Finance

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The love of money is the root of all evil.

THE NEW TESTAMENT

Lack of money is the root of all evil.

GEORGE BERNARD SHAW

Aim of subject

- To deepen the financial understanding of the modern economy
- To show the main operations of financial service providers
- To introduce into financial mathematics and investment decisions
- To give a glossary about the main financial terms

References

- Requested readings:
  - Rose: Money and capital markets (available in library)
  - Slides and supplementary readings available at webside of departement http://www.gtk.uni-miskolc.hu/gtk/ui/uipz/index.html
- Offered readings:
  - Kohn: Financial markets
  - Johnson Hazel: Financial institutions and markets (Available in library)
  - John Buchanan: Undergraduate Introduction to Financial Mathematics http://banach.millersville.edu/~bob/book/
- Exam:
  - Condition of signature - attendance at least 70% of lectures and seminars
  - report on a country (20 scores) – only for Hungarian students
  - Two exams in seminars (2*20 scores)
  - Verbal exam in the examination period (40 scores)

Requirements and evaluation

- ***Request for underwriting:***
- Attendance at least 70% of total seminars.
- **Way of exam:**
- Preparing a case study (country report) about the financial system of a chosen EC country and its verbal presentation (20 scores)
- Two seminar written exams (40 scores)
- Verbal exam in the examination period (40 scores)
- **Evaluation:**
- Total scores: 100 points 0 - 50 points (1) unsatisfied; 51 - 61 points (2) satisfied; 62 - 73 points (3) average; 74 - 85 points (4) good; 86 - 100 points (5) excellent

Structure of report

- Introduction to the finance of the chosen country
  - Population, GDP/capita, economic growth, inflation, capitalisation/GDP, total granted non-financial loans/GDP, other social data
- Monetary policy (if independent)
  - Prime rate, tools, level of independence
- Stucture of consolidated bank balance sheet (available on the website of National Banks)
- Structure of central budget
  - main expenses (functional distribution)
  - main revenues (tax structure)
- Analysis of balance of payment (in percentage of GDP)
  - Trading balance
  - Transfer payment
  - Current account
  - FDI investment
  - Portfolio investment

Money and the financial system

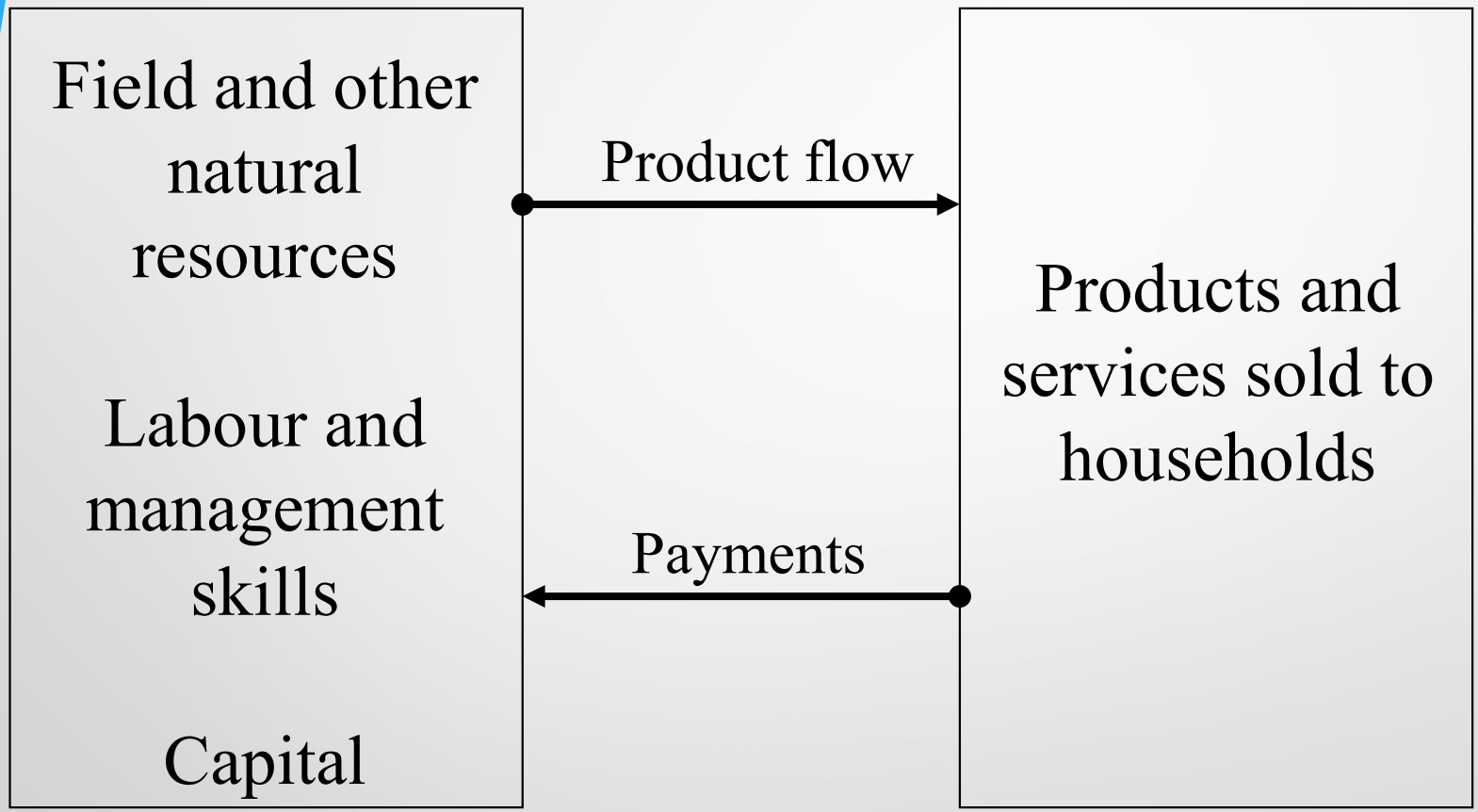
Subject of economics

- How to manage/allocate limited resources to maximise the society's/company's/people's income
- Resources are called production factors
- Income is measured by GDP/profit/salary
- To compare resources and income we expressed them in money term.

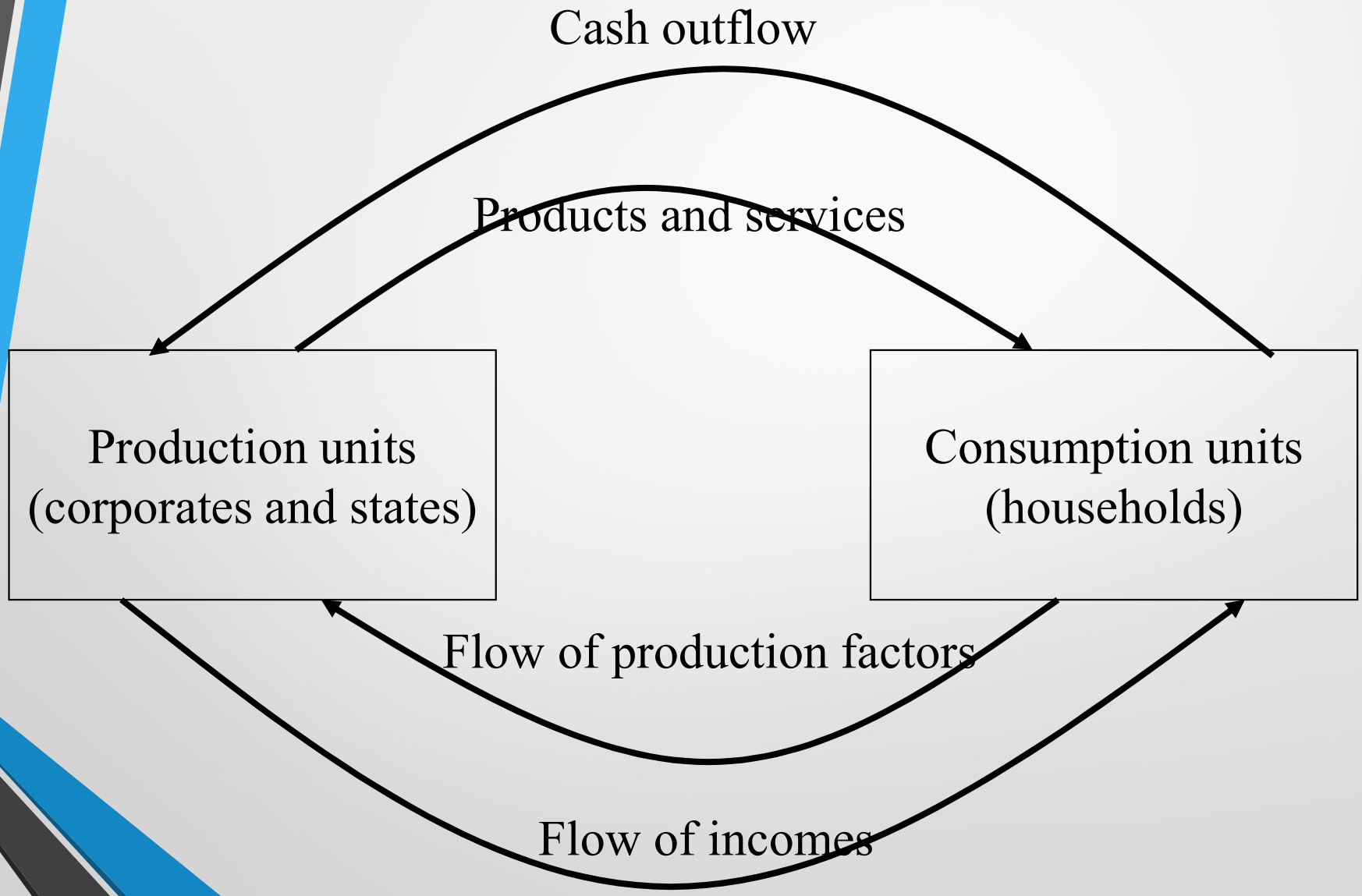
Subject of finance

- Finance is a science dealing with the examination of the financial system, particularly
- - the internal operation of this system,
- - its effect on other subsystem of economy,
- - its institutional framework.

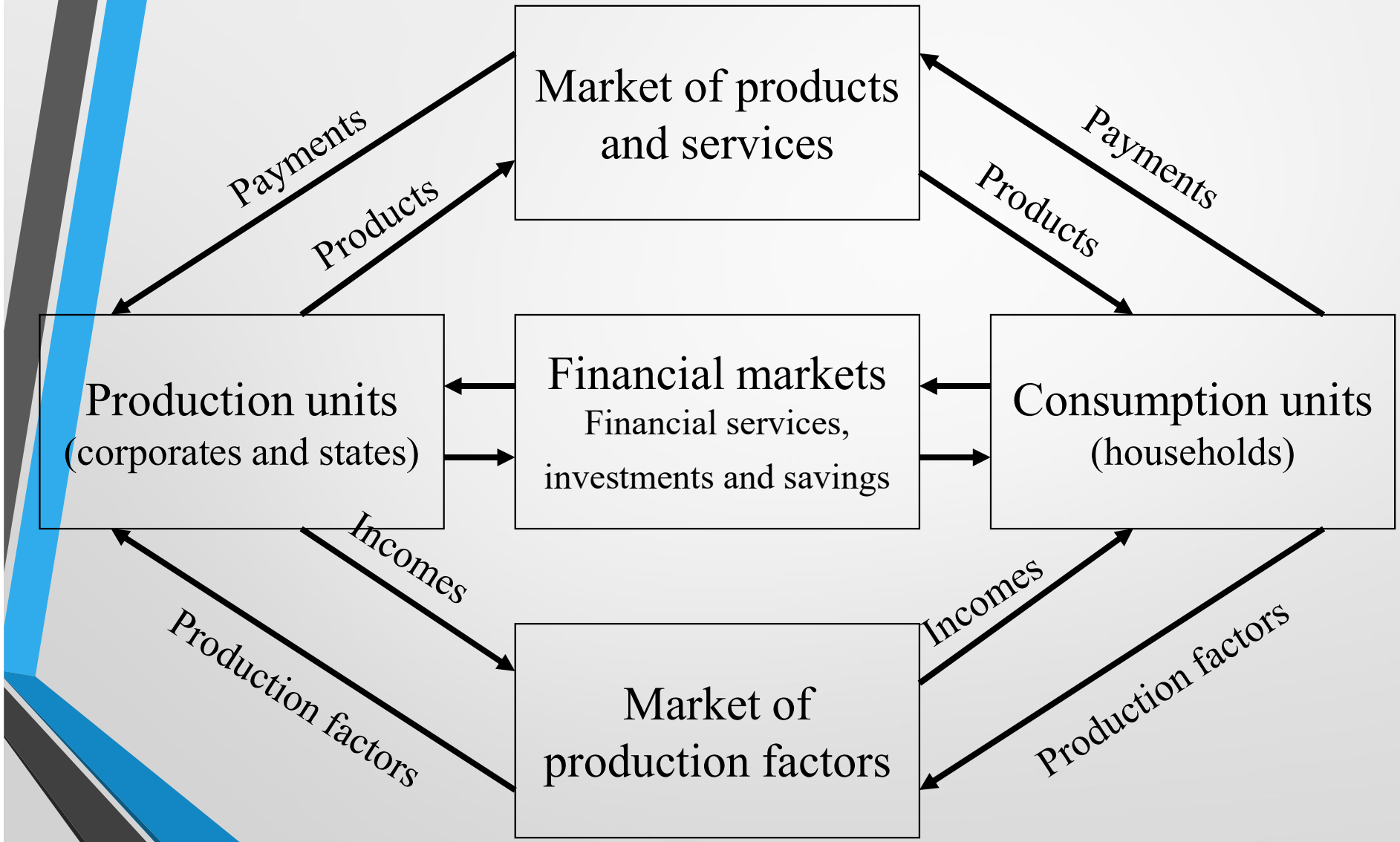
Economic system



Circulation of incomes, wages, products and services in the economic system



Types of market in an economy



Fields of Finance

- National and international finance
- Sectorial finance (banking, insurancing, public finance, etc.)
- Corporate Finance
- Financial Mathematics
- Financial Statistics

Role of financial markets

- Financing function – collect savings
- Investing function – finance investments
- Payment function – manage payments
- Portfolio function – diversify risks
- Signalling function – show the state of economy
- Political function – influence economy

Money history

Concept of money

- 1. Money is which fulfills its functions.
- 2. Money is the most liquid asset.
- 3. Modern money is a claim of non-bank economic actors against the bank system or alternatively the modern money is a special bank liability.

Greek approach

- Three functions of Money
  - calculation unit
  - transaction unit
  - reserve unit

Functional approach

- Money is:
  - Tool of economic calculation and accounting
  - Storage of wealth
  - Transaction tool
  - International money

Karl Marx's approach

Money

- measures the value
- exchanges for products and services
- Settles commitments
- Saves the wealth
- Can be used worldwide

Why do the people need money?

Problems of direct exchange

- Need for mutual interest for exchange
- Uncertain exchange rates
- Problem of equal values
- Problem of durability

What criteria does the money meet?

- Acceptable
- Homogenious
- Scarecity
- Recognisability
- Transferable
- Splittable

Precisious metals, expecially gold and silver

Max Weber's approach

- The state duties have needed to finance
- The state collected goods to finance them
- The goods by which the taxpayers could meet the state's demand, became very attractive.
- Some attractive goods emerged and began to use as payment tool.
- The state authorities recognise the convenience to collect only one goods – this became the money.

Important to note

- The money is a social phenomena
  - requires an acceptance agreement among people
  - needs to be institutionalised
- Examples
  - Yap inlands – stone money (clearing house)
  - Etiope – salt bar
  - Western Africa – copper rings
  - China – cauri snail
  - Central-America – wampun-belt

Development of currency systems

Currency system

- The material of money, and the mechanisms determining its creation, transfer and destruction.
  - **1. Currency with intrinsic value**
  - **2. Metalcurrency systems (bimetal and monometal) with classical monetary substitutes**
  - **3. Credit currency systems**
  - **4. E-money???**

Big picture of money history

- History how the gold (precisious metal) has lost its money functions
- History how to finance a war
- History how the members of a society can co-operate

Features of metal-currency system

Material of money:

- One metal – monometallic system
- Two metals – bimetallic system

Creation of money: mining (or melting) + coinage (seniourage)

Destruction of money: abrasion + loss + jewellery

Main problem: supply of money doesn't fit to the demand of money -> price fluctuation

Law of metal currency system

- Gresham law: „The bad money crowds out the good money"
- Explanation:
  - The good money is used to store the wealth.
  - The bad money is used to pay (everybody tries to get rid of it).
- Consequence – a bimetal system leads to a monometal system

Problems with precisious metals

- Risky to deliver
- Heavy
- Easy to fake
- Soft metal deteriorates
- Metals become treasury – out of transactions
- Volume of metals depends on the productivity of mining – tensions between the required and actual volume
- Role of state

Classic money substitutes

- Classical banknote - obligation of banks
- Classical state currency – obligation of state
- Classical bill of exchange – obligation of individuals and corporates

Classic paper money

- Represents the debt of state
- 3 cases relating the relationship with volume of transactions
  - enough gold, only technical substitutes
  - not enough gold, but the increase of transactions requires more money
  - **real paper money issue** – issued paper money extends the needs of transactions – leads to inflation

Classic banknote

- Issued by a representative (rich) man
- To increase the liquidity – doesn't have maturity, entitlement, fixed denomination
- More banknote issued than the gold reserve
- Reserve rate – volume of gold/volume of outstanding bank note

Classic bill of exchange

- Represents the debt of private persons
- Fixed denomination, maturity and entitlement
- can be endorsed
- can be discounted

Emerging the money substitutes

- Main problem – lack of trust
- Invention – only one bank is entitled to issue bank note for financing the state
  - 1668 - National Bank of Sweden
  - 1694 - Bank of England

Steps to create a classic National Bank

- 1708 – the Bank of England is the only legal entity
- 1751 – manage the budget's account
- 1826 – issue monopoly in a circle of 65 miles around London
- 1833 – the issue monopoly was extended to the whole England
- 1844 – Peel Act

Banking – Currency debate

- Question: What is the optimal quantity of issued bank note (what is the real nature of money?)

Issues	Currency	Banking
What is the money?	Gold – substitutes only substitutes	Gold + substitutes
What determines the amount of issued substitutes?	Gold reserves held by the National Bank	Requirements of transactions
What is the nature of money?	Money is homogenious and exogen	Money is heterogenious and endogen
How can we struggle against inflation? (balance of payment)	Not to allow more substitutes than the gold reserves	Not to allow more substitutes than the requirements of transactions

Functions of (classic) National Bank

- issues bank notes
- finances the state deficit
- manages and record the state's accounts
- influences the foreign exchange rates and manages the foreign currency reserves
- influences the money supply (monetary policy)
- regulates and control the activity of financial institutions
- analyses the economy and makes data services.

Currency systems

Gold standard system (1844-1914)

- Money substitutes are convertible to gold (at a fixed rate) and each other
- Exchange rates are determined by the export/import goldpoints
- Gold and money substitutes are accepted as payment
- Boosting foreign trade

Collapse of gold standard

- In 1914 the convertibility of bank notes was suspended.
- After I. World War – unsuccessful attempts to reestablish the convertibility
- After II. World War – one real rich country (USA) and lot of poor countries

Bretton-Woods system (1944-1971)

- The US dollar is the only currency which can be exchanged to gold (1 ounce of gold = 35 dollar)
- The other currencies pegged against dollar with ±0,75% band
- To monitor and interfere the system two international financial institution were establish (IMF, IBRD)

The Bretton Woods System

- The Bretton Woods System was the result of an international monetary conference that took place in 1944
- Three principles guided this system
  - in ordinary times, exchange rates should be fixed
  - in extraordinary times, exchange rates should be changed
  - an institution was needed to watch over the international financial system
    - the International Monetary Fund (IMF)

The Bretton Woods System

- The Bretton Woods System broke down in the early 1970s
  - the U.S. found itself with a large trade deficit and sought to devalue its currency
- Since then, the exchange rates of the major industrial powers have been ***floating exchange rates***
  - fluctuate according to supply and demand

Comparison of IMF and IBRD

Aspects	IMF	IBRD
Corporate's goal	Maintain the stability of the international financial system	Encourage the recovery of economy of member countries
Debtor of outstanding loans	State (National Bank)	Corporates (co-operating with local banks)
Purpose of loan	Free	Fixed (by tender)
Conditions	Stand-by (to macroeconomic conditions)	Stand-by (to microeconomic conditions)
Constraints	Linked to the quota	Linked to the equity
Maturity of loan	Generally short and medium (1-3 years)	Generally long (over 5 years)

Milestones of the European Monetary Union

- 1958 - convertibility in export and import (in frame of Bretton-Woods system)
- 58 – 68 – matching the fiscal policy (mainly indirect taxes)
- 68-78 – matching the exchange rates
- 69 – Werner-plan – towards to monetary union – failure
- 1971 – 1975 Currency snake - pegged in ± 2,25%
- 1975 – basket currency – ecu
- 1979 – European Monetary System – every currency pegged in ± 2.25 against ecu; European Monetary Cooperation Fund
- 1989 – Delors-plan
- 1992 – Maastricht-treaty
- 1994 – full convertibility
- 1999 – introduction of euro as bank money
- 2002 – introduction of euro as bank note

Mundell's optimal currency belt

Assymetric shock – output of country decreased – devaluation if every country has got own currency

If there is a common currency
•to make the production factors flexible – liberalisation of capital and labour movement
•to transfer some money to the poor region – poor means that the GDP/capital doesn't exceed the two third of EU average.

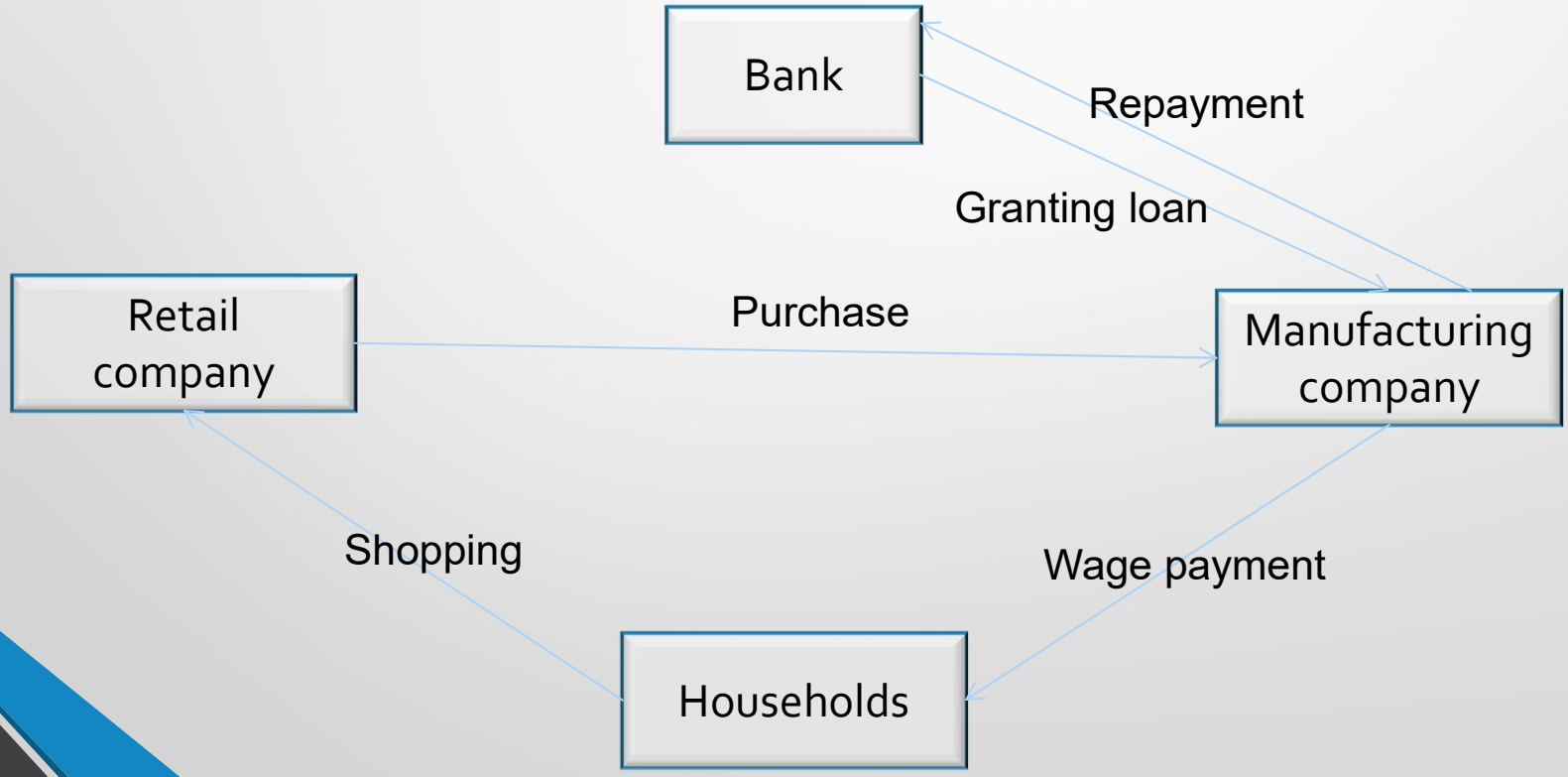
Criterias of Maastricht-treaty

- price stability – keep your inflation below 1.5% over the average inflation rate of three countries with lowest inflation figure
- convergence of long term interest rates – keep your long interest rate 2.0% over the averge long term interest rate of three countries with lowert long term interest rate figure
- foreign currency rates stability – fix your currency against euro with a 15% peg during 2 years
- stability of public finance –
  - public deficit should be lower than 3% of annual GDP
  - public debt should be lower than 60% of annual GDP

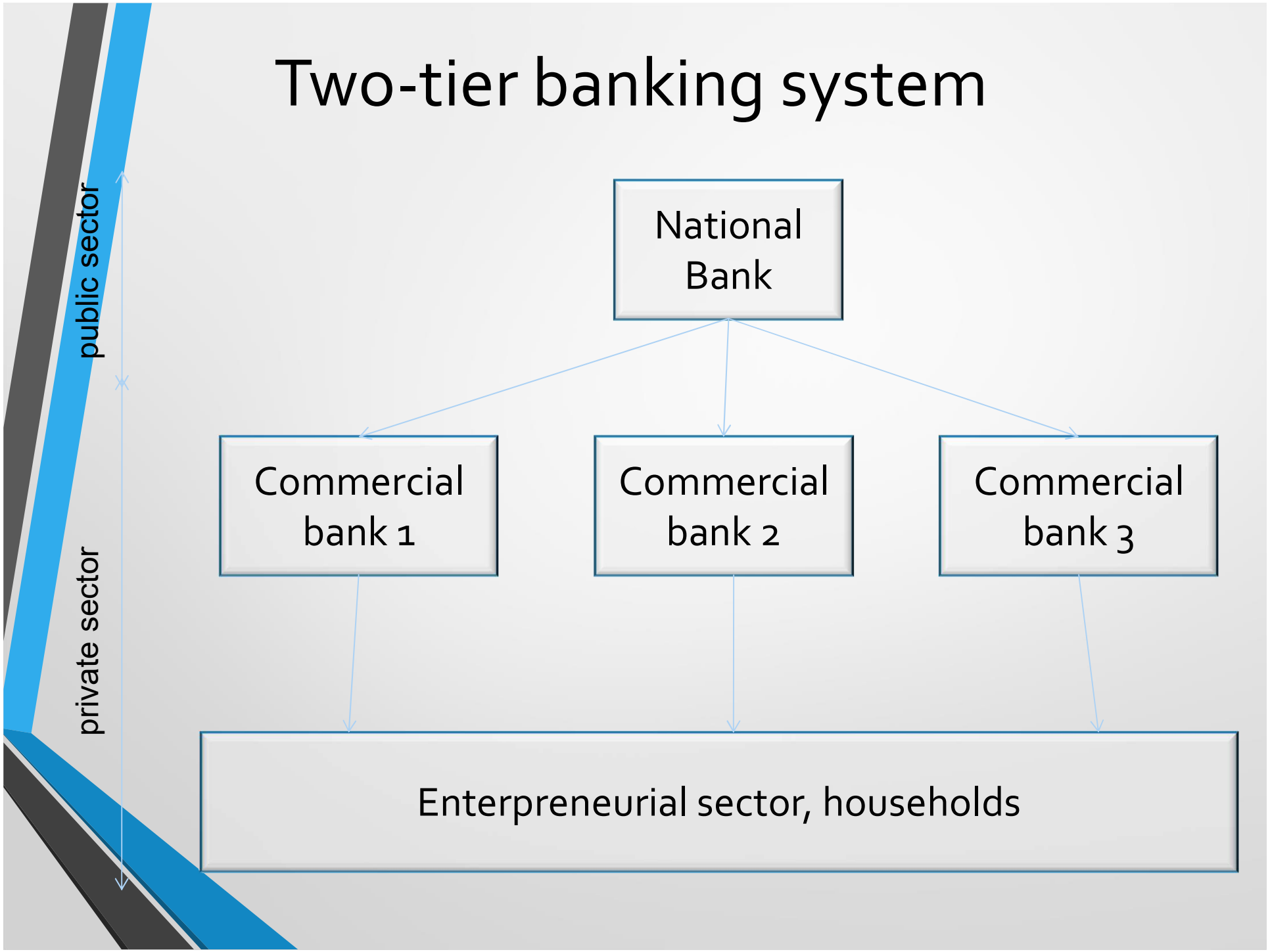
Current money system

Current money system

- Current money = fiat money = credit money = bank liability
- Basic (simplified) circulation:



Two-tier banking system



Duties of National Bank (follows public interest)

- Providing money
- Ensuring the purchase power of money (anti-inflation) with monetary policy
- Management of foreign reserves and foreign debt
- (Managing and finance the state debt)
- (Lender of last resort)
- (Supervising the activity of financial institutions)
- Analysing the economy

Two types of money in circulation

- Bank note (issued by the National Bank)
- Account money (created by the commercial banks)
- Account money is used to pay inside the client circle of a particular commercial bank
- Bank note is used to pay outside the client circle + for cash payment.
- International money is used for international payments.

Money creation loan

Current account of debtor		Loan account of debtor	
	100	100	

Multiplication

- 1 unit of bank note creates more than 1 unit of money.
- Conditions:
  - National Bank grants loan to a commercial bank (€ 100)
  - Constant reserve ratio (r) = $\frac{\text{Reserve in National Bank}}{\text{Collected deposit}} = 10\%$
  - Constant bank note ratio (c) = $\frac{\text{Bank note in circulation}}{\text{Account money}} = 20\%$

Process of multiplication

Number of turn	Amount of loan	Amount of deposit	Cash in circulation	Reserve in National Bank
1	Mo	Mo*(1-c)	Mo*c	o
2	Mo*(1-c)*(1-r)	Mo*(1-c)²*(1-r)	Mo*c²*(1-r)	Mo*(1-c)*r
3	Mo*(1-c)²*(1-r)²	Mo*(1-c)³*(1-r)²	Mo*c³*(1-r)²	Mo*(1-c)²*r²
.....	Mo*(1-c)ⁿ*(1-r)ⁿ	Mo*(1-c)ⁿ⁺¹*(1-r)ⁿ	Mo*cⁿ*(1-r)ⁿ⁻¹	Mo*(1-c)ⁿ*rⁿ
Total	$\frac{M0}{c+r-c*r}$	$\frac{M0*(1-c)}{c+r-c*r}$	$\frac{M0}{1-c-c*r}$	$\frac{M0}{1-r-c*r}$

$$\frac{100}{0.3-0.02}=\frac{100}{0.28}=357$$

Assumptions of multiplication

- Infinite loan demand
- Constant reserve and bank note rate
- Very quick cash velocity

Endogenious-egzogenious money creation

- <u>Egzogenious (external) money:</u>

1. National Bank grants loan
2. Deposit is put in commercial banks
3. Unlimited demand for loan

- <u>Endogenious (internal) money:</u>

1. Economic decisions
2. Financial request, demand for loan
3. Granting loan, money creation
4. Refinancing

Source and cancellation of bank note

Source

- Granting loan
- Purchasing foreign currency
- Buying state security
- Rediscounting bill of exchange
- Interest payment

Cancellation

- Repaying loan
- Selling foreign currency
- Selling state security
- Collecting bill of exchange
- Collecting interest

Monetary policy

Monetary policy

- Target: inflation below desired level (in Europe – 2%, in Hungary – 3%)
- Instruments:
  - Direct
    - reserve rate
    - loan limits
    - special loan facilities
    - moral pressure
  - Indirect
    - **open market operations**
    - refinancing

Goal of Monetary Policy

- Price stability
- Monetary stability

- Anchors:
  - Money supply
  - Exchange rate
  - Direct inflation targeting

Monetary aggregates

- Bank note: issued amount of bank note and coins. Called monetary basis. Splitted into money at banks and money in circulation.

$M_0 = C + R$

- Commercial bank account money (DS)
- Further money aggregates:

$M_1 = KPF + DL$

$M_2 = M_1 + DT$ (short-term deposits)

$M_3 = M_2 + MI$ (bank securities)

$M_4 = M_3 + TN$ (Treasury – notes)

Money supply as anchor

$$M * V = P * T$$

$$\Delta M * \Delta V = \Delta P * \Delta T$$

$$\Delta V := 1 \Rightarrow \Delta P = \frac{\Delta M}{\Delta T}$$

Assumption:

- Closed economy or export and import are equal
- Cash velocity is constant

Exchange rate as anchor

- Devaluation of currency → Inflation increases
  - Price level of import goods increases
  - Price level of domestic goods increases through import purchase
  - Profit of exporters increases the disposable income
- Appreciation of currency
  - Price level of import goods decreases → Inflation decreases
  - Price level of domestic goods decreases through import purchase
  - Profit of exporters declines

Inflation targeting (Mishkin)

1. Declaring a fixed medium term inflation target.
2. The National Bank is committed to price stability -> it should be independent.
3. The National Bank operates on a basis of a wide information base.
4. The monetary policy is transparent. One goal – one tool.
5. Reporting commitment.

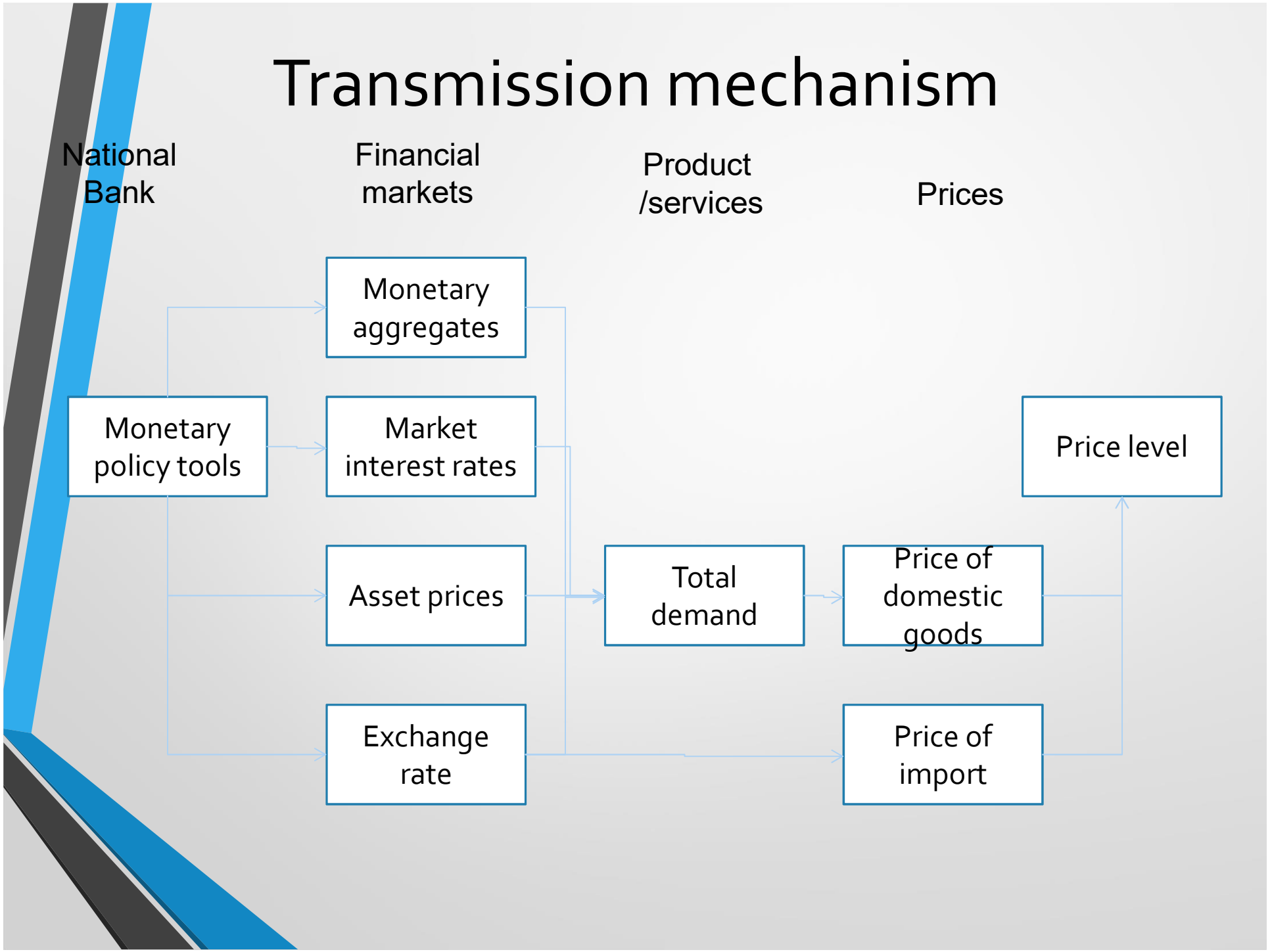
Forrás: MNB Monetáris politika 2012

Four elements of independence

- Personal independence
- Political independence
- Financing independence
- Economic independence

Responsible body of Monetary Policy: Monetary Board

Transmission mechanism



Way of transmission

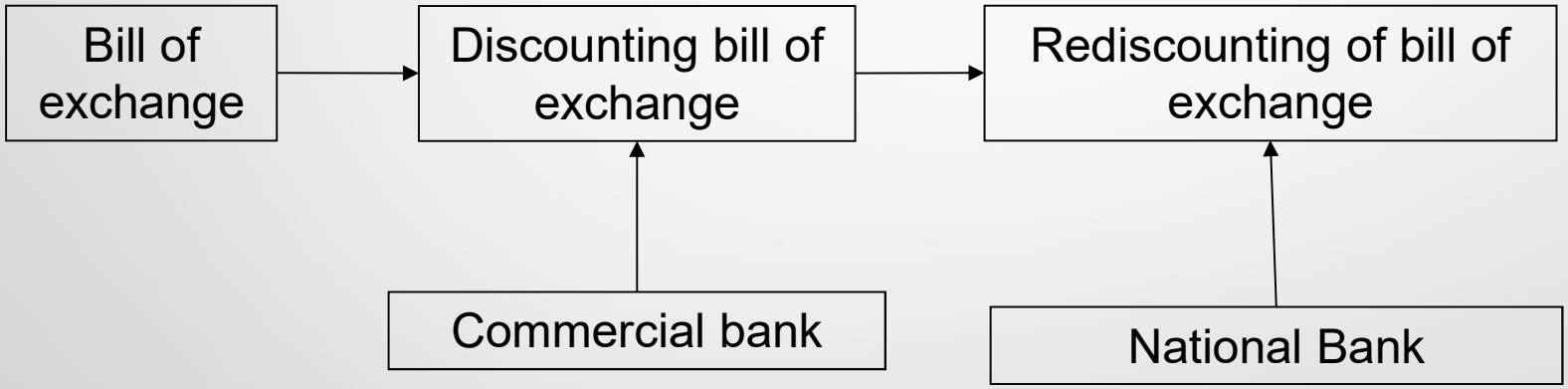
1. Interest rate channel
2. Asset price channel
3. Foreign exchange channel
4. Credit channel
    1. Bank loan channel <-> interest rate channel
    2. Balance sheet channel <-> asset price channel
5. Expectation channel

Tools of monetary policy

- Indirect tools: tools, which operate in the financial markets, and the National Bank acts as a market actor. These tools affect indirectly on the money supply.
  - Refinancing loan rate
  - Deposit rate, bond rate
  - Repo rates
  - Prices of state securities bought and sold
- Direct tools: tools, which operate as legal order or decree, and the National Bank acts as an authority. Theses tools affect directly on the money supply.
  - Reserve rate
  - Credit limits
  - Interest rate floor and ceiling
  - Moral pressure

Indirect monetary tools

- ***1. Refinancing loan rate***



Interest rate transmission

- Refinancing loan rates increase

Increasing cost of liabilities

Commercial banks increase the lending rates

Fewer loans

Money supply decreases!

Indirect monetary tools

- Assumptions:
- Banks depend on the liabilities provided by the National Bank
- Banks transmit the increase of interest rates to their clients
- Loan demand should be elastic

2. *Open market operations – the most popular*

Indirect monetary tools

Advantages:

1. Autonomious
2. Direct effect on money supply
3. Flexible tool

Selling T-securities -> reduces the money supply

Buying T-securitites -> increases the money supply

Indirect monetary tools

- ***3. Repo***

  Repurchase aggrement between a commercial bank and the National Bank

- Active repo: the National Bank buys T-securities and sells them later – in fact gives short-term loan to the commercial bank

- Passive repo: the National Bank sells T-securities and sells them later – in fact accepts short-term deposit from the commercial bank

Direct monetary tools

1. ***Reserve rate*** (y)

   How many cash should be kept by the commercial banks to meet their depositors money demand?

   If y is big – fewer loan

   Elements: rate of reserve, the basis of reserve, reserveable assets, interest rate on reserve, calculation

Direct monetary tool

- Reserve rate is a very drastic monetary tool
- Indirect taxation

<u>Other tools:</u>

- Credit limits
- Interest rate floor and ceiling
- Moral pressure

Reserve rate

Reserve rate: 10%

Assets		Liabilities	
Reserve	10	Deposit	100
Loan	90		

Reserve rate: 20%

Assets		Liabilities	
Reserve	10	Deposit	50
Loan	40		

Conditions of efficiency:

- -no extra cash in banks
- -no other source of cash than National Bank
- -no foreign liabilities

Advantages of open market operation

- Autonomious
- Direct effect on money supply
- Flexible

Classification and main types of securities

Common features of securities

- It incorporates some valuable right, but no commitments.
- Its form meets the legal criteria.
- It can be traded.

Classification types

- By incorporated right
- By liquidity
- By tradeability
- By maturity
- By issuer
- By return
- By nomination

By right

- Debt securities (T-bill, T-note, corporate bond, debentures, bill of exchange)
- Equity securities (shares, investment fund note)
- Derivative securities (warrant, swap, options, futures)

By liquidity

- Registered
- Non-registered

By tradeablility

- Transferable – in sight securities
- Non-transferable – nominated securities
- Partly transferable – endorsed securities

By maturity

- Short term – less than or equal to 1 year
- Medium term - more than 1 year less than 5 years
- Long term – more than 5 years
- Infinite term

By issuer

- State
- Local governments
- Corporates
- Banks
- (Individuals)

By return

- Discount
- Fixed rate
- Variable rate
- Yield

Share

- Represents ownership in a company, pays dividend (yield), has infinite term and issued by share-holding companies
- Types:
  - Common share
  - Preferred share
  - Employee share
- Rights incorporated:
  - Property rights (dividend, pre-emtion, liquidation revenue)
  - Ownership rights (participating, voting)
  - Minority rights (control functions)

Bond

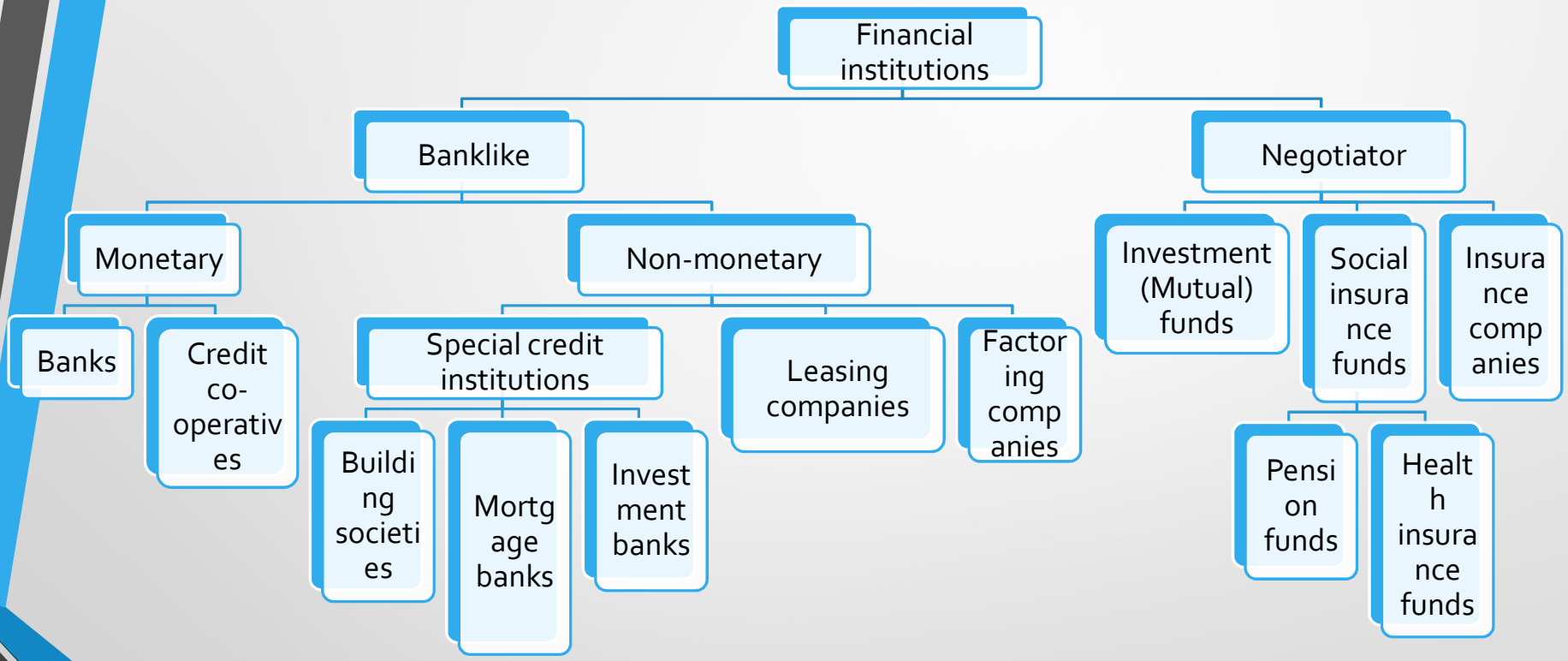
- Represents lending, pays interest, has a medium or long term.
- Types:
  - T-bond – issued by state
  - Corporate bond – issued by companies
  - Mortgage bond – issued by mortgage banks
  - Municipal bond – issued by local governments

Commercial paper

- Represents lending, discount paper, has a short term.
- Types:
  - Promissory note
  - Bill of exchange

Financial institutions

Financial institutions



What is a bank?

A bank is a special entitled corporation, which grants loans, accepts deposits and runs current accounts to manage the flow of payments among the actors of the economy.

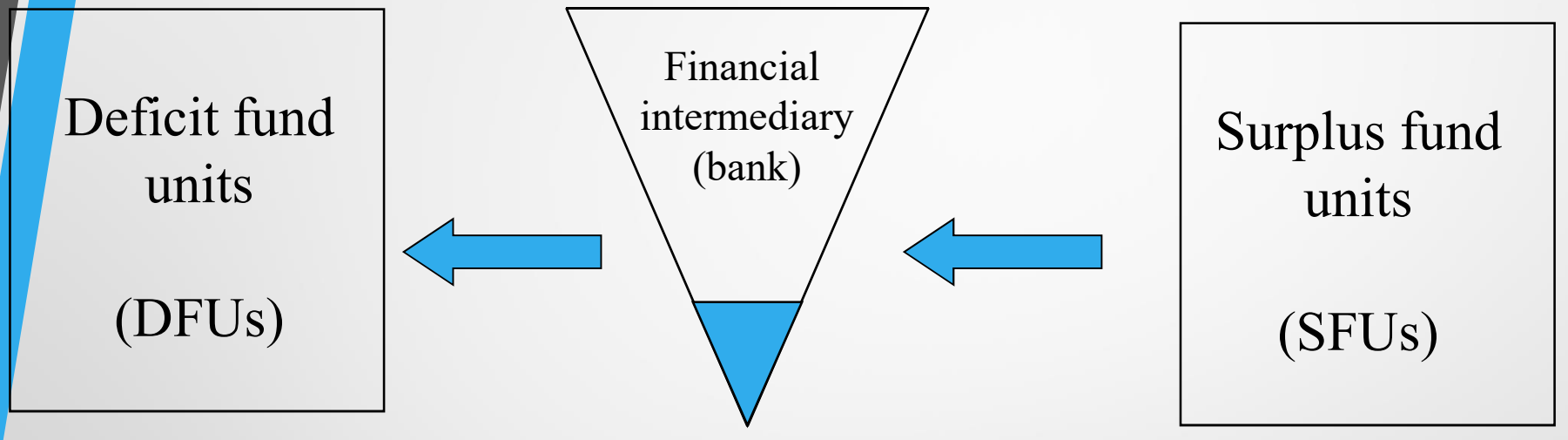
Origin of the word „bank" –

- italian word „banco" means bench
- french word „banque" means chest of drawer

Who are the major commercial banks?

	Institution	Headquarters	Assets ($Billions)
1	Citicorp	New York, NY	1051.5
2	JP Morgan Chase	New York, NY	693.6
3	Bank of America	Charlotte, NC	621.8
4	Wachovia	Charlotte, NC	330.5
5	Wells Fargo	San Francisco, CA	307.6
6	Bank One	Columbus, OH	269
7	MetLife Inc.	New York, NY	256.9
8	Taunus Corp. (Deutsche Bank)	New York, NY	227.2
9	Washington Mutual*	Seattle, WA	207.7
10	FleetBoston Financial Corp.	Boston, MA	203.6
11	U.S. Bancorp	Minneapolis, MN	171.4
12	National City	Cleveland, OH	106.9
13	SunTrust Bank	Atlanta, GA	104.7
14	Bank of New York	New York, NY	81
15	KeyCorp	Cleveland, OH	80.4
16	Fifth Third Bancorp	Cincinnati, OH	71
17	BB&T Corporation	Winston-Salem, NC	70.9
18	State Street Corp.	Boston, MA	69.9
19	PNC Bank	Pittsburgh, PA	69.6
20	Golden West Financial*	Oakland, CA	58.4

Bank, as a financial intermediary



Needs of debtors:

1. Long term loans
2. Lender takes significant risk
3. Big amount of loan
4. Convenience

Needs of creditors:

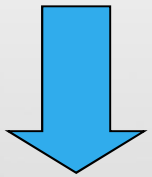
1. Liquidity
2. Security
3. Convenience
4. Small amount of savings

Comparison of direct and indirect money flow

Transformation	Securities	Financial intermediaries
Location	Focused on one place	Network of branches, ATM, or via Internet
Amount	Fragmented in small nominal value	Creating pools
Liquidity	Secondary market	Liquidity management
Risk	None	Risk management

Financial specialities of banks

- High capital leverage
- Financial assets, non physical assets
- Mismatch between assets and liabilities
- Special constraints of activity
- Economy of scale
- Too big, to fail



Trust

Why do the banks need to supervise?

- Liquidity problem
  - Zombi effect
- Bank siege effect
- Too big, to fail

Moral hazard

Types of financial institutions

Name	Activity	Organisa-tional form	Required share capital
Financial enterprise	Limited financial service except for deposit collection and running current accounts	Ltd. or Plc.	50 mHUF
Financial holding	Allfinance	Plc.	2.000 mHUF
Credit institution			
Bank	**All financial services, but obliged to run current accounts and collect deposits**	**Plc.**	**2.000 mHUF**
Special credit institution	Not allowed to make all financial services, especially not allowed to run current accounts	Plc.	Regulated in special laws
Cooperative credit institution	All financial services except for investment fund, custody, wealth management	Cooperative	100 mHUF
Credit cooperative	Financial services only for members	Cooperative	mHUF

Type of investment service providers

Name	Activity	Organisa-tional form	Required share capital
Brocker	Selling and buying security as an agent	Ltd. or Plc.	50 mHUF
Dealer	Brocker + own deals	Ltd. or Plc.	200 mHUF
Investment bank	Brocker + facilitate security issue and transformation of companies	Plc.	1.000 mHUF
Investment fund	Allocating large investment pools	Ltd.	
Pension fund	Allocating pools for paying pensions	Ltd.	
Health fund	Allocating pools for health insurance	Ltd.	

Insurance companies

Life insurance – (term insurance, whole life insurance, endowment, unit-linked)

Non-life insurance – (property, responsibility, accident)

Types of investment funds

- By risk
  - Money market funds
  - Bond funds
  - Mixed funds
  - Share funds
  - Estate funds
- By liquidity
  - closed end
  - Open end


Payment system

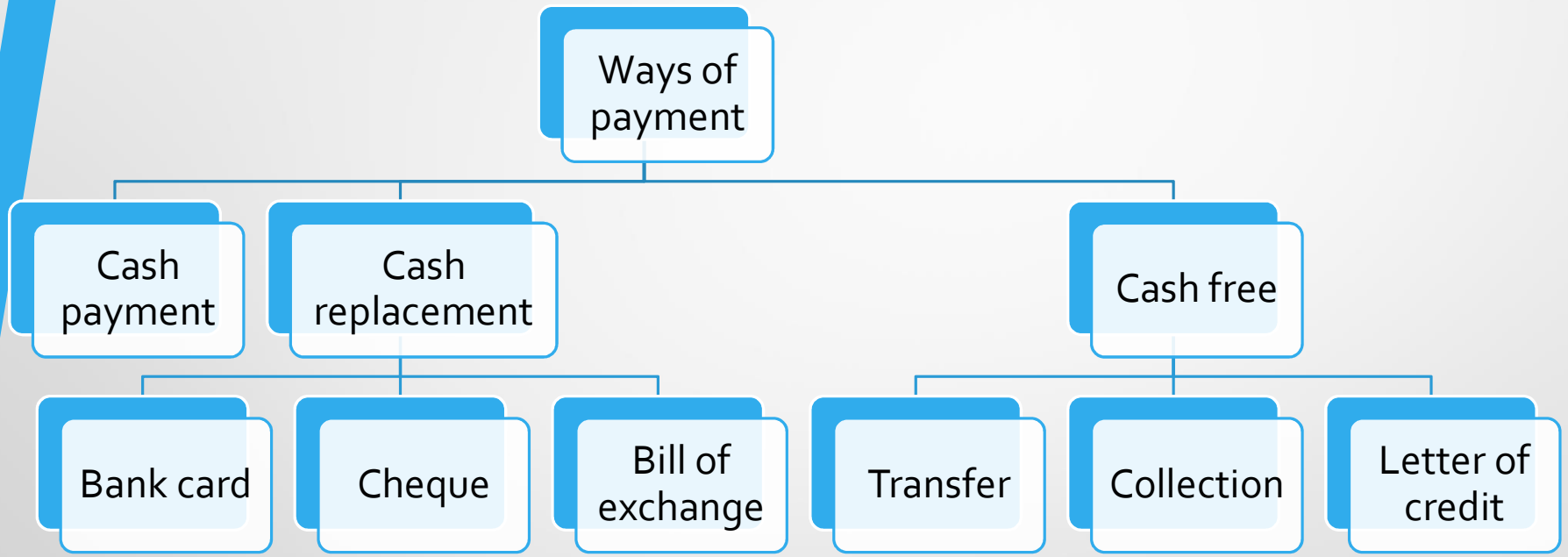
Payment system

- Its function is to manage the financial transaction made by the economic actors.
- Its effect is to:
  - bridge the territorial differences between beneficiary and payer
  - make the payments quicker, cheaper and more convenient
  - improve the security of transactions
  - helps to „whiten” the economy

Elements and processes of payment system

- **Elements: settlement house, liquidity provider, electronic information and clearing system, electronic money market trading platform, commercial banks**
- **Processes:**
  - **Recording and sorting the outgoing payments – comm. bank**
  - **Issuing a payment list to the clearing system – comm. bank**
  - **Creating the payment matrix – settlement house**
  - **Providing liquidity – national bank**
  - **Settlements – settlement house**
  - **Repaying the outstanding loans + interest – comm. Bank and national bank**
- **Basic types: gros and net**

Ways of payment



Collection versus transfer

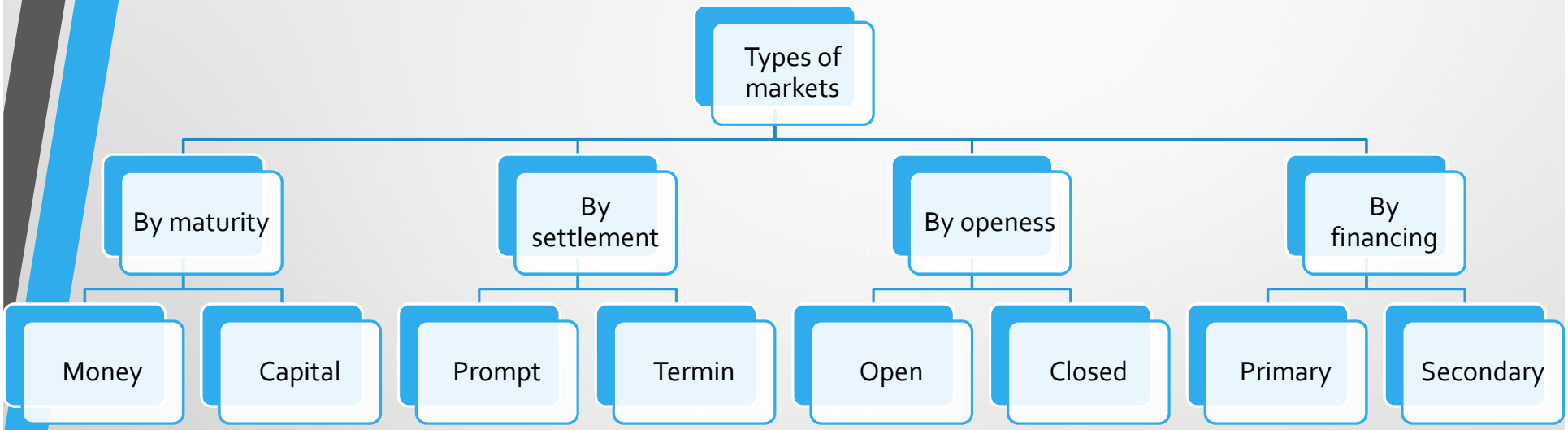
- Transfer is started by the payer, collection is started by the payee.
- Prompt collection is made
  - Based on decision of court
  - Based on contract
  - Based on bill of exchange

Letter of credit

- Payment is guaranteed by the bank of payer if it receives the dokuments proving the delivery.
- Most expensive, most time-consuming, but most reliable way of payment

Financial markets

Types of financial markets



Comparison of money and capital markets

Aspects	Money market	Capital market
Maturity	Less than 1 year	More than 1 year
Major purpose of existence	Provide liquidity for daily operation	Provide financing source for investment
Major actors	Commercial banks	Investment and pension funds, economic „angels”
Major products	Short term loan, deposit, T-note, bill of exchange	Bonds, shares

Comparison of prompt and termin markets

Aspects	Prompt market	Termin market
Time between deal and settlements	2 working days	More than 1 week
Major purpose of existence	Exchange of financial market instuments	Trading, hedging, arbitrageing
Major products		Forward, futures, options, swaps

Purposes to enter the stock market

- Trading – invests for extra return and takes extra risk
- Hedging – reduces the risk (corn producer sells the corn in the futures market)
- Arbitrageing – achives profit without risk to utilise the bad pricing.

Descriptions of derivatives

- Forward – obligation to deliver/pay a financial product at a fixed price in a certain period/at a certain date out of stock exchange
- Futures – obligation to deliver/pay a financial product at a fixed price in a certain period/at a certain date in stock exchange
- Options - right to deliver/pay a financial product at a fixed price in a certain period/at a certain date in stock exchange
- Swap – exchange of cash flows of financial products (exchange the cash flows of a loan with fixed rate with a loan of variable rate)

Primary and Secondary Markets

- **Primary markets are:**
  - **Where the securities are issued to access financing sources**
  - **Main actors: investment banks**
- **Secondary markets are:**
  - **Where the issued securities are traded**
  - **They provide liquidity and transparency for investors.**
  - **Main actors: brockers and dealers**

General characteristics of stock exchanges

- **Organised open market with standardised products**
- **Independent private institution**
- **Products: homogenious mass products (commodities, securities, foreign currencies, interest rates)**
- **Transparent market**
- **Settlement is centralised and quaranteed.**


Fiscal policy

Fiscal Policy

If an economy is in a depression or a recession, the government may try to energize it by spending more money or by cutting tax rates.

During the Great Depression, John Maynard Keynes recommended massive government spending to re-start the U.S. economy.

Functions of the state

Public duties: Those duties which the other actors of the society cannot solve.

- *classical*: legal, administrative services (army, police, court, govermental bodies)
- *Social political*: social welfare, education, culture
- *Economical: influencing the economy*

Aims and tools of fiscal policy

- Inflation (price stability)
- Balance (balanced central budget, and balance of payment)
- Activity (increasing)
  - GDP (increasing)

  - To reach a long-term sustainable growth of the living standard (GDP increase)
  - Sustainable
    - Demografically
    - Ecologically
    - Economically (balanced central budget and balanced balance of paymnent)

Fiscal policies can be either “expansionary” or “contractionary”

Contractionary Policy

CONTRACTIONARY FISCAL POLICY occurs when the government deliberately reduces its deficit in order to slow down the economy (usually with the goal of reducing inflation).

The net effect of contractionary fiscal policy, all other things being equal, is to slow down the rate of growth of the economy.

Contractionary Policy

-- In contractionary fiscal policy, the government cuts its spending (G) or raises taxes (T) or both.

-- Contractionary fiscal policy slows down the economy by decreasing aggregate demand

Expansionary Policy

- -- With an expansionary fiscal policy, the government raises its spending (G) or cuts taxes (T) or both.
- An expansionary fiscal policy expands the economy because it stimulates aggregate demand.

Neoliberal approach (Milton Friedman)

- The government cannot change the long run growth rate, because it depends on the production factors.
  - unemployment is voluntarily
  - capacity are given
  - expansion leads to inflation
  - Import leads to foreign indebtedness

Structure of government sector

- Central budget
- Social insurance funds (pension and health)
- Special state funds
- Local governments

Budget

- **Budget:**
  - Financial plan enacted by the Parliament.
  - Financial fund, which is collected, spent, and contolled by the government.
- **Budget cyle:**
  - Planning
  - Budget Committee approval
  - Minister's proposal
  - Debate
  - Voting. Enacting.
  - Execution and controll (ÁSZ)
  - Report

Budget

- Budget: Accounting the total revenues and total expenses of an organisational unit at a given period
  - Related to the future
  - It is published in a fixed form
  - Legal commitment
- Budget is based on budget of public institiutions.
- Budgeting principles: completed, uniform, transparent, real, detailed

Balance of state budget

- 1. **Technical deficit**: incomes occasionally, expenses continuously – *short term bridge loan*
- 2. **Regulational deficit**: due to imprecisiously measured income – *state securities*
- 3. **Real deficit**: expense unavoidable, but not enough income – *foreign loan, money creation*

International comparison of budget

- Total expenses or deficit / GDP
  - Redistribution depends on:
    - Economic development
    - Market tradition
    - Social policy

Social insurance

- Main duties:
  - **Pension insurance**
  - **Health insurance**
- Main incomes:
  - Fees and grants paid by employees and employers
  - State subsidies

Specialised funds

- Finance some particular duties of the state
- Use own taxes and contributions
- Advantages:
  - Some kind of independence from central budget
  - Attitude of taxpayers is better to see the precise goal of taxes
- Disadvantages:
  - Limited transparency
  - Decentralised cash management
  - Actual preferences of public finance are more difficult to ensure.

Local governments

- 1. Finance the local public services
- 2. Encourage the economic development – investments
- Management:
  - *Taxes*: local taxes
  - *Subsidies*
  - *Own incomes:* from operation of public property

Financing techniques

- Basically decentralised model
  - The decisions are made at the lowest level
- Basically centralised model
  - Centralised decision making, execution is local

Government in the Economy

- Tax rates are controlled by the government, but tax revenue depends on changes in household income and the size of corporate profits, which the government cannot control.
- ***Discretionary fiscal policy*** refers to changes in taxes or spending that are the result of deliberate changes in government policy.

The role of State Treasury in the system of public finance

- **Support of Maastricht convergence criteria fullfilment by managment of public debt,**
- **Control of budget discipline,**
- **Optimalization of costs related to debt service,**
- **Securing of the smooth financing of public services by the minimization of costs,**
- **Centralization of financial flows of the public sector.**

Public Procurement

- Private spending on long-lived assets is called ***investment***
  - standard accounting treatment of long-lived assets is to spread out their costs over their useful lives (***amortization***)
- The government spends money on long-lived assets
  - shouldn't the government amortize these assets?
    - which government expenditures are capital expenditures?

Tax policy, taxation terms

Ordinary incomes of central budget

Taxlike revenues:

Tax: An involuntary fee levied on corporations or individuals that is enforced by a level of government in order to finance government activities.

Tariff: A tax imposed on imported goods and services.

Social insurance fee: A certain sum charged by law to finance specific public services.

Contribution: a fee charged by law to partly finance specific public services.

Non-taxlike revenues (fee, fine, charge for public services)

Other revenues (privatisation, dividend, rental fee, interest, aid)

Tax policy

- **Tax policy** is an administrative apparatus that is built to levy and collect tax, through applying different tariff and basis taxation, in order to apply policy that has built.
- „Art of taxation consists in so plucking the goose as to obtain the largest possible amount of feathers with the smallest possible amount of hissing.” Colbert, Finance minister of Louis XIV.

Direct versus indirect taxes

Aspects	Indirect	Direct
Object	Sales of product and services	Income, wealth
Taxation target	Consumption	Income
Tax avoidance	Smuggling, sale without invoice	Black labour
Tax burden	Normative	Differenciate
Economic effect	Stimulate investment	Stimulate consumption

Taxation principle (Adam Smith)

- Beneficiary – *The subjects of every state ought to contribute towards the support of the government, as nearly as possible, in proportion to their respective abilities; that is, in proportion to the revenue which they respectively enjoy under the protection of the state.*
- Transparency - *The tax which each individual is bound to pay ought to be certain, and not arbitrary.*
- Convinience - *Every tax ought to be levied at the time, or in the manner, in which it is most likely to be convenient for the contributor to pay it.*
- Economical - *Every tax ought to be so contrived as both to take out and to keep out of the pockets of the people as little as possible over and above what it brings into the public treasury of the state*

Taxation principles

- Fairness - *A tax should not be used to give favorable tax treatment to special interest groups against public opinion.*

Keynesian tax policy (left wing)

- Strongly progressive income taxes
- Many tax allowances
- Heavy taxes on capital incomes
- Prefer the direct taxes for redistribution

Monetarist tax policy (right-wing)

- Flat income taxes or less progressive taxes
- Less allowances but lower general tax rates.
- No taxes on capital incomes
- Prefers indirect taxes

Taxation termsI.

- ***Tax subject,*** who is ordered to pay the tax.
- ***Tax payer,*** *who actually pays the tax.*

Taxation termsII.

- ***Tax base,*** is the amount of money or quantity of product on which the tax should be paid.
- ***Tax object,*** is a particular product, service, activity or property, which is burdened by tax.
- ***Tax source,*** is the income, from which the tax is paid.

Taxation terms III.

- ***Tax size*** is the amount of tax per one unit of tax base.
- ***Lump tax*** is where the tax size is a fixed amount.
- ***Tax rate*** *is, where the tax size is expressed in a percentage of tax base.*

Taxation terms IV.

- ***Tax allowance*** *is the lowering of taxation amount by reducing the tax base or reducing the tax rate.*
- ***Tax free*** *is an exemption under a certain tax.*

Consumption (indirect) and local taxes

Indirect taxes

- Indirect taxes tax the sales of products and services. The tax subject is the enterprises who sell, but the tax burdens the consumer.

Taxes on consumption

Name of tax	Tax object	Tax size	Note	Income in mHUF
Value Added Tax	All sales with few exceptions	27%, 5%, 0%, free	Taxed the value added	2 953 200
Excise tax	Sales of ABC products	Forint per physical quantity	Fixed path selling	947 100
Registration tax	Sales of cars	Function of power, age, and volume		14 000
Telecommunication tax	Call time (min)	3 Ft/min	max. 5000 Ft/subscriber	44 000
Transaction fee	Volume of transaction	0,6% for cash widthdrawal, 0,3% for transfer		301 000
Insurance tax	casco, property and accident insurance	15%, and 10%	Progressive	27 500
Total				4 286 800

Reason of Value Added Tax

- Tax on sales is payable, but the tax on purchase is deductible -> burdens the value added
- Tax subjects are interested in asking invoice -> basis of tax control
- Its rules are the same in Union level (except of rates)
- Export is tax-free with deductible right

Value Added Tax

Features:

- Covers the whole economy
- Burdens the consumption
- Encourages the export
- normative
- Whitens the economy

Disadvantages:

- Causes inflation when it is introduces
- Moderate way to differenciate
- Requires burocracy
- Burdens the company’s liquidity

Excise tax

- Gross, one phase, special tax Beépül az ÁFA alapjába
- Burdens luxury or harmful products (ABC) – rigid price elasticity
- ABC products
  - (A)lcohol
  - (B)enzin – crude-oil products
  - (C)igarette – tobacco products
- Controlled manufacturing and import
  - Excise products can be made only in tax warehouses.
  - Import goods is stored in tax warehouse till paying the tax.
  - The product is released to sale after paying the excise tax.

Other indirect taxes

Name of tax	Tax subject	Tax size	Whose income?	Income in mHUF
Nationhealth product tax	Unhealthy food (chip, syrup, cocoa powder)	Physical quantity	National Health Fund	???
Energy tax	Gas, coal and electricity sold	Physical quantity	Central budget	17 500
Mining fee	Minerals, geothermical energy produced	Tax rates	Central budget	95 000
Gambling tax	Gambling sale	Generally amount of sales	Central budget	47 000
Total				159 500

Local taxes

- Right incorporated in Constitution
- Act determines its frame rules
- Precise rules are determined by local government
  - Which types of taxes are introduced
  - What rates/sizes are used (maximum is enacted)
  - What kind of other allowances and exemption are applied? (besides the enacted ones)

Types of local taxes

Name of tax	Tax object	Tax subject	Tax base	Type of tax
Building tax	Building	Owner in 1 of January	Corrected value or useful m^2	Property
Site tax	Site	Owner in 1 of January	Corrected value or useful m^2	Property
Communal tax	Building, site, rent	Owner in 1 of January	Unit	Property
Local business tax	Enterprise	Enterpreneur	Value added or occasion	Indirect
Tourism tax	Accomodation	Resetter	Accomodation fee or numer of guest night	Indirect
Car tax	Domestic car or transporting foreign truck	Owner in 1 of January or transporter	Power of engine or way length	property


Direct taxes

Concept of direct taxes

- Taxed the corporate or personal income or property
  - Property taxes
  - Income taxes
- By taxpayer
  - Personel taxes
  - Corporate taxes
- By beneficiary
  - Central
  - Social insurance
  - Separated fund

Revenue of central budget from corporates

Name of tax	Tax subject	Tax base	Income in mHUF
Corporate tax	Corporates	Corrected pre-tax profit	320 800
Credit institution fee	Credit institution granting subsidised loan	Size of subsidy	37 400
Income tax of energy providers	Energy providers (utilities)	Corrected pre-tax profit	80 000
EVA	Corporate below revenue under 30 mHUF	Gross sales	108 000
KIVA	Small enterprise	Value added	130 200
KATA	Sole propriators	Lump sum	74 300
Environmental fee	Corporate polluting water, air or soil	Quantity of polluting material	8 500
Special tax of financial institutions	Credit institution and financial enterprises	Risk adjusted total balance sheet	144 000
Total			903 200

Revenue of central budget from households

Name of tax	Tax subject	Tax base	Income in MHUF
Personal tax	Private person	Annual income	1 501 600
Tax of sevarance	Sevarance greater than 2 mHUF	Amount of sevarance	900
Duties	Inheritage, present, transaction duties		111 000
Car tax	See on local taxes		44 100
Registration fee of resident maid	Employer	Month	0
Total			1 657 600

Revenue of social insurance and special funds (linked to employment)

Name of tax	Tax subject	Tax base	Income in MHUF
Social contribution fee	Employer	Salary	2 703 724
Pension insurance fee	Employer	Salary	593 551
Vocational training fee	Employer	Salary	54 815
Health contribution	After every income, which is not taxed by social contribution fee		113 791
Total			3 465 881

Revenue of special funds

Name of tax	Tax subject	Special fund	Income in MHUF
Innovation fee	Enterprises	Research and Technology Fund	56 100
Cultural fee	Cultural enterprises, data carriers	National Cultural Fund	11 700
Vocational training fee	Employer	Labour Market Fund	54 815
Total			122 615

Balance of payment

The balance of payments is
“a statistical statement that systematically summarizes, for a specific time period, the economic transactions of an economy with the rest of the world.”
(IMF official definition)

Current Account

Measures the *net* flow of goods, services, and unilateral transfers between a country and all foreign countries.

- merchandise trade balance
- trade in services
- net investment income
- unilateral transfers

International Asset Transactions (***net financial flows***)

- Two broad categories:
  - governments' transactions (***official settlement balance***, or *reserve balance*)
  - private capital flows
    - portfolio investment
    - direct investment
- Other minor asset transactions

Current Account Balance

+

Net Financial Flows

= 0

A current account deficit *must* be financed by capital inflows, or it cannot be incurred in the first place