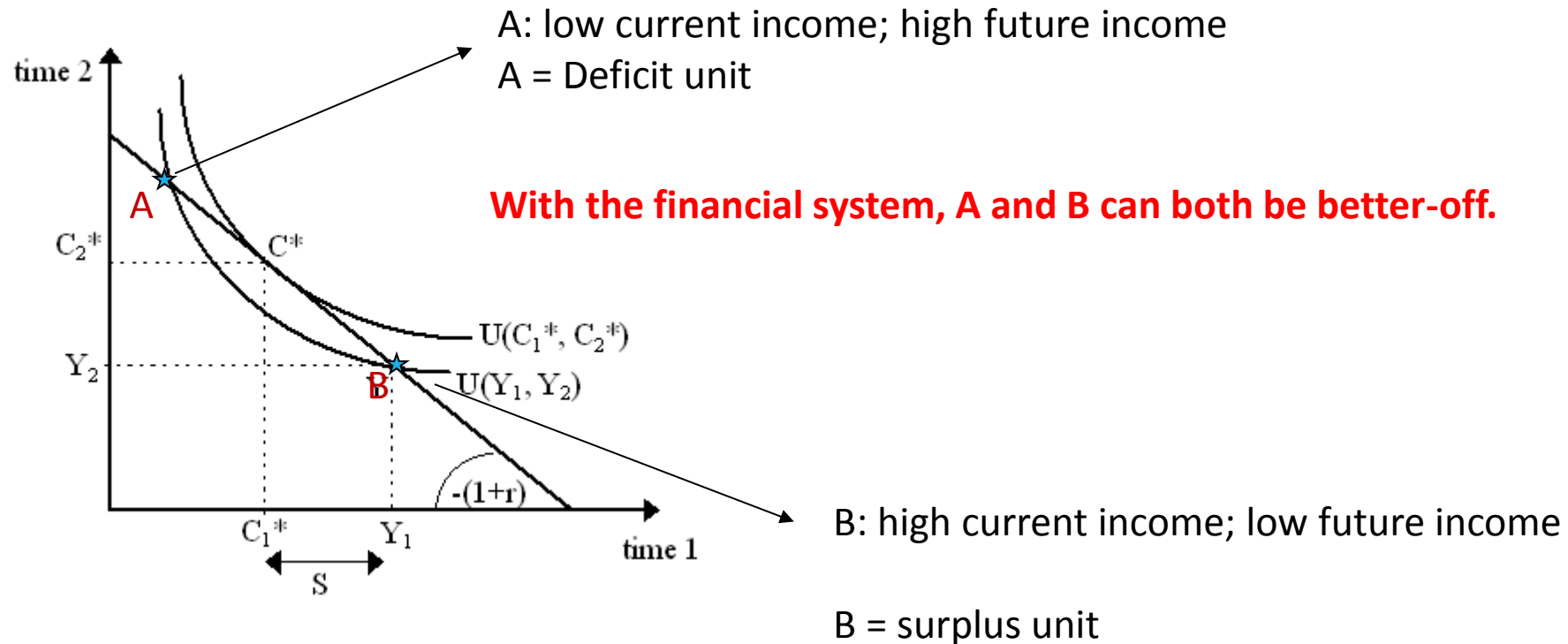
Channel funds between **Deficit units** and **Surplus units**

- Deficit: endowment is less than spending.
- Surplus: endowment is greater than spending.

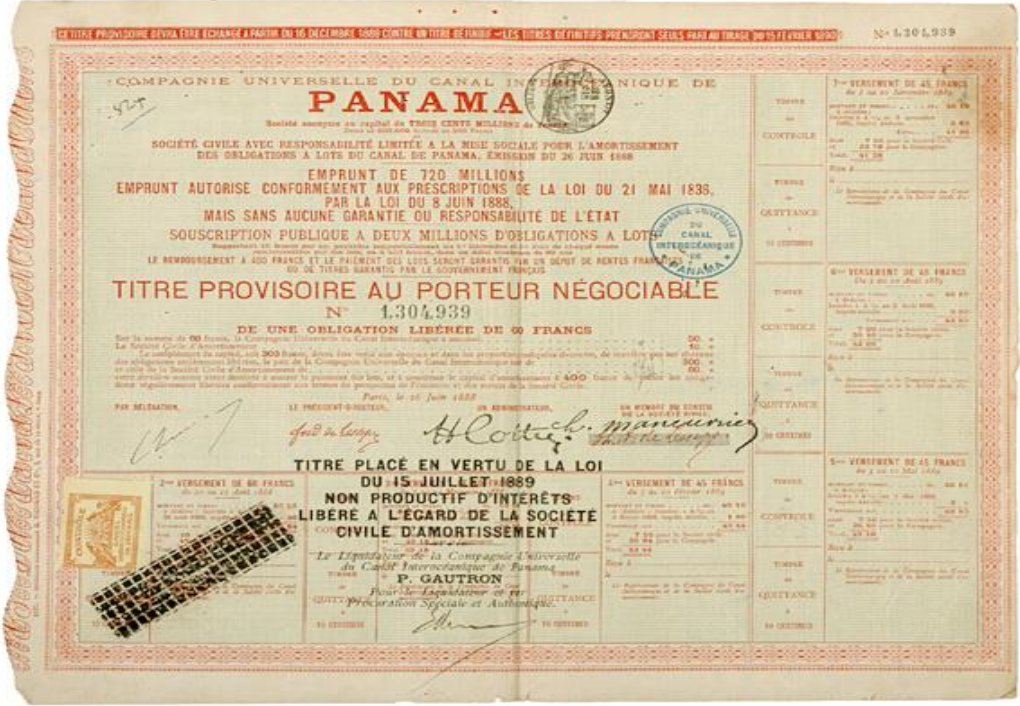
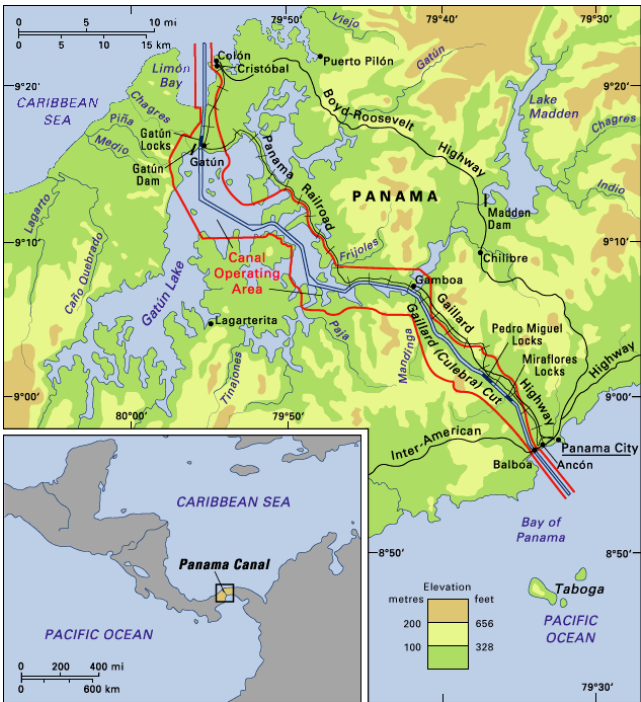
**What are the benefits of channeling fund process?**

# 1. Financial system benefits us

## win-win: better consumption timing



2. Financial system allows us to make **an efficient use of capital. This promotes growth.** For example, in 2004 dollars, adjusted with the U.S. GDP deflator, the Panama Canal cost \$4.4 billion.



Direct benefit is to cut the transportation cost. Indirect benefit is to increase the trade volume. Social IRR of the project is considerable.

	Panama Canal route	Shortest alternative		1921	1922	1923	1924	1925	1926	1927	1928	1929
<i>Selected U.S. routes</i>			US Intercontinental									
New York to Valparaíso	5,515	8,512	US East - SouthAm West	\$3.78	\$1.57	\$3.73	\$4.70	\$5.70	\$6.37	\$5.72	\$5.35	\$4.73
New York to Los Angeles	5,812	12,949	US East - Asia	\$5.73	\$7.09	\$6.10	\$5.51	\$4.95	\$6.07	\$6.81	\$6.04	\$6.23
New York to Portland	6,756	13,907	US East - Australasia	\$1.11	\$0.48	\$0.71	\$0.81	\$0.95	\$1.09	\$1.18	\$0.78	\$0.67
New York to Vancouver	6,925	14,054	US West - Europe	\$5.17	\$5.92	\$5.09	\$5.79	\$5.62	\$6.53	\$7.92	\$7.82	\$7.93
San Francisco to Liverpool	7,825	13,841	Non-US intercontinental									
New York to Sydney	10,573	12,762	Europe-Canada West	\$0.00	\$1.75	\$3.14	\$3.92	\$5.15	\$6.28	\$7.45	\$9.46	\$6.75
New York to Shanghai	11,471	16,746	Europe to SouthAm West	\$3.75	\$2.91	\$4.93	\$5.41	\$7.23	\$7.30	\$5.90	\$7.49	\$7.03
<i>Selected non-U.S. routes</i>			Mexico East to SouthAm West	\$1.86	\$0.73	\$0.67	\$0.65	\$0.32	\$0.00	\$0.00	\$0.00	\$0.00
Tampico to Valparaíso	4,785	9,088	Transcontinental	\$10.80	\$23.76	\$78.27	\$128.42	\$84.57	\$96.16	\$99.49	\$96.89	\$106.26
Liverpool to Valparaíso	7,192	11,841	Minus tolls	(6.22)	(11.56)	(17.60)	(24.72)	(21.37)	(22.82)	(24.69)	(27.27)	(27.36)
Liverpool to Vancouver	8,602	13,251	TOTAL	\$25.99	\$32.66	\$85.05	\$130.49	\$93.10	\$106.98	\$109.79	\$106.56	\$112.24
Liverpool to Sydney	12,250	11,514										
Liverpool to Shanghai	13,148	10,465										
Source: <a href="http://www.distances.com">www.distances.com</a>			Social rate of return	2.8%	3.5%	9.2%	14.2%	10.1%	11.6%	11.9%	11.6%	12.2%

# 3. Risk-bearing / Risk-sharing / Hedging

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- Health risk and risk of financial loss can be mitigated within the financial system.
- Financial system offers product such as **insurance** and **derivative**. These products allow buyer to benefit of risk reduction.
- Sellers of those financial products can bear the risk by charging the premium or fee. Technically, they apply the idea so called **“law of large number”** and **“pooling”** or **“sharing”**.

# 4. Facilitate the payment system

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- Exchange economy requires payment system to validate the transaction.
- Imagine a potential activity that can occur between any two parties locating into two distant areas.
- Unless we have the financial system to validate the transaction, few number of transactions could have emerged.

# Agenda

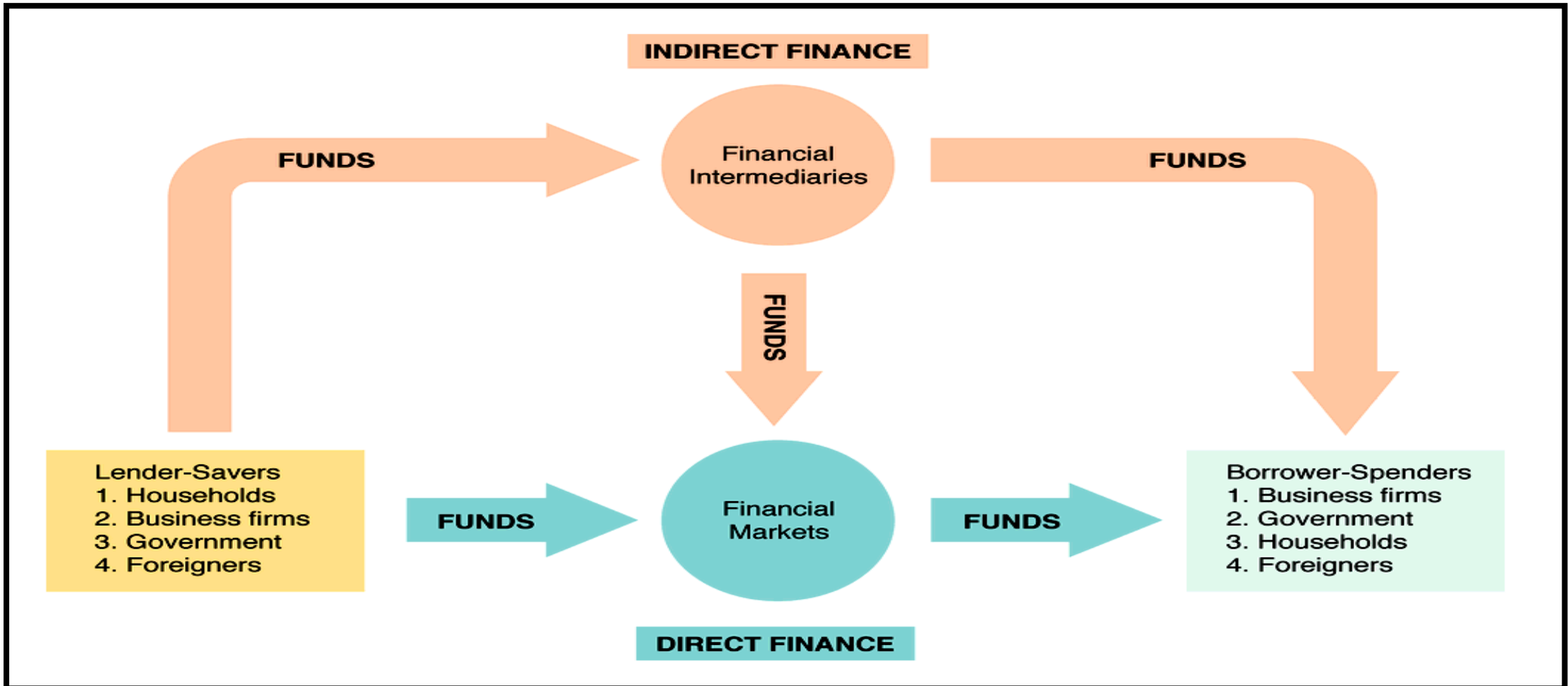
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What does financial system do?

Structure of financial system

Some facts of financial structure

# Structure of financial system



# Direct finance: *peer-to-peer financing*

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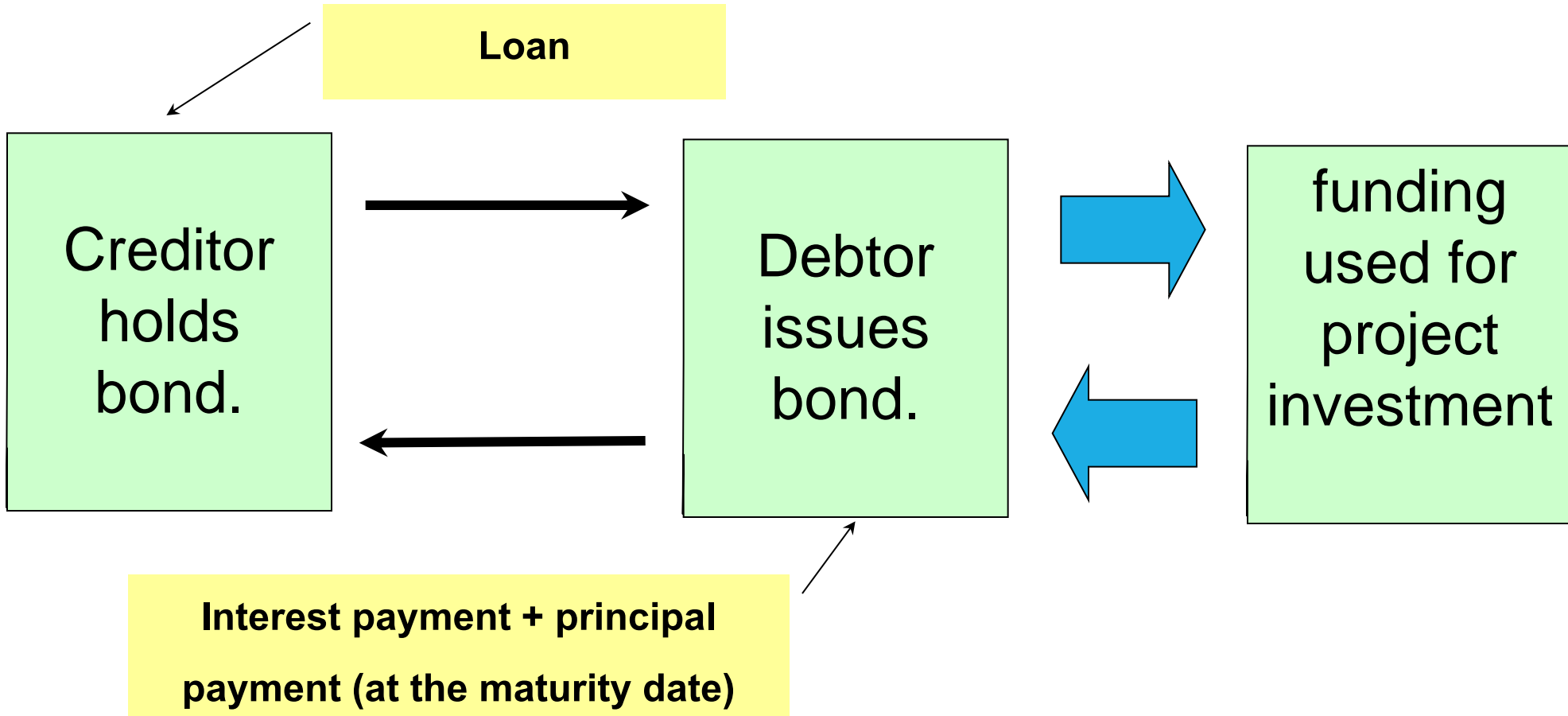
- Types of financial products
- Types of markets

# Types of financial products

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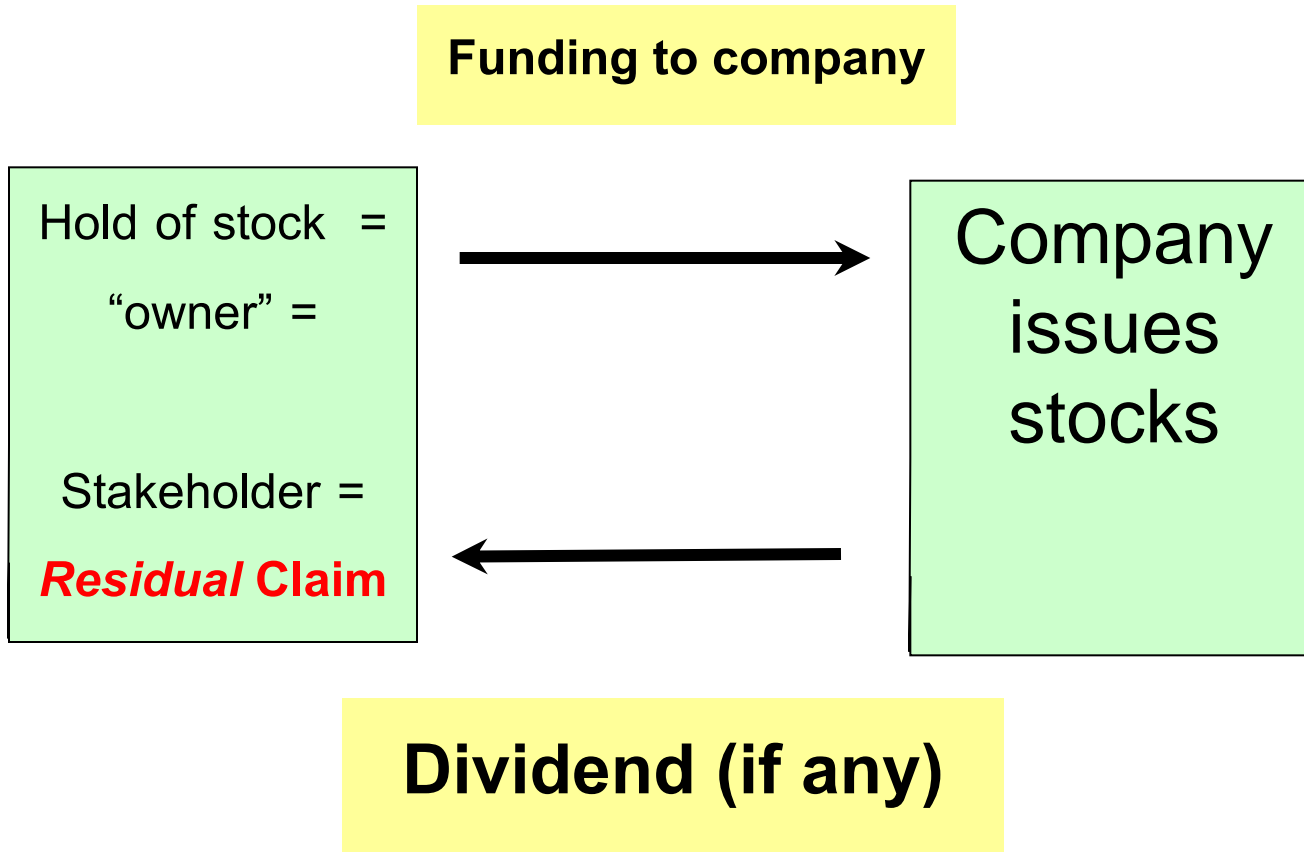
- Debt instrument
- Equity instrument
- Derivative instrument

# Debt Instrument: **BOND / credit loan**



# Equity Instrument : **STOCK**

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# Derivative instrument

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- The Instrument whose value is “derived” from some basic instruments.
- Mostly, the instrument is used for the purpose of risk management.
- Examples include future, option and CDS etc.

# Types of financial markets

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Linkages between Issuers and Holders

- Primary market
- Secondary market

Term (length of term) of financial contract

- Money market
- Capital market

# Primary v.s. Secondary

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**Primary market:** cash transacted in this market will be allocated to the fund raiser who issues the instrument.

**Secondary market:** trading/resell the instrument for cash.

- Organized Exchange
- Over The Counter (OTC)

# Secondary market: Organized exchange market

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SET, TFEX, TBX, NYSE, NASDAQ, Nikkei .....

“middleman” = broker

Buying/selling order will be processed at a central location; with an organized platform of exchange

Clearing rule: minimum margins, payment period

Single market price!!!

# Secondary market: Over the counter

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- OTC is commonly used in bond/derivative/foreign currency trading.  
Broker-dealer helps facilitating the trading process
  - Dealer v.s. Broker?
- *Bilateral trading* → quoted prices could be varied; takes some times before all the prices converge, if any.
- One common feature in the OTC market is the existence of Bid/ask spread.

# Money and capital market

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- Duration of financial contract: *maturity date (time length of the contract)*
  - Money Market: *less than (or equal) 1 year*
  - Capital Market: *Greater than 1 year*

# Government

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Treasury Bill

Government Bond

State-Owned Enterprise Bond

Bank of Thailand bond

Financial Institutions

Development: FIDF bond)

# Corporate

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Bill of exchange (BE)

Corporate Bond (Debenture)

Secured v.s. Non-Secured Debt

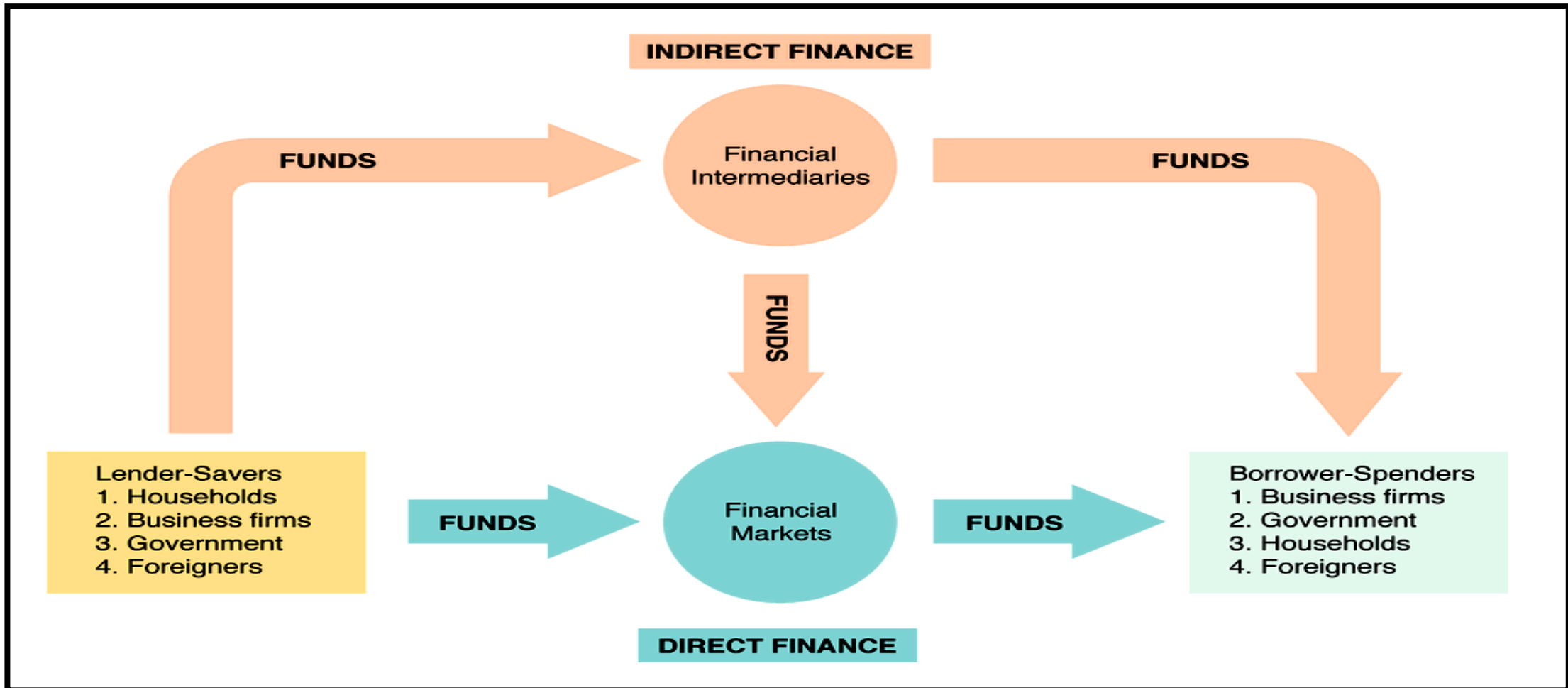
Senior-Debt

Subordinated Debt

Hybrid Debenture

Residential mortgage-backed  
security

# Structure of financial system: Financial intermediaries



# Financial intermediaries (FIs)

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- Intermediary helps facilitating the transaction between Surplus units and Deficit units, a.k.a. indirect financing
- Some groups of market participants might be facing “**some difficulties**”, and make their direct entrance to the financial markets as an unprofitable option.
  - Transaction cost associated with financial transaction.
  - Cost associated with mitigating the *asymmetric information problem*

# Financial intermediaries (FIs)

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- Asymmetric information: adverse selection; moral hazard
- FIs overcome (alleviate) these difficulties, and enhance the efficiency of financial system as a whole, i.e. allowing **greater pool of people** to access to financial services.

# Types of financial institutions (1/4)

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## Depository Institutions

- Commercial Banks and Credit union
- Take the deposit and originate loan to non-financial firms, households and government (other financial firms too.)
- Deposit v.s. Other forms of debt contract?
- **Prone to run**, (system is highly **fragile**) and hence highly regulated!!!

# Types of financial institutions (2/4)

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## Contractual Saving Company

- Contractual (*periodic*) Payments
- e.g.: Saving-insurance (life + saving), provident funds, retirement funds

# Types of financial institutions (3/4)

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## *Security* Market Institution

- Financial firms that do the business related to market security.
- E.g. Investment Bank, Mutual Funds, Brokerage Firm and Organized Exchange Market

# Types of financial institutions (4/4)

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## Government sponsored enterprise (GSE)

- Serve for some particular objectives set by the government
- e.g. Government Saving bank; Government housing bank; SMEs bank, Agricultural bank etc.

# Agenda

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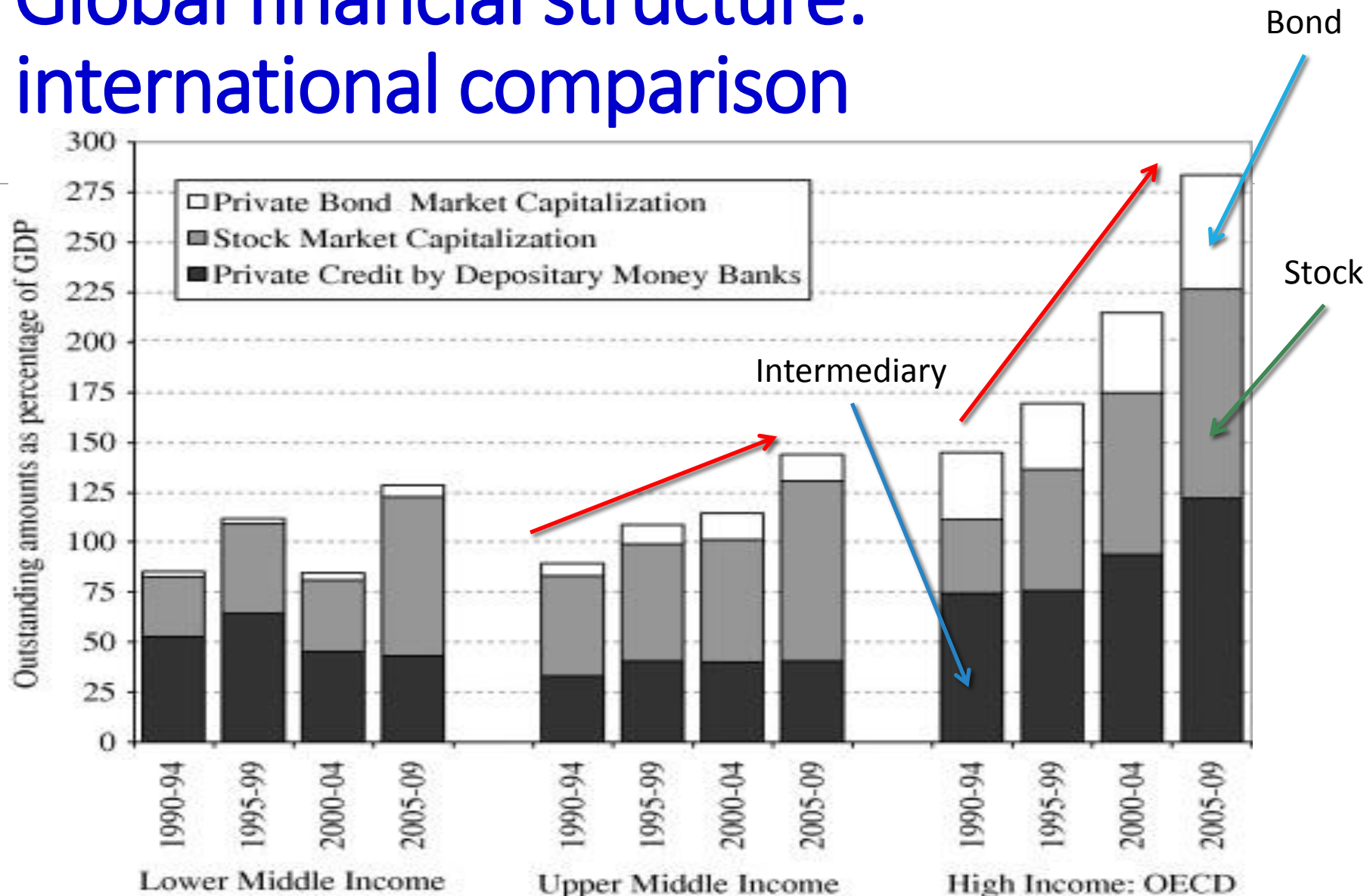
Some facts of financial structure

# Global financial structure: international comparison

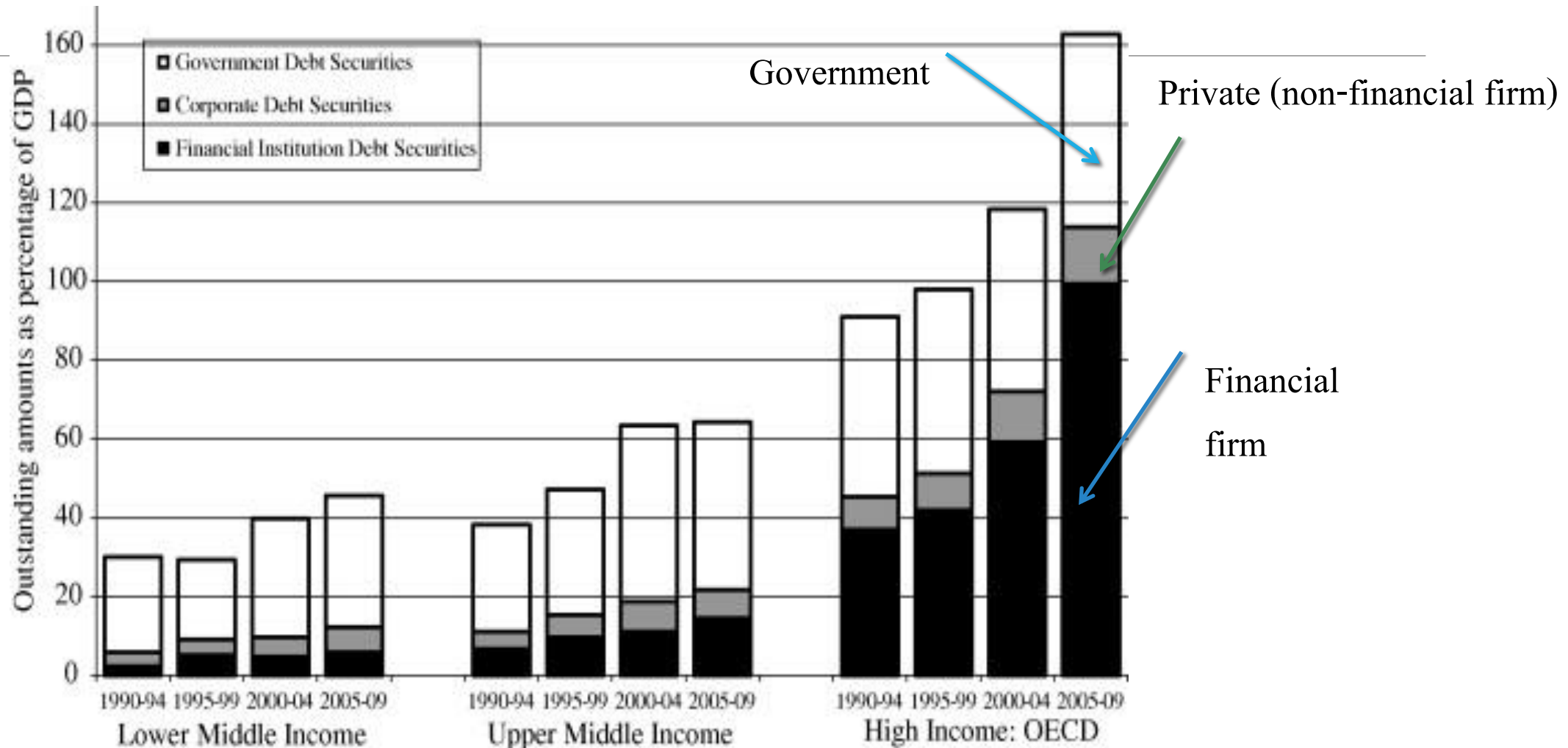
Observation 1: Growing importance of financial sector; rising trend

Observation 2: Private bond market is relatively small.

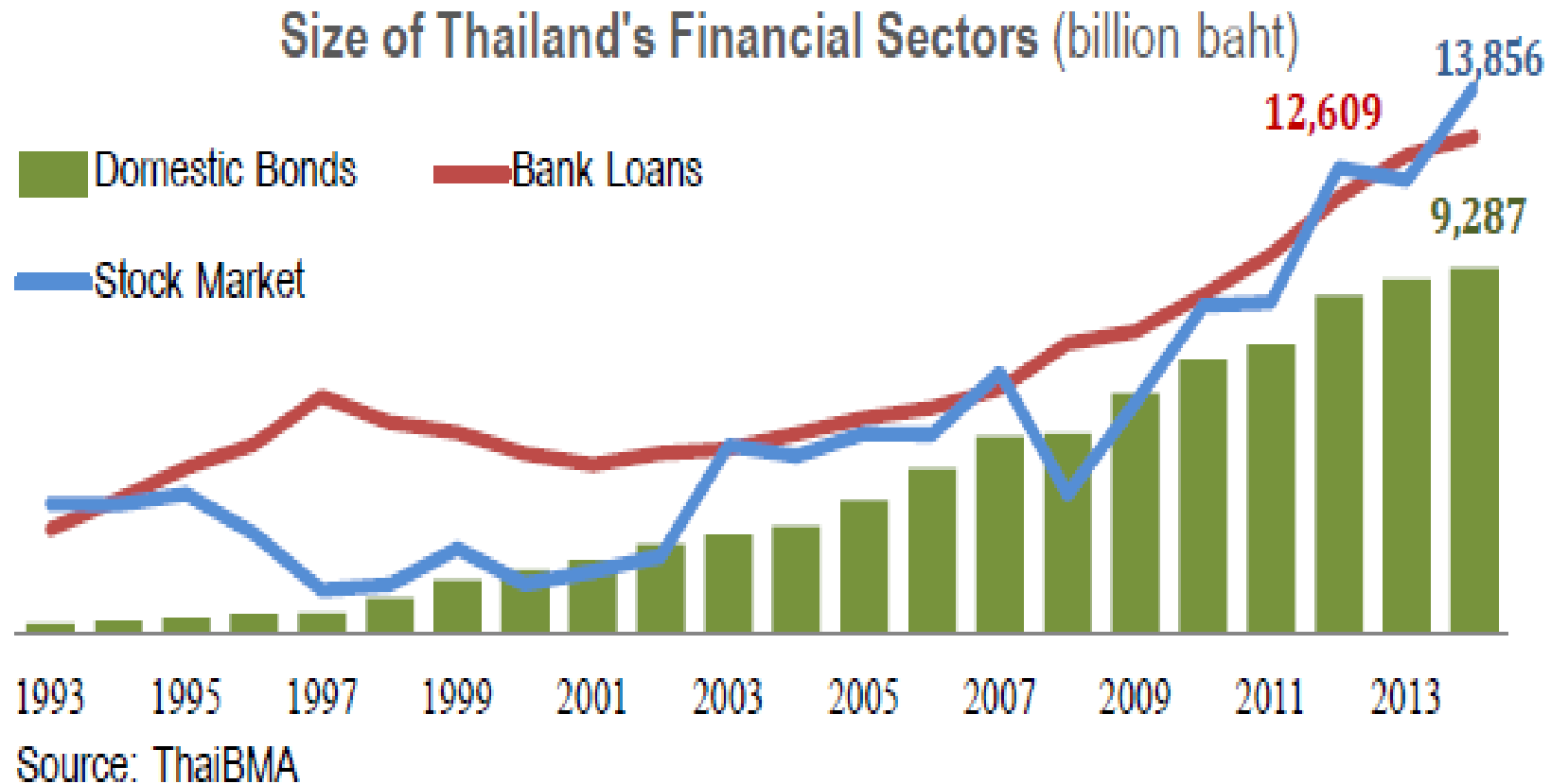
Observation 3: Stock market has increasingly played more important role.



# Bond market classified by issuers: international comparison



# Size of Thailand's financial sector: **Total outstanding.**



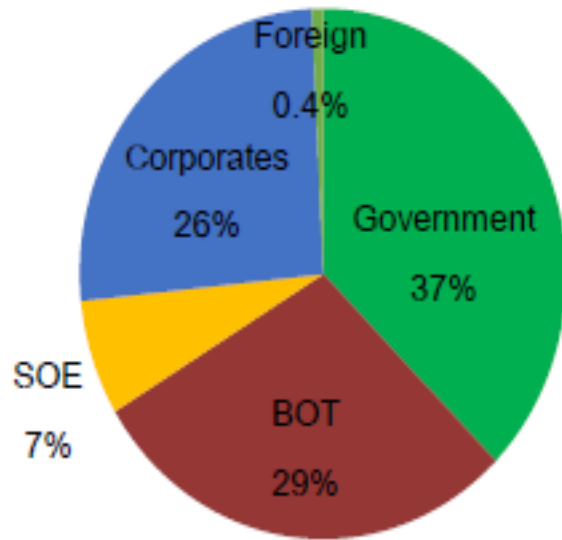
# Direct finance: who can get in?

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- While the size of direct finance is relatively high, few numbers of companies and organizations can get into the market.
- Mostly are big firms and government. Fact: large percentage of GDP is attributed to these big firms.
- However, judging the importance of direct finance as the dominant source of market funding could be misleading in some senses.

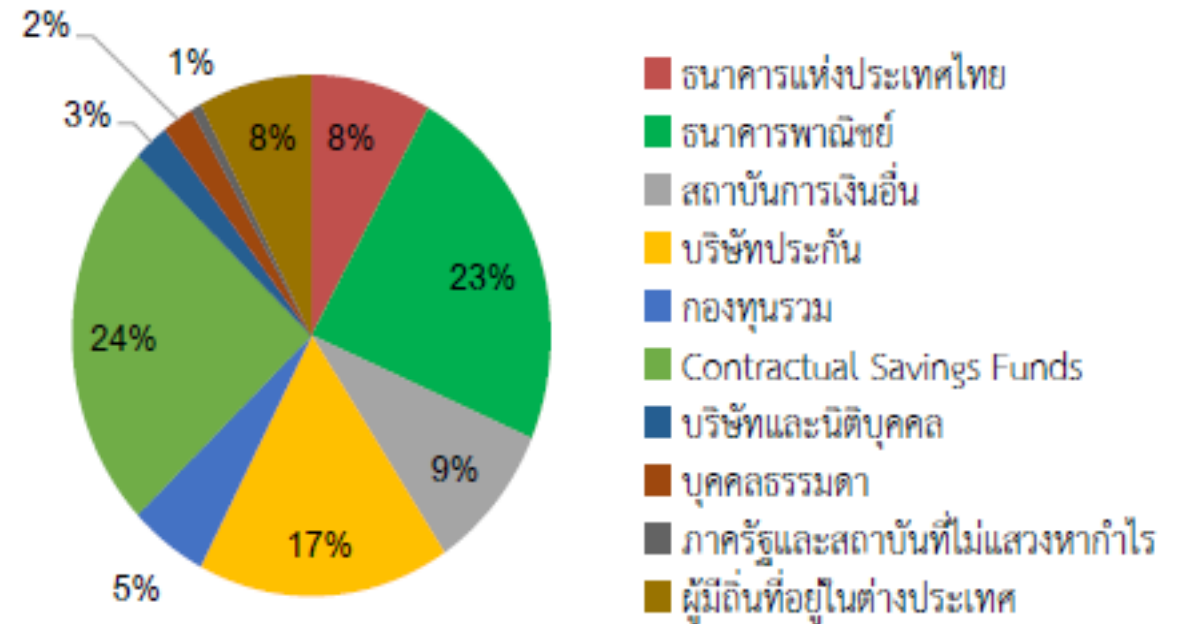
# Thai Bond market: BOT report

## Composition of Bond Issuers



Source: ThaiBMA (2016 data)

## Composition of Bond Holders

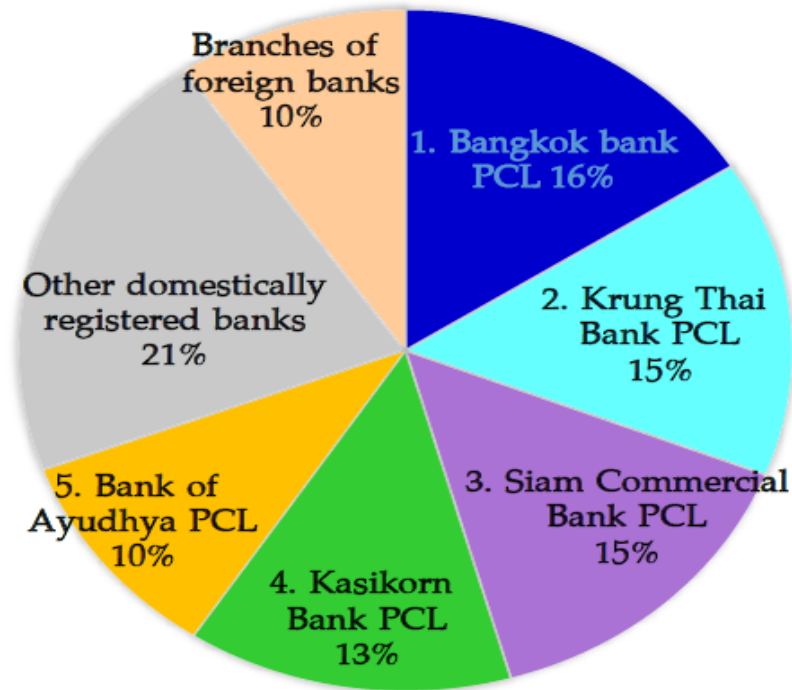


Source: Bank of Thailand (2016 data)

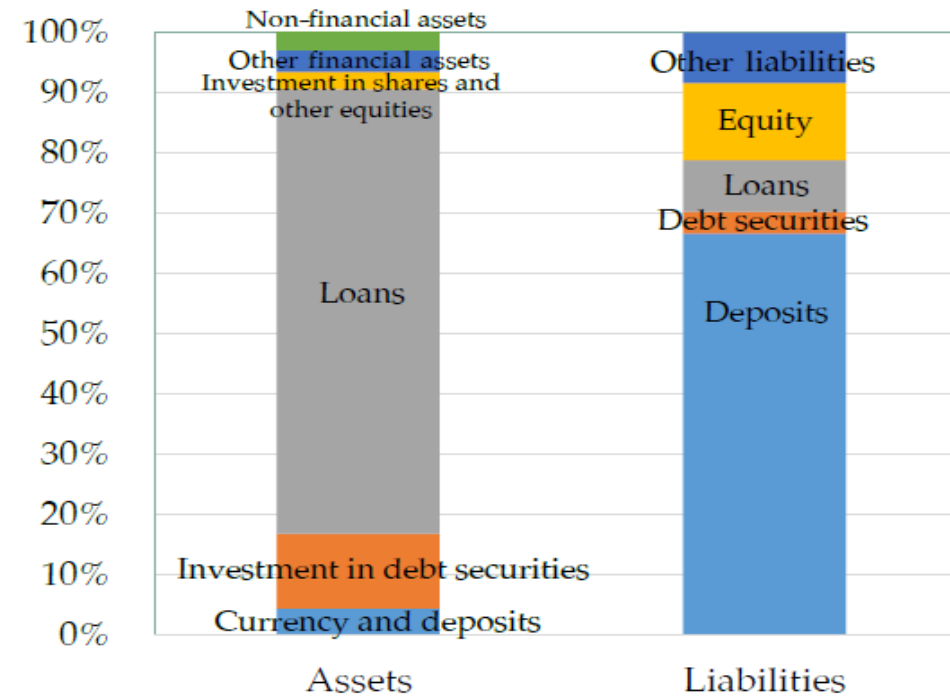
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# Thai banking system: commercial bank

Shares of commercial bank by asset size

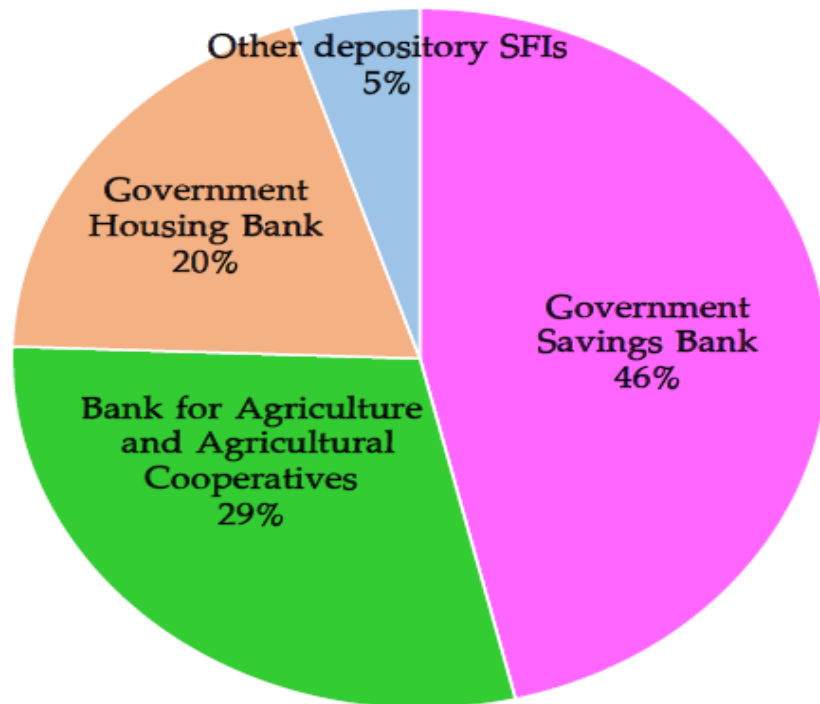


Asset and liability structure of commercial bank

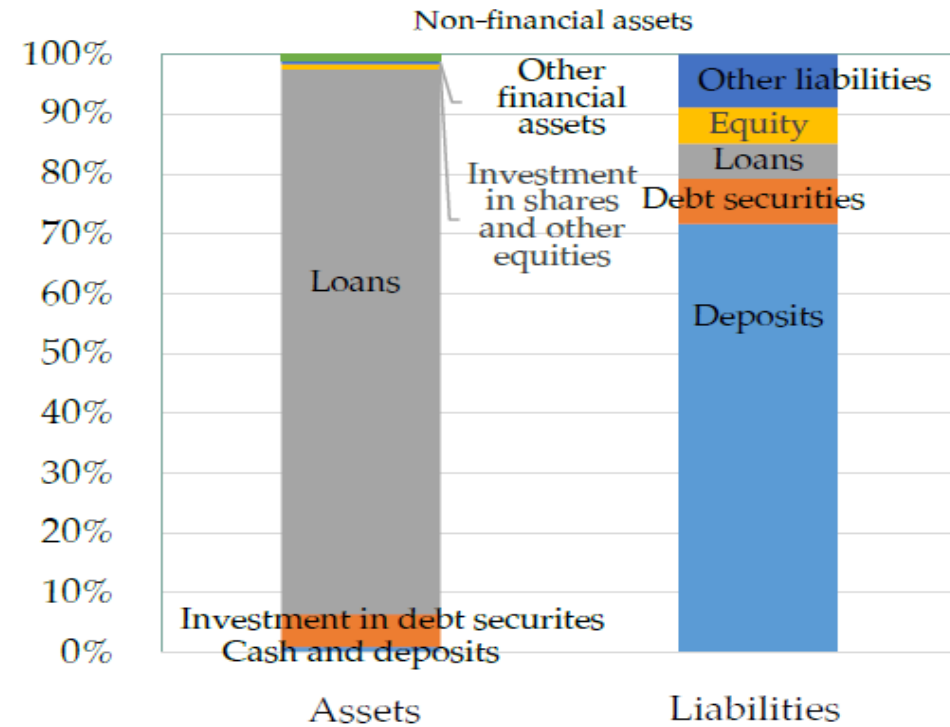


# Thai banking system: SFIs in Thailand

Shares of depository SFIs by asset size



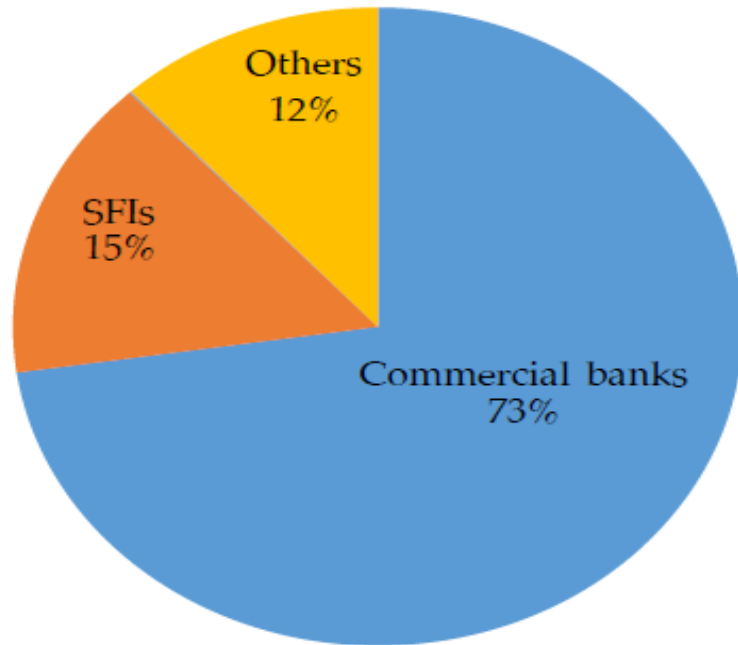
Asset and liability structure of depository SFIs



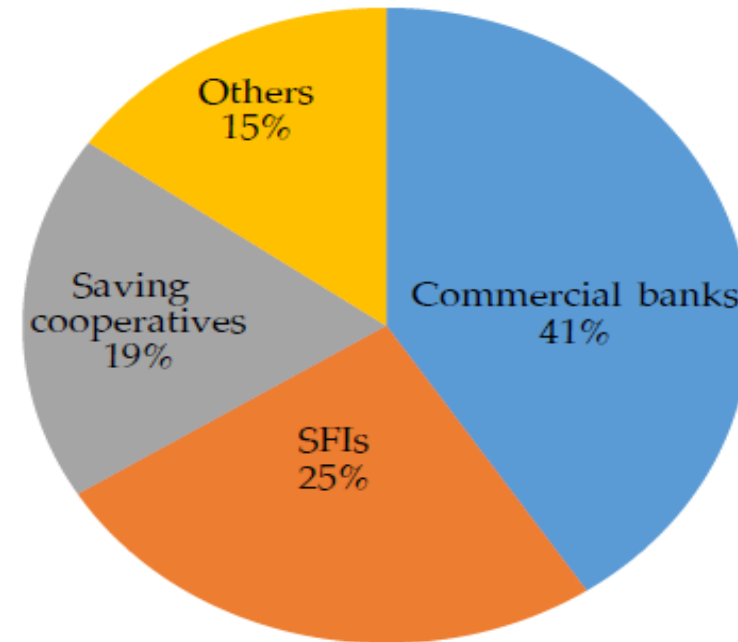
# Thai loan market: Commercial bank V.S. SFIS in a very big picture

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Shares of corporate loan as of 2016 Q3  
classified by type of financial institutions



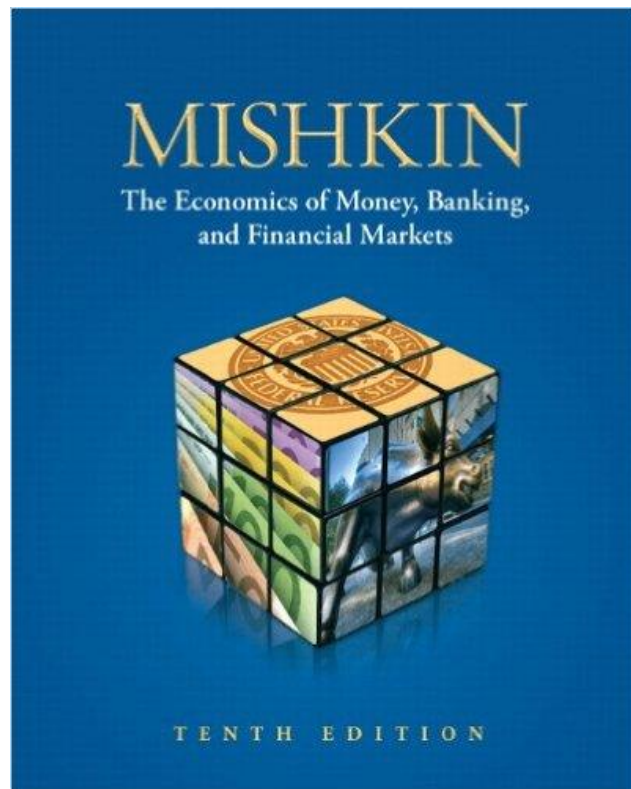
Shares of consumer loan as of 2016 Q3  
classified by type of financial institutions



# Readings

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## Chapter 1 – 3: Mishkin



## Chapter 1 – 3: Prof.Anya

