Banks & Banking system

Luděk Benada

Department of Finance, office 402

e-mail: *benada@econ.muni.cz*

Content

Content

Bank

Bank

Definition

A bank represents an entity in the economy that has **permission** to receive funds, which it further offers to inquiring clients. In modern times, however, it also provides numerous other services that are based on the needs of the financial system, or clients' wishes. Due to its importance and scope of activity, it belongs to the most important financial intermediaries.

Bank

Definition

A bank represents an entity in the economy that has **permission** to receive funds, which it further offers to inquiring clients. In modern times, however, it also provides numerous other services that are based on the needs of the financial system, or clients' wishes. Due to its importance and scope of activity, it belongs to the most important financial intermediaries.

A bank can be viewed as a financial institution that accepts deposits from the public *(banking licence)* and creates a supply of capital.

Banks - Historical excursion

Banks - Historical excursion

The impulse for the creation of banks was caused by the natural need of people who accumulated savings and looked for a safe place for them *(e.g. temples)*.

Banks - Historical excursion

The impulse for the creation of banks was caused by the natural need of people who accumulated savings and looked for a safe place for them *(e.g. temples)*.

Several millennia BC, banking activities were observed in the lending of agrarian commodities, e.g. grain loans.

Banks - Historical excursion

The impulse for the creation of banks was caused by the natural need of people who accumulated savings and looked for a safe place for them *(e.g. temples)*.

Several millennia BC, banking activities were observed in the lending of agrarian commodities, e.g. grain loans.

Later, banks gained importance due to growing trade. This is associated with the period of ancient Rome, from where the name for this institution *"il banco"* also comes from.

Banks - Historical excursion

The impulse for the creation of banks was caused by the natural need of people who accumulated savings and looked for a safe place for them *(e.g. temples)*.

Several millennia BC, banking activities were observed in the lending of agrarian commodities, e.g. grain loans.

Later, banks gained importance due to growing trade. This is associated with the period of ancient Rome, from where the name for this institution *"il banco"* also comes from.

Italy, specifically the cities of Venice, Genoa or **Florence** *(Medici Bank)*, played a fundamental role in the development of banks and banking.

Banks - Historical excursion

The impulse for the creation of banks was caused by the natural need of people who accumulated savings and looked for a safe place for them *(e.g. temples)*.

Several millennia BC, banking activities were observed in the lending of agrarian commodities, e.g. grain loans.

Later, banks gained importance due to growing trade. This is associated with the period of ancient Rome, from where the name for this institution *"il banco"* also comes from.

Italy, specifically the cities of Venice, Genoa or **Florence** *(Medici Bank)*, played a fundamental role in the development of banks and banking.

Banca Monte dei Paschi di Siena (1624).

The magic behind how banks work

The magic behind how banks work

- The role of banks in the modern economy is absolutely essential.

The magic behind how banks work

- The role of banks in the modern economy is absolutely essential.
- However, the functioning of these institutions is very specific.

The magic behind how banks work

- The role of banks in the modern economy is absolutely essential.
- However, the functioning of these institutions is very specific.
- A fundamental prerequisite for the operation of the bank is the **trust** of clients ...

The magic behind how banks work

- The role of banks in the modern economy is absolutely essential.
- However, the functioning of these institutions is very specific.
- A fundamental prerequisite for the operation of the bank is the **trust** of clients . . .
- . . . because banks can create more sources of capital than they actually have available.

The magic behind how banks work

- The role of banks in the modern economy is absolutely essential.
- However, the functioning of these institutions is very specific.
- A fundamental prerequisite for the operation of the bank is the **trust** of clients ...
- ... because banks can create more sources of capital than they actually have available.

$$\Downarrow$$

The magic behind how banks work

- The role of banks in the modern economy is absolutely essential.
- However, the functioning of these institutions is very specific.
- A fundamental prerequisite for the operation of the bank is the **trust** of clients ...
- ... because banks can create more sources of capital than they actually have available.

$$\Downarrow$$

Thus, banks can increase the amount of money in the economy.

Content

Balance sheet

Balance sheet

$$\text{BANK ASSETS} = \text{BANK LIABILITIES} + \text{BANK CAPITAL}$$

Financial sources

Financial sources

A simplified balance sheet may include these funding sources:

Financial sources

A simplified balance sheet may include these funding sources:

- Checkable Deposits

Financial sources

A simplified balance sheet may include these funding sources:

- Checkable Deposits
- Other Deposits

Financial sources

A simplified balance sheet may include these funding sources:

- Checkable Deposits
- Other Deposits
- Financial instruments *(bonds)*

Financial sources

A simplified balance sheet may include these funding sources:

- Checkable Deposits
- Other Deposits
- Financial instruments *(bonds)*
- Other liabilities

Financial sources

A simplified balance sheet may include these funding sources:

- Checkable Deposits
- Other Deposits
- Financial instruments *(bonds)*
- Other liabilities
- Interbank market funding

Financial sources

A simplified balance sheet may include these funding sources:

- Checkable Deposits
- Other Deposits
- Financial instruments *(bonds)*
- Other liabilities
- Interbank market funding
- Equity

Bank assets

Bank assets

A simplified balance sheet may include these assets (i.e. what the bank owns):

Bank assets

A simplified balance sheet may include these assets (i.e. what the bank owns):

- Required Reserves

Bank assets

A simplified balance sheet may include these assets (i.e. what the bank owns):

- Required Reserves
- Excess Reserves

Bank assets

A simplified balance sheet may include these assets (i.e. what the bank owns):

- Required Reserves
- Excess Reserves
- Loans

Bank assets

A simplified balance sheet may include these assets (i.e. what the bank owns):

- Required Reserves
- Excess Reserves
- Loans
- Securities

Bank assets

A simplified balance sheet may include these assets (i.e. what the bank owns):

- Required Reserves
- Excess Reserves
- Loans
- Securities
- Interbank debt claims

Bank assets

A simplified balance sheet may include these assets (i.e. what the bank owns):

- Required Reserves
- Excess Reserves
- Loans
- Securities
- Interbank debt claims
- Physical assets

Off-balance sheet items

Off-balance sheet items

In general, the balance sheet and the income statement provide information about the financial health of the bank.

However, some important information is not captured in these accounts. These are so-called off-balance-sheet items, which can be contingent assets and liabilities, e.g. **unused promises**, **letters of credit** or **financial derivatives**.

These items can represent credit risk, counter-party risk or liquidity risk for the bank.

Content

Banks increase the amount of money in the economy

Banks increase the amount of money in the economy

There are two ways how *"new money"* can be created in the economy.

Banks increase the amount of money in the economy

There are two ways how *"new money"* can be created in the economy.

The traditional market economy works with a two-tier banking system environment.

Banks increase the amount of money in the economy

There are two ways how *"new money"* can be created in the economy.

The traditional market economy works with a two-tier banking system environment.

This means that at the top of the banking system stands the central authority - the central bank, which implements monetary policy and influences the activity of commercial banks.

Banks increase the amount of money in the economy

There are two ways how *"new money"* can be created in the economy.

The traditional market economy works with a two-tier banking system environment.

This means that at the top of the banking system stands the central authority - the central bank, which implements monetary policy and influences the activity of commercial banks.

An increase in the amount of money in circulation can be done by:

There are two ways how *"new money"* can be created in the economy.

The traditional market economy works with a two-tier banking system environment.

This means that at the top of the banking system stands the central authority - the central bank, which implements monetary policy and influences the activity of commercial banks.

An increase in the amount of money in circulation can be done by:

- Central bank

Banks increase the amount of money in the economy

There are two ways how *"new money"* can be created in the economy.

The traditional market economy works with a two-tier banking system environment.

This means that at the top of the banking system stands the central authority - the central bank, which implements monetary policy and influences the activity of commercial banks.

An increase in the amount of money in circulation can be done by:

- Central bank
- Commercial banks

The central bank and the amount of money in the economy

The central bank and the amount of money in the economy

The central bank can **increase** or **decrease** the amount of money in circulation.

The central bank can **increase** or **decrease** the amount of money in circulation.

It can by provided:

The central bank can **increase** or **decrease** the amount of money in circulation.

It can by provided:

- Directly by Central Bank

The central bank and the amount of money in the economy

The central bank can **increase** or **decrease** the amount of money in circulation.

It can by provided:

- Directly by Central Bank - *Purchasing financial assets, lending money.*

The central bank and the amount of money in the economy

The central bank can **increase** or **decrease** the amount of money in circulation.

It can by provided:

- Directly by Central Bank - *Purchasing financial assets, lending money.*
- Through Commercial Banks

The central bank and the amount of money in the economy

The central bank can **increase** or **decrease** the amount of money in circulation.

It can by provided:

- Directly by Central Bank - *Purchasing financial assets, lending money.*
- Through Commercial Banks - *Mandatory minimum reserves.*

The central bank and the amount of money in the economy

The central bank can **increase** or **decrease** the amount of money in circulation.

It can by provided:

- Directly by Central Bank - *Purchasing financial assets, lending money.*
- Through Commercial Banks - *Mandatory minimum reserves.*

Commercial banks and the increase of money in the economy

Commercial banks and the increase of money in the economy

Thanks to clients' **trust** in banks and thanks to **partial mandatory minimum reserves** that must be kept in a central bank account, new credit money could be issued.

Commercial banks and the increase of money in the economy

Thanks to clients' **trust** in banks and thanks to **partial mandatory minimum reserves** that must be kept in a central bank account, new credit money could be issued.

FRACTIONAL RESERVES BANKING

Commercial banks and the increase of money in the economy

Thanks to clients' **trust** in banks and thanks to **partial mandatory minimum reserves** that must be kept in a central bank account, new credit money could be issued.

FRACTIONAL RESERVES BANKING

$$\Downarrow$$

Commercial banks and the increase of money in the economy

Thanks to clients' **trust** in banks and thanks to **partial mandatory minimum reserves** that must be kept in a central bank account, new credit money could be issued.

FRACTIONAL RESERVES BANKING

$$\Downarrow$$

MULTIPLAYING MONEY

Multiplicaton of deposits

Multiplicaton of deposits

An illustrative example . . .

Bank run, Bank panic

Bank run, Bank panic

If clients' trust in a banking institution is lost, it can have fatal consequences for the bank.

Bank run, Bank panic

If clients' trust in a banking institution is lost, it can have fatal consequences for the bank.

This situation can manifest itself in form:

Bank run, Bank panic

If clients' trust in a banking institution is lost, it can have fatal consequences for the bank.

This situation can manifest itself in form:

- **Bank run**

Bank run, Bank panic

If clients' trust in a banking institution is lost, it can have fatal consequences for the bank.

This situation can manifest itself in form:

- **Bank run** - *At the same time, a large number of clients request the withdrawal of their deposits, but the bank does not have enough liquidity.*

Bank run, Bank panic

If clients' trust in a banking institution is lost, it can have fatal consequences for the bank.

This situation can manifest itself in form:

- **Bank run** - *At the same time, a large number of clients request the withdrawal of their deposits, but the bank does not have enough liquidity.*
- **Bank panic**

Bank run, Bank panic

If clients' trust in a banking institution is lost, it can have fatal consequences for the bank.

This situation can manifest itself in form:

- **Bank run** - *At the same time, a large number of clients request the withdrawal of their deposits, but the bank does not have enough liquidity.*
- **Bank panic** - *We can also talk about a banking crisis, more banks in the economy are facing a bank run.*

Content

A commercial bank

A commercial bank

A commercial bank is usually a private entity, therefore it must be profitable in the long run. The profit stems from its business activity.

A commercial bank

A commercial bank is usually a private entity, therefore it must be profitable in the long run. The profit stems from its business activity.

Banking activity can be divided into:

A commercial bank

A commercial bank is usually a private entity, therefore it must be profitable in the long run. The profit stems from its business activity.

Banking activity can be divided into:

- **Primary**

A commercial bank

A commercial bank is usually a private entity, therefore it must be profitable in the long run. The profit stems from its business activity.

Banking activity can be divided into:

- **Primary** - *Accepting deposits and offering bank loans.*

A commercial bank

A commercial bank is usually a private entity, therefore it must be profitable in the long run. The profit stems from its business activity.

Banking activity can be divided into:

- **Primary** - *Accepting deposits and offering bank loans.*
- **Secondary**

A commercial bank

A commercial bank is usually a private entity, therefore it must be profitable in the long run. The profit stems from its business activity.

Banking activity can be divided into:

- **Primary** - *Accepting deposits and offering bank loans.*
- **Secondary** - *Other services (Transfer money, Standing guarantee on behalf of its customers, Facilities of foreign exchange, Consulting, collecting supplying business information, etc.).*

Types of commercial banks

Types of commercial banks

- Retail Bank *(individual, small businesses)*

Types of commercial banks

- Retail Bank *(individual, small businesses)*
- Business Bank *(mid-market businesses)*

Types of commercial banks

- Retail Bank *(individual, small businesses)*
- Business Bank *(mid-market businesses)*
- Corporate Bank *(large businesses)*

Types of commercial banks

- Retail Bank *(individual, small businesses)*
- Business Bank *(mid-market businesses)*
- Corporate Bank *(large businesses)*
- Private Bank *(high net worth individuals/families)*

Types of commercial banks

- Retail Bank *(individual, small businesses)*
- Business Bank *(mid-market businesses)*
- Corporate Bank *(large businesses)*
- Private Bank *(high net worth individuals/families)*
- Investment Bank *(business activities associated with financial markets)*

Differences in the banking systems

Differences in the banking systems

Universal banking system

Differences in the banking systems

Universal banking system - *EU.*

Differences in the banking systems

Universal banking system - *EU.*

Separated banking system

Differences in the banking systems

Universal banking system - *EU.*

Separated banking system - *Separated banking activities into commercial banks and investment banks (1933 - Glass-Steagal. act, 1933, Franklin D. Roosevelt).*

Content

Central bank

Central bank

A central bank is a public institution that manages the currency of a country or group of countries *(Euro zone)* and regulates the money supply – literally the amount of money in circulation.

Central bank

A central bank is a public institution that manages the currency of a country or group of countries *(Euro zone)* and regulates the money supply – literally the amount of money in circulation.

The main task of the central bank is to ensure the stability of the currency.

Central bank

A central bank is a public institution that manages the currency of a country or group of countries *(Euro zone)* and regulates the money supply – literally the amount of money in circulation.

The main task of the central bank is to ensure the stability of the currency.

Among other things, it has a **monopoly** on the issuance of cash money. But generally it performs several essential functions.

Main functions of the Central bank

Main functions of the Central bank

- Maintain price stability

Main functions of the Central bank

- Maintain price stability
- Issue banknotes

Main functions of the Central bank

- Maintain price stability
- Issue banknotes
- Controls and regulates the activities of commercial banks *(ensures the stability of the financial system)*

Main functions of the Central bank

- Maintain price stability
- Issue banknotes
- Controls and regulates the activities of commercial banks *(ensures the stability of the financial system)*
- Bank of the state *(for government)*

Main functions of the Central bank

- Maintain price stability
- Issue banknotes
- Controls and regulates the activities of commercial banks *(ensures the stability of the financial system)*
- Bank of the state *(for government)*
- Banker´s clearing house

Main functions of the Central bank

- Maintain price stability
- Issue banknotes
- Controls and regulates the activities of commercial banks *(ensures the stability of the financial system)*
- Bank of the state *(for government)*
- Banker´s clearing house
- Lender to the last resort *(in the case of liquidity lack)*

Main functions of the Central bank

- Maintain price stability
- Issue banknotes
- Controls and regulates the activities of commercial banks *(ensures the stability of the financial system)*
- Bank of the state *(for government)*
- Banker´s clearing house
- Lender to the last resort *(in the case of liquidity lack)*
- Monetary policy

Main functions of the Central bank

- Maintain price stability
- Issue banknotes
- Controls and regulates the activities of commercial banks *(ensures the stability of the financial system)*
- Bank of the state *(for government)*
- Banker´s clearing house
- Lender to the last resort *(in the case of liquidity lack)*
- Monetary policy
- Collecting statistic data/analysis

Clearing & Clearing bank

Clearing & Clearing bank

Clearing is a non-cash payment system. In essence, it is an interbank settlement of mutual operations. It is usually carried out by accounting for bilateral or multilateral claims and liabilities.

Clearing & Clearing bank

Clearing is a non-cash payment system. In essence, it is an interbank settlement of mutual operations. It is usually carried out by accounting for bilateral or multilateral claims and liabilities.

Clearing at the national level is carried out by a clearing bank (mostly the central bank) and at the international level by multinational clearing systems (CHIPS, Clearstream, Euroclear).

Clearing & Clearing bank

Clearing is a non-cash payment system. In essence, it is an interbank settlement of mutual operations. It is usually carried out by accounting for bilateral or multilateral claims and liabilities.

Clearing at the national level is carried out by a clearing bank (mostly the central bank) and at the international level by multinational clearing systems (CHIPS, Clearstream, Euroclear).

The main part of international payments is made via a specialized network - Worldwide Interbank Financial Telecommunication or **SWIFT** *(1973, Brussel, 239 Banks, BIC).*

Content

Bank risks

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit
- Liquidity

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit
- Liquidity
- Market

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit
- Liquidity
- Market
- Systematic

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit
- Liquidity
- Market
- Systematic
- Other risks:

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit
- Liquidity
- Market
- Systematic
- Other risks:
  - Operational

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit
- Liquidity
- Market
- Systematic
- Other risks:
  - Operational
  - Fraud

Bank risks

Banking activity is essential for the entire economy and it is associated with a number of risks that must be monitored and managed.

Banking activities may be associated with the following risks:

- Credit
- Liquidity
- Market
- Systematic
- Other risks:
  - Operational
  - Fraud
  - Reputation

Basel

Basel

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basel

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basell III requirements include:

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basell III requirements include:

- Capital requirements (Equity)

Basel

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basell III requirements include:

- Capital requirements (Equity)
- Risk management

Basel

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basell III requirements include:

- Capital requirements (Equity)
- Risk management
- Leverage Ratio (Off-balance sheet items)

Basel

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basell III requirements include:

- Capital requirements (Equity)
- Risk management
- Leverage Ratio (Off-balance sheet items)
- Capital buffer

Basel

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basell III requirements include:

- Capital requirements (Equity)
- Risk management
- Leverage Ratio (Off-balance sheet items)
- Capital buffer
- Minimum standards for liquidity management

Basel

It is a set of rules and measures that apply to the business of banks. The concept is created by the Basel Committee on Banking Supervision. *(Basel I 1988, Basel II 2004, Basel III 2013, . . .)*

Basell III requirements include:

- Capital requirements (Equity)
- Risk management
- Leverage Ratio (Off-balance sheet items)
- Capital buffer
- Minimum standards for liquidity management
- Corporate governance, disclosure

Literature:

MADURA, J.; *Financial markets and institutions* , Cengage learning, 2015.

MISHKING, F.,S., EAKINS, S. G.;*Financial markets and institutions*, Pearson, 2018.

HULL, C., H.; *Risk Management and Financial Institutions*, Wiley, 2023.