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FINANCE

Textbook

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The textbook is devoted to the study of the fundamentals of the theory of finance at the macro- and microlevels. The principles of formation and distribution of finance at the state level, the features of the credit mechanism, the methods of financial planning at the enterprise are presented. Each theme provides practical exercises and self-assessment questions.

For students of economic specialities of higher educational institutions of all forms of study who master the academic discipline "Finance", as well as for managers, professionals of various industries, entrepreneurs, businessmen.

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Introduction

Learning the academic discipline "Finance" is based on the assimilation of economic disciplines and mastering the general theory of finance.

Because, in the structure of the market economy, finance plays a significant role as part of the market relations, it is an important tool of the state. State typically uses the financial system as a tool of social and economic policies, thus reflecting the complex system of redistribution relations in society covering practically every legal and physical person.

Finance can be viewed from many aspects and at different levels: macro- and microlevel. It is also worthwhile to consider finance from the positions of domestic and international theory.

The purpose of the textbook is the formation of knowledge of the finance theory, mastering the patterns of operation of finance on the macro- and microlevels as the theoretical basis of financial policy and development of the financial system in the country, and formation of an effective financial system at an enterprise.

The objectives of the academic discipline are:

application of the main principles of the theory of finance to the justification of trends in solving financial problems;

mastering of the theoretical bases of formation and functioning of financial relations and financial policies;

understanding of the principles of the budgetary system and the principles of the budget system;

formation of theoretical and practical knowledge according to the methods and sources of formation of budget revenue and also directions and forms of financing costs;

formation of knowledge of the issues of functioning of public credit and debt management;

understanding of formation of financial relations at enterprises and in households;

generation of theoretical and practical knowledge of the issues of functioning of the financial market and components of the financial system.

The object of the study is the system of economic relations in the process of redistribution and reallocation of finance on the macro- and microlevel.

The subject is the interaction of parts of the financial system of the state and the subjects of economic activity.

According to the requirements of the educational and professional program the students should:

know:

the definition of the economic category "financial theory"; the methods and components of financial theory; the basic historical aspects of the financial theory formation;

how to determine the nature of the budget and the budget system, the levels of the budget system of Ukraine, the structure of Ukraine's consolidated budget, the principles of formation of the budgetary system of Ukraine;

the nature of financial and credit relations; the main components of the credit facility; the nature of inflation and its impact on the formation of interest on loans; the nature of the banking system;

the typology of banking institutions and the features of development of the Ukrainian bank systems;

the basics of the financial system of Ukraine;

the major factors of influence on the functioning and development of the domestic financial system;

the nature of public revenues and sources of their formation; the principles of formation of budget reserves to finance the budget deficits;

the essence of the financial resources of business entities, the sources of their formation and distribution;

the basics of financial analysis of the activity of business entities; the fundamentals of financial planning;

be able to:

determine the financial theory as the science that studies the phenomena and processes which take place in the state in the creation and use of funds of financial resources for its economic and social development;

determine the subject of financial theory; argue the methods of scientific knowledge used in financial theory; identify and analyze the stages of formation and development of financial theory;

prove and determine the features and periodization of development of the financial science in Ukraine; comment on theories and scientific views of the modern world scientific financial thought;

determine the basics of the budget system which characterize the direction and forms of the vertical construction budget; analyze the legal and regulatory framework functioning of the budget system of Ukraine; determine the levels of the budget system of Ukraine; analyze the key indicators of the budget;

explore the best practices in the sphere of financial management of the company; determine the features taking into account the time factor in investing; determine the rate of inflation in the analysis and evaluation of the efficiency of investment; evaluate the effectiveness of the investment portfolio companies and analyze the feasibility of investment projects;

analyze the factors that affect the order of formation of financial resources and the authorized capital of the company; evaluate the degree of solvency, liquidity, financial stability of business entities; analyze the financial statements of enterprises;

analyze the financial statement of an enterprise using different methods.

The material of the textbook is presented in the form of a set of content modules which consist of a set of themes. In each theme, the theoretical material which reveals the essence of issues is presented. Also, practical exercises and test tasks are contained in each content module. This will help students to acquire skills in the field of finance. Each theme contains a list of questions for self-assessment. Searching answers to them will allow students to master the subsequent theoretical material in more detail.

The textbook also contains the subject and author indexes that help quickly find the definition of the necessary concept in the text and the reference to a particular author.

This textbook is recommended to students of economic specialities of higher educational institutions, to managers, professionals of various industries, entrepreneurs, businessmen.

Unit 1
Theory of finance at the macrolevel

1. The essence and purpose of finance

The purpose of the theme is to form knowledge, skills and competences in theory of finance.

The main competence: the ability to understand the nature of finance, the importance of finance in the modern economy and the main functions of finance.

Agenda

1.1. The meaning, the definition and the features of finance.
1.2. Classification and functions of finance.
1.3. The historical background of finance.

1.1. The meaning, the definition and the features of finance

If we trace the origin of finance, there is evidence to prove that it is as old as human life on earth. The word "finance" was originally a French word. In the 18th century, it was adapted by English-speaking communities to mean *the management of money*. Since then, it has found a permanent place in the English dictionary. Today, finance is not merely a word, it has developed into an academic discipline of great significance [39].

As per the dictionary meaning, finance is the management of large amounts of money, especially by governments or large companies. If used as a verb, it may mean providing funding for a person or an enterprise. The word has its origins in the Latin root *finis*, meaning "the end", settlement or payment and is used in the context of ending or settling a debt or a dispute. The notion is finishing (by satisfying) something that is due. After adaption to English, the word is used to define any type of management of money.

According to [39] there are different approaches to the definition of **finance**:

1. **In the general sense**: finance is the management of money and other valuables, which can be easily converted into cash.

2. **Experts' opinion**: finance is a simple task of providing the necessary funds (money) required by the business entities like companies, firms, individuals and others on the terms that are most favourable to achieve their economic objectives.

3. **Entrepreneurs' view**: finance is concerned with cash. It is so, since every business transaction involves cash directly or indirectly.

4. **Academicians' view**: finance is the procurement (getting, obtaining) of funds and effective (properly planned) utilisation of funds. It also deals with profits that adequately compensate for the cost and risks borne by the business.

Finance has been closely bound with money since it replaced barter as the means of exchange. Finance is the lifeline of all activities; economic, social and administrative. Finance flows from public as taxes to Government, as savings to banking and financial institutions and as share capital or bonds or debentures to the entrepreneur. It then gets used for a variety of development and non-development activities through Government and other agencies and flows back to public as income in various ways. Given below are some commonly understood definitions of finance [54]:

1. **Economics**: a branch of economics concerned with resource allocation as well as resource management, acquisition and investment which deals with matters related to money and the markets.

2. **Business**: finance is raising money through the issuance and sale of debt and/or equity.

3. **Experts**: finance is the study of how people allocate their assets over time under conditions of certainty and uncertainty. Finance aims to price assets based on their risk level, and expected rate of return.

4. **Scientific view**: finance is the science that describes the management, creation and study of money, banking, credit, investments, assets and liabilities.

5. **Function view**: the finance function encompasses a variety of functions, activities and processes. It compasses financing functions, budgetary functions, risk and return management, cash flow management, cash management, financial management, risk and governance and many more associated functions.

6. **Systems view**: finance consists of financial systems, which include the public, private and government spaces, and the study of finance and financial instruments, which can relate to countless assets and liabilities.

In conclusion, **finance** can be defined as:

✍ The science that describes the management, creation and study of money, banking, credit, investments, assets and liabilities

✍ A broad term that describes two related activities: the study of how money is managed and the actual process of acquiring the needed funds

✍ A financial system which includes the public, private and government spaces, and the study of finance and financial instruments which can relate to countless assets and liabilities

✍ The study of the art and the science of money management

Finance is now organized as:

1. A branch of economics.
2. Allocation of scarce resources.
3. A source of capital.

Another category which is important in theory of finance is financial resources.

✍ **Financial resources** is a term covering all financial funds of the organization

From an economic perspective financial resources are part of the organization's assets (property). Sometimes financial resources are referred to just as finance, often with some attributes (such as business finance, personal finance, public finance, etc.).

In the meaning of financial resources, the concept of financial assets is also used, these assets having various forms of securities, which organizations own or other forms of receivables [54]:

- ✓ money and gold (in cash or in a bank account);
- ✓ shares;
- ✓ bonds;
- ✓ debentures;
- ✓ promissory notes;
- ✓ checks.

According to [39] there are some specific features of finance (Fig. 1.1). Let's consider all of them in detail.

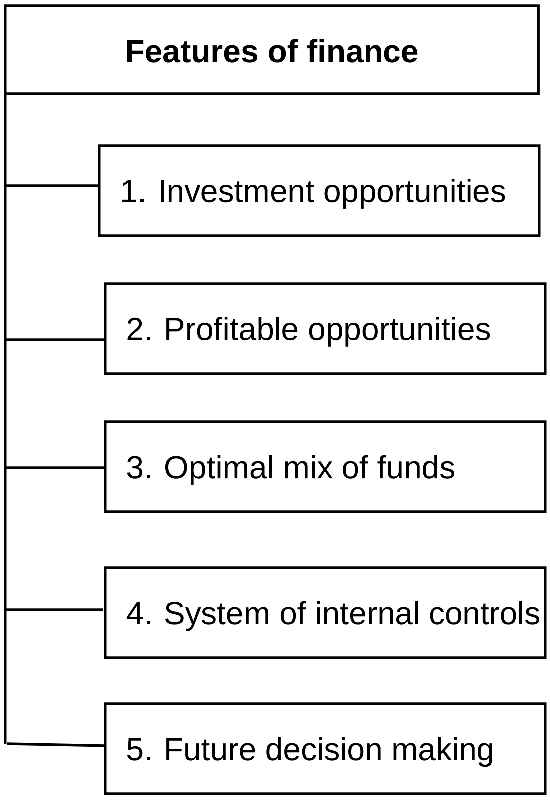

Fig. 1.1. **The features of finance**

Investment opportunities. Finance, investment can be explained as utilization of money for profit or returns.

Investment can be done by:

1. Creating physical assets with the money (such as development of land, acquiring commercial assets, etc.).
2. Carrying on business activities (like manufacturing, trading, etc.).
3. Acquiring financial securities (such as shares, bonds, units of mutual funds, etc.).

Finance, *profitable opportunities* are considered as an important aspiration (goal). Profitable opportunities signify that the firm must utilize its available resources most efficiently under the conditions of cut-throat competitive markets. Profitable opportunities shall be a vision. It shall not result in short-term profits at the expense of long-term gains. For example, business carried on with noncompliance with law, unethical ways of acquiring the business, etc., may usually result in huge short-term profits but may also hinder the smooth possibility of long-term gains and survival of business in the future.

Finance is concerned with the best *optimal mix of funds* in order to obtain the desired and determined results respectively. Primarily, funds are of two types, namely:

1. Owned funds (promoter contribution, equity shares, etc.).
2. Borrowed funds (bank loan, bank overdraft, debentures, etc.).

The composition of funds should be such that it shall not result in loss of profits to the entrepreneurs (promoters) and must recover the cost of business units effectively and efficiently.

Finance is concerned with *internal controls* maintained in the organization or workplace. Internal controls are a set of rules and regulations framed at the inception stage of the organization, and they are altered as per the requirement of its business. However, these rules and regulations are monitored at various intervals to accomplish the same which have been consistently followed.

Finance is concerned with the *future decision making* of the organization. "Good finance" is an indicator of growth and good returns. This is possible only with the good analytical decision of the organization. However, the decision shall be framed by laying more emphasis on the present and future perspective (economic conditions) respectively.

Finance, to be more precise, is concerned with the management of:

1. Owned funds (promoter contribution).
2. Raised funds (equity shares, preference shares, etc.).
3. Borrowed funds (loans, debentures, overdrafts, etc.).

At the same time, finance also encompasses a wider perspective of managing the business-generated assets and other valuables more efficiently. Another approach [54] gives the following features of finance (Table 1.1).

Table 1.1

The features of finance [53]

Features	Description
1	2
Channelizing funds	It is a well established fact that financial system is a critical element of any economy
	Financial sector and financial markets perform the essential function of channeling funds from people who have saved surplus funds by spending less than their income to people who have a shortage of investible funds because their plans to spend exceed their income

Table 1.1 (the end)

1	2
Maximization of shareholder's wealth	The objective of any business is to maximize and create wealth for the investors which is measured by the price of the share of the company
	The price of the share of any company is a function of its present and expected future earnings
	Finance helps in defining policies and ways to maximize the earnings
Acquisition, allocation and utilization of funds	Finance as a function deals with acquisition, allocation and utilization of funds
	A business must ensure that adequate funds are available from the right sources at the right cost at the right time. It needs to decide the mode of raising fund, whether it is to be through the issue of securities or lending from the bank
	Once acquired, the funds have to be allocated to various projects and services and finally the objective of the business is to earn profits which to a very large extent depend upon how effectively and efficiently the allocated funds are utilized
	Proper utilization of funds is based on sound investment decisions, proper control and asset management policies and efficient management of working capital
Financial management	Maximization of economic welfare of its owners is the accepted financial objective of the firm. Hence, the objectives of finance are to ensure adequate and regular supply of funds to the business and provide a fair rate of return to the suppliers of capital
	Finance helps by ensuring efficient utilization of capital and available resources according to the principles of profitability, liquidity and safety
	It provides a definite system for internal investment, financing and internal controls
	And finally, finance attempts to minimize the cost of capital by developing a sound and economical combination of corporate securities

In conclusion, it is possible to say that finance is an art of managing various available resources like money, assets, investments, securities, etc.

Now people cannot imagine a world without finance. In other words, finance is the soul of our economic activities.

1.2. Classification and functions of finance

There are different approaches to finance classification.

Firstly, finance can be broken into three different subcategories: public finance, corporate finance and personal finance (Fig. 1.2).

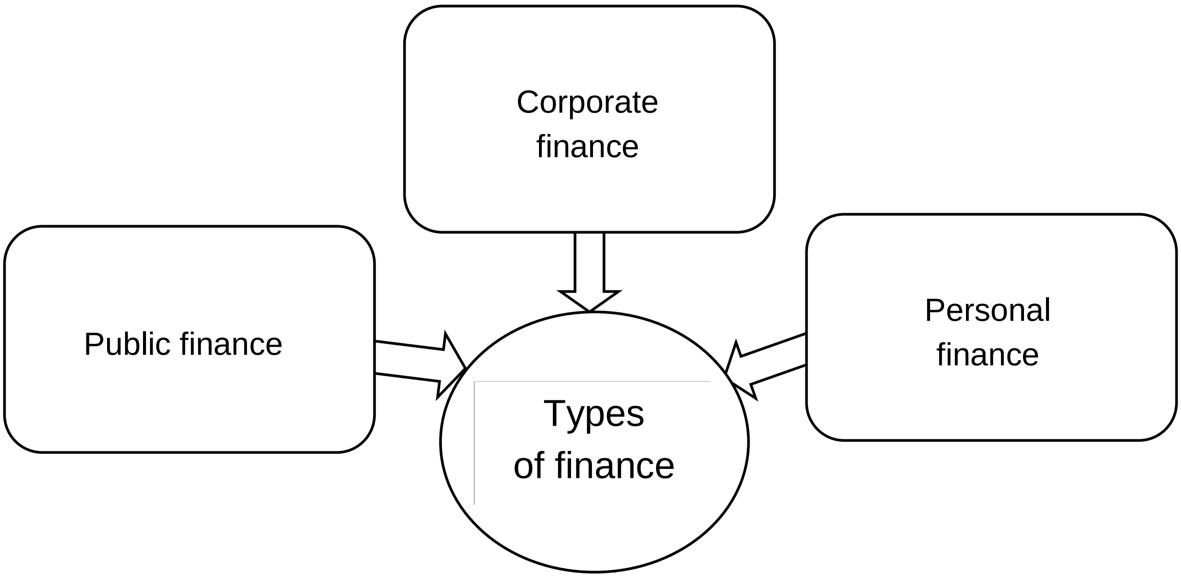

Fig. 1.2. **The types of finance**

All three of them would contain many subcategories [54]:

✍ **Public finance** is a part of study of economics. It borders on the fields of government and political science

Public finance is the study of the financial activities of governments and public authorities. Public finance describes finance as related to sovereign states and subnational entities (like states/provinces) and related public entities (e.g. municipal corporations) or agencies. It describes and analyses the expenditures of governments and the techniques used by governments to finance these expenditures. It is concerned with the identification of required expenditure of a public sector entity and sources of revenue and the budgeting process. Public finance analysis helps us to understand why certain services have come to be supplied by government, and why governments have come to rely on particular types of taxes.

Public finance is concerned with answering the questions like:

- How to maximize the entity's (nation's) revenue?
- How to decrease the entity's (nation's) expenditures?
- Where to spend and how much?
- Privatization or nationalization?

The main key areas public finance addresses are:

1. Public finance management. Resource generation, resource allocation and expenditure management (resource utilization) are the essential components of a public financial management system.

2. Government expenditures. These include all government consumption and investment; (infrastructure, research and development, salaries, education, security, etc.)

3. Financing of government expenditures through tax and non-tax revenues, borrowing, printing money and privatization.

4. Public finance methodology which implies macroeconomic data and statistics to support public finance economics (generally referred to as fiscal or government finance statistics).

✍ **Corporate finance** is the task of providing the funds for a corporation's activities by raising and administering funds

Corporate finance aims to study the funding of assets from various sources like market, general public, or various financial institutions. In this process corporate finance is designed to balance risk and profitability, while attempting to maximize an entity's wealth and the value of its stock. The importance of corporate finance is underlined by economic and social significance in terms of rasing public responsibility as the organization grows and wide distribution of the corporate ownership in the process of separating the ownership from management.

Corporate (business) finance is concerned with answering the questions like:

- How to maximize the entity's wealth and profits?
- How to maximize the value of its stock?
- How tax planning can affect the entity's profitability?
- How to handle market risks?

The main key areas corporate finance addresses are:

1. Investment decisions (where management must allocate limited resources between competing opportunities (projects).
2. Financing decisions (ensuring that any corporate investment is financed properly).
3. Dividend decisions (whether to issue dividends, in what amount, and form of the dividend distribution – cash or shares).

✍ **Personal finance** refers to financial decisions which an individual must make to plan for his future

These decisions include obtaining monetary resources, planning the application of income, budgeting, deciding on the amounts and mode of saving, and decisions around spending monetary resources over time. During this process one is expected to take into account various financial risks and future life events that may impact current income levels or projected incomes and must plan for them [54].

Personal finance is concerned with answering the questions like:

➢ How can people protect themselves against unforeseen personal events, as well as those in the external economy?

➢ How can family assets be best transferred across generations?

➢ How does tax policy affect personal financial decisions?

➢ How does credit affect the financial position?

The main key areas personal finance addresses are:

1. Financial position (concerned with understanding personal resources available to cover personal wants and needs).

2. Protection (concerned with the analysis of how to protect a household from unforeseen risks (liability, property, death, disability, health and long-term care).

3. Tax planning (concerned with handling legally the payment of the least possible tax on income).

4. Investments (concerned with investing to create future wealth (stocks, bonds and real estate).

5. Retirement planning (concerned with understanding how much it costs to live at retirement and plan for it).

6. Assets planning (concerned with planning for the disposition of one's assets after death).

The next approach [50] presents another classification of finance (Fig. 1.3).

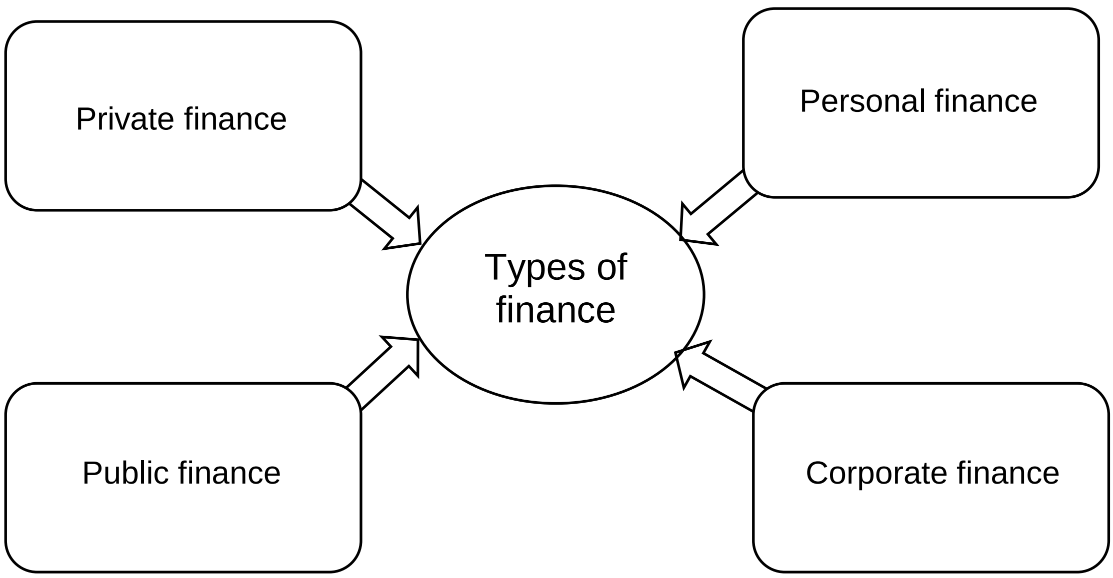

Fig. 1.3. **The types of finance** [50]

Public finance is the study of the income and expenditure of the State. It deals only with the finances of the Government. The scope of public finance consists in the study of the collection of funds and their allocation between various branches of state activities which are regarded as essential duties or functions of the State.

Public finance may be divided into the following three parts [33]:

- public expenditure. Public expenditure is the end and aim of the collection of state revenues. It involves the judicious expenditure of public funds on the most important and socially and economically relevant activities of the State. The term "public expenditure" refers to the expenses incurred by the Government for its own maintenance and also for the preservation and welfare of society and economy as a whole. It refers to the expenses of the public authorities, central, state and local governments, for protecting the citizens and for promoting their economic and social welfare;
- public revenue. In a broad sense, public revenues include all the income and receipts, irrespective of their source and nature which the Government obtains during any given period of time. It will include even the loans raised by the Government. In a narrow sense, it will include only those sources of income of Government which are described as revenue resources. The sources include taxes, fees, price, fines and penalties, gifts, etc.;
- public debt is the loans raised and a source of public finance which carries with it the obligation of repayment to the individuals, along with interest, from whom the debt was raised.

Private finance is an alternative corporate finance method that helps an organization raise cash to avoid limited time frame monetary shortfalls. This method typically serves a firm that is not listed on a securities exchange or is unable to seek financing on such markets. A private financing plan also may be suitable for a nonprofit entity.

Corporate finance:

- ✓ the financial activities related to running a corporation;
- ✓ a division or department that oversees the financial activities of a company. Corporate finance is primarily concerned with maximizing share-holder value through long-term and short-term financial planning and the implementation of various strategies. Everything from capital investment decisions to investment banking falls under the domain of corporate finance.

Corporate finance includes:

1. Planning the finance: the finance manager plans the finance of the company.

2. Raising the finance: the finance manager raises (collects) finance for the company. Finance can be collected from many sources, viz., shares, debentures, banks, financial institutions, creditors, etc.

3. Investing the finance: the finance manager uses the finance to achieve the objectives of the company. There are two types of corporate finance, viz., fixed capital and working capital.

4. Monitoring the finance: the finance manager monitors (i.e. controls and manages) the finance of the company.

Personal finance is the application of the principles of finance to the monetary decisions of an individual or family unit. It addresses the ways in which individuals or families obtain, budget, save and spend monetary resources over time, taking into account various financial risks and future life events.

The areas of the personal finance focus are:

- financial position which is concerned with understanding the personal resources available by examining the net worth and the household cash flow. Net worth is a person's balance sheet, calculated by adding up all assets under that person's control, minus all liabilities of the household, at one point in time. The household cash flow totals up all the expected sources of income within a year, minus all the expected expenses within the same year. From this analysis, the financial planner can determine to what degree and in what time the personal goals can be accomplished;
- adequate protection: the analysis of how to protect a household from unforeseen risks. These risks can be divided into liability, property, death, disability, health and long-term care. Some of these risks may be self-insurable, while most will require the purchase of an insurance contract. Determining how much insurance to get on the most cost effective terms requires knowledge of the market for personal insurance;
- tax planning: typically, the income tax is the single largest expense in a household. Managing taxes is not a question of if you will pay taxes, but when and how much. Government gives many incentives in the form of tax deductions and credits which can be used to reduce the lifetime tax burden. Most modern governments use a progressive tax. Typically, as one's income grows, a higher marginal rate of tax must be paid. Understanding how to take advantage of the myriad tax breaks when planning one's personal finances can make a significant impact;

➢ investment and accumulation goals: planning how to accumulate enough money for large purchases and life events is what most people consider to be financial planning. Major reasons to accumulate assets include purchasing a house or car, starting a business, paying for education expenses, and saving for retirement. This asset allocation will prescribe a percentage allocation to be invested in stocks, bonds, cash and alternative investments. The allocation should also take into consideration the personal risk profile of every investor, since risk attitudes vary from person to person;

➢ retirement planning is the process of understanding how much it costs to live at retirement, and coming up with a plan to distribute assets to meet any income shortfall. Methods for retirement planning include taking advantage of government allowed structures to manage tax liability including: individual structures or employer sponsored retirement plans;

➢ estate planning which involves planning for the disposition of one's assets after death. You can leave your assets to family, friends or charitable groups.

It is necessary to say that in Ukrainian economy people don't pay enough attention to managing personal finance. People in the USA, the EU and other developed counties devote a lot of time to this question.

These classifications illustrate the area of finance and their main functions.

In financial theory finance is classified in a different way [49]:

1. Direct and indirect finance:

✓ direct finance. In this case the borrower directly borrows funds from the lender in the financial markets by selling securities (also called financial instruments), which are claim on the borrower's future income/assets or reserves and which entitle the borrower with partial ownership if the funds have been raised using equity;

✓ indirect finance. In this case the role of channelizing the funds from the savers to borrowers is done through financial intermediaries (e.g. commercial banks).

2. Short-term and long-term finance. Money is needed to set up any kind of business. A business owner can look for the investors to invest money in the business and this money can be borrowed for a short term or a long term:

✓ long-term finance is generally used for investment in fixed assets such as land and building, plant and machinery, etc. and is not repayable within a short period of time.

✓ short-term finance is used for investment in working capital. It is used to meet the short-term needs of the business. It may be repayable in a short term or on demand as in case of a cash credit account. Short-term loans are usually repayable within a period of one to three years.

3. Sources of finance:

✓ owned capital is the money brought in by the businessman himself and sometimes referred to as capital or equity capital.

✓ borrowed capital is the money advanced by outside agencies like banks, financial institutions, etc. generally in the form of a loan.

So, there is a wide range of finance and each type performs specific functions.

1.3. The historical background of finance

Financial theory is part of the public sector financial theory. Financial theory of public sector deals with the issues of financing the public sector – the public finances. This financial theory of public sector generally differs from financial theory. The term "financial theory" is broader than the term "financial theory of public sector" because financial theory, for example, examines the money markets, private insurance or corporate finance.

The economic and financial theory can respond to the problem in two ways – non-normative (positivist), or normative. If the economist decides to use the non-normative approach, then he chooses the research methods and procedures that are to preserve independence (disengagement) of scientific evidence. The non-normative theory provides systematized knowledge which refers to the analysis of the problem as the way "in itself".

To understand the modern financial theory it is necessary to analyze the history of finance. The fullest analysis is given in [52] (Table 1.2).

Table 1.2

A summary of the evolution of the financial management function [52]

Period	Events	Financial theory
1	2	3
Early 20th century	Movement toward corporate consolidation	Focus on capital structure and key financial episodes
1920s – 1960s	Expansion of new industries. Merger process	Concern with financial structure. Liquidity considerations

Table 1.2 (continuation)

1	2	3
		Incipient discussion on planning and control
	1929 crash	Importance to solvency/liquidity and financial recovery of companies
	World War II	Relevance of fund raising
	Fear of post-war recession	Emphasis on cash flow versus profitability. Internal financial controls (accounts receivable and payable, inventory)
	Technological development (computing). Growth of international trade	Modigliani and Miller and the irrelevance of dividends and capital structure. Capital costs analysis to determine obstacles to development. Development of policies adequate to the internationalization process
1970s	Technological development (computing). Collapse of the Bretton Woods Agreements. 1974 U.S. stock market crash. U.S. oil and inflation increasing	Interest in the theories of Markowitz, Tobin, and Sharpe, as well as market efficiency. Use of the CAPM and the concepts of systematic and non-systematic risk
1980s	External debt crisis: developing countries declare debt moratorium, financial crisis. Financial disintermediation and M&A activity. Basel Accord I (1988)	Greater interest in the Black-Scholes option pricing formula. Development of complex derivatives strategies for risk limitation
1990s – 21st century	Globalization of the economy and intensification of the transaction volume. Increased interdependence among economies. The Bank for International Settlements (BIS) creates the Committee on Payment and Settlement Systems (CPSS). Mexican financial crisis (1994 – 1995). Asian financial crisis (1997 – 1998). Russian financial crisis (1998). Reformulation of the Basel Accord (Basel II) (1998). Cases: Metallgesellschaft, Barings Bank and Long Term Capital Management.	Greater importance of option- and futures-based hedging strategies. Risk management gains relevance. Concern with reduction of systematic risk and focus on mitigation of clearing risk and credit risk. Greater attention to value creation. Greater importance of corporate governance and information transparency. Increased concern with social and environmental responsibility, which is important to the relationship with other stakeholders. Discussion of corporate ethics as applied to finance. Behavioural finance and the contributions of Minsky (1982) move into the spotlight

Table 1.2 (the end)

1	2	3
	Argentine financial crisis (2001 – 2002). U.S. accounting scandals (Enron, Tyco, WorldCom, etc.). U.S. subprime mortgage crisis	

Modern theory of finance is based on four basic theory groups:

1. Saving and investment.
2. Corporate finance.
3. Financial intermediation.
4. Management information system (MIS).

The founder of the *saving and investment theory* is Fisher (1930) who considered how to earn higher return by lending on the capital market than they could by seeking out individual borrowers, and borrowers can obtain inexpensive financing without incurring search costs. He suggested the separation theorem (Fig. 1.4).

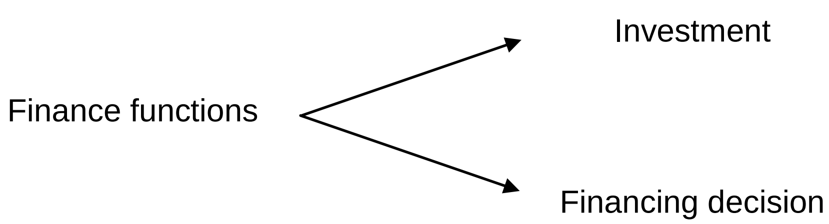

Fig. 1.4. **Fisher separation theorem**

The saving and investment theory consists of some independent theories:

1. The Portfolio Theory.
2. The Capital Asset Pricing Model (CAPM).
3. The Efficient Market Hypothesis.
4. The Option Pricing Theory (Black-Scholes Option Pricing Model).
5. The Market Microstructure.

Let's consider these theories in detail.

Professor Harry Markowitz, the founder of the *Portfolio Theory* (1952), said: "Don't put all your eggs in one basket". The base concept of the theory is: unsystematic risk and systematic risk make an efficient portfolio. The technique and measuring correlation, covariance, standard deviation, and total variation are included in portfolio setting. Markowitz (1952) rejected the idea that investors should base their portfolios solely on the greatest expected return, because adopting this criterion may lead to two assets with similar returns being allocated to the investment portfolio with no analysis of their contribution to its risk. He also explained that a portfolio with the maximum expected return is not necessarily that with the least risk, and stresses that a naively diversified portfolio, which does not account for the relationship between assets (stocks) and considers only their amount, does not necessarily mitigate risk [49]. The Markowitz model (1952) was therefore important because it allowed propagation of the understanding that diversifying a portfolio – by holding assets with a reduced level of correlation (covariance) – is important for mitigating portfolio variance in relation to its expected return (risk).

The contributions of the *Capital Asset Pricing Model (CAPM)* by W. Sharpe (1964), J. Lintner (1965), and J. Mossin (1966) are:

1. The Risk Return Tradeoff: Capital Market Line.
2. The beta (β) coefficient.

Ross's (1976) postulate is: Arbitrage Pricing Theory (APT) with more than one factor that influence the expected return on assets such as economic variables.

CAPM considers returns expected by resource suppliers to be determined by the risk-free rate, plus the expected market risk premium adjusted by the beta coefficient. This simplification of the Markowitz model allowed observation of the fact that total asset risk is composed of systematic and non-systematic (or diversifiable) risk, broadening understanding of the matter. The CAPM explains that the super-efficient portfolio obtained through the combination of risk-free and risky assets is located at the point of tangency between the Capital Market Line (CML) and the efficient frontier. The CML represents a set of combinations of risk-free and risky assets, which will be considered by all investors (homogeneous expectations), and the point where the CML meets the efficient frontier is known as the Market Portfolio. W. Sharpe (1964) concluded that this super-efficient portfolio is the market itself; according to him, investors cannot obtain above-market returns in a consistent manner, because the market behaves in a manner conducive to its equilibrium, assuming that all investors are subject to the same risk-free rate [49]. The CAPM introduced the concept of beta, which measures the covariance between the return on assets and the market, and represents the contribution of systematic (non-diversifiable) asset risk towards the risk of a diversified portfolio. Therefore, unlike H. Markowitz (1952), the CAPM explicitly mentions the concept of systematic (non-diversifiable) risk.

E. Fama (1970) suggested the *Efficient Market Hypothesis*: which states that all relevant information is instantly and completely incorporated in the capital market. There are three degrees of efficiency:

1. The weak form.
2. The semi-strong form.
3. The strong form.

The basic concept of this theory is that investors are rational. The hypothesis posits that, in efficient markets, the prices of financial assets reflect the set of available, relevant information.

Eight assumptions of the *Option Pricing Theory* by F. Black and M. Scholes (1973) are:

1. Markets are friction.
2. Short sales are allowed.
3. No dividend payment or other distribution.
4. Market movements cannot be predicted.
5. Stock prices random movement.
6. Constant variance rate of return.
7. The option can be exercised only at maturity.
8. The risk less interest rate is known and constant.

Black and Scholes (according to Famá and Galdão, 1996) developed a formula to evaluate call options, showing that the value of these options is influenced by the strike price, the time to maturity, the spot price, the risk-free interest rate, and the volatility of the stock [49].

The first modern market microstructure study was done by T. Ho and M. Stol (1981) based on M. Demsetz (1968) and S. Tinic (1972). The American capital market crashed in 1987. There are two basic models: the spread model and the price formation model. To study these models the intraday data are used. So, an appropriate software is needed e.g. SAS. Some basic empirical models are: trade-off between the dealer and the informed/uninformed trader, evolution of stock prices, trading day vs. non-trading day, asymmetric information in the international capital market, market design, market mechanism, private vs. public information, herding, etc.

The major study of **corporate finance** is capital budgeting, capital structure, dividend policy and merger and acquisition to maximize shareholder's wealth.

F. Modigliani and M. Miller (1958) introduced a new mainstream on the subject, which was previously characterized by two polarized beliefs:

one stated that the distribution of dividends maximized the value of the company to its stockholders, while the other implied that distributing dividends prevented the company from investing in profitable projects, thus impeding value maximization [4; 7]. They devised the concept that the value of a company is independent of its capital structure. In light of the innovative character of this proposal, D. Chew (1993) considers Modigliani and Miller to be the founders of modern finance. Although the assumptions that underlie the original proposal of Modigliani and Miller (1958) – such as the absence of taxes – cannot be wholly ratified in real-world situations, they do allow study of the factors capable of affecting the definition of an adequate corporate capital structure [52]. The capital structure links are asymmetric information such as the signaling model, the pecking order hypothesis, the agency cost/ tax shield trade-off model.

The financial intermediation theory consists of:

1. The financial institutions: commercial banks; saving and loan associations; credit unions; insurance companies; mutual funds; pension funds; other financial companies which borrow funds from people who have saved and in turn make loans to others.
2. Banking: investment vs. commercial banking.
3. Banking: national banking vs. universal banking.
4. Insurance: life, investment, pension, education, etc.

The basic idea of the **Management Information System (MIS)** is: unite the disparate financial functions into a single, integrated system that provides complete visibility of the financial system.

The MIS functions are [52]:

- ✓ as a management tool: support of management change;
- ✓ providing a wide range of financial and nonfinancial information;
- ✓ as a system: connecting, accumulating, processing, and then providing information to all parties in the budget system on a continuous basis.

The main steps in introducing the MIS are:

1. Preparation.
2. Design.
3. Procurement.
4. Implementation.

So, the modern financial theory has a long-term historical background and develops day to day because of changes in the political and economic environment.

Questions for self-assessment

1. What are the main definitions of finance?
2. Compare different views on defining finance.
3. What are the main features of finance, the main approaches?
4. Give a detailed description of specific finance features.
5. What are the main types of finance?
6. Explain the meaning of personal and private finance.
7. Characterize the functions of each type of finance.
8. How is finance classified depending on the type of borrowings, the term or sources?
9. What are the main postulates of the modern financial theory?
10. Give a detailed description of the saving and investments theory.
11. What are the basic ideas and functions of the MIS theory?

2. The financial system of Ukraine

The purpose of the theme is to study the internal and organizational structure of the financial system of Ukraine and define its main actors.

The main competence: the ability to identify the main peculiarities of the financial system of Ukraine.

Agenda

2.1. The circular flow as the basis of national finance.

2.2. The essence, the structure and the general characteristics of the financial system and its elements.

2.3. The organizational foundations of the financial system of Ukraine.

2.4. Financial policy and its tools.

2.1. The circular flow as the basis of national finance

The forms of financial relations are the elements of finance, divided by certain attributes. The set of these components is determined by the term "financial system". Like any other system, it is not a simple set of individual elements, but a set of interconnected elements that have homogeneous features.

The financial system is considered from two sides: the internal (content) structure and the organizational structure.

The **main task of building a national financial system** is to ensure the maximum mobilization of available financial resources within the community and from the outside, creation of conditions for effective use of financial resources and maximization of the GDP production on this basis. The movement of cash flows through branches and sectors of the financial system should facilitate the formation of income from each entity that reflects its performance and is sufficient to meet the needs of its activities.

To understand the specifics of the financial system, it is necessary to know the basics of the money circulation in the economy and, hence, the specifics of the GDP production.

The circular flow of income or the **circular flow** is a model of the economy in which the major exchanges are represented as flows of money, goods and services, etc. between economic agents (Fig. 2.1).

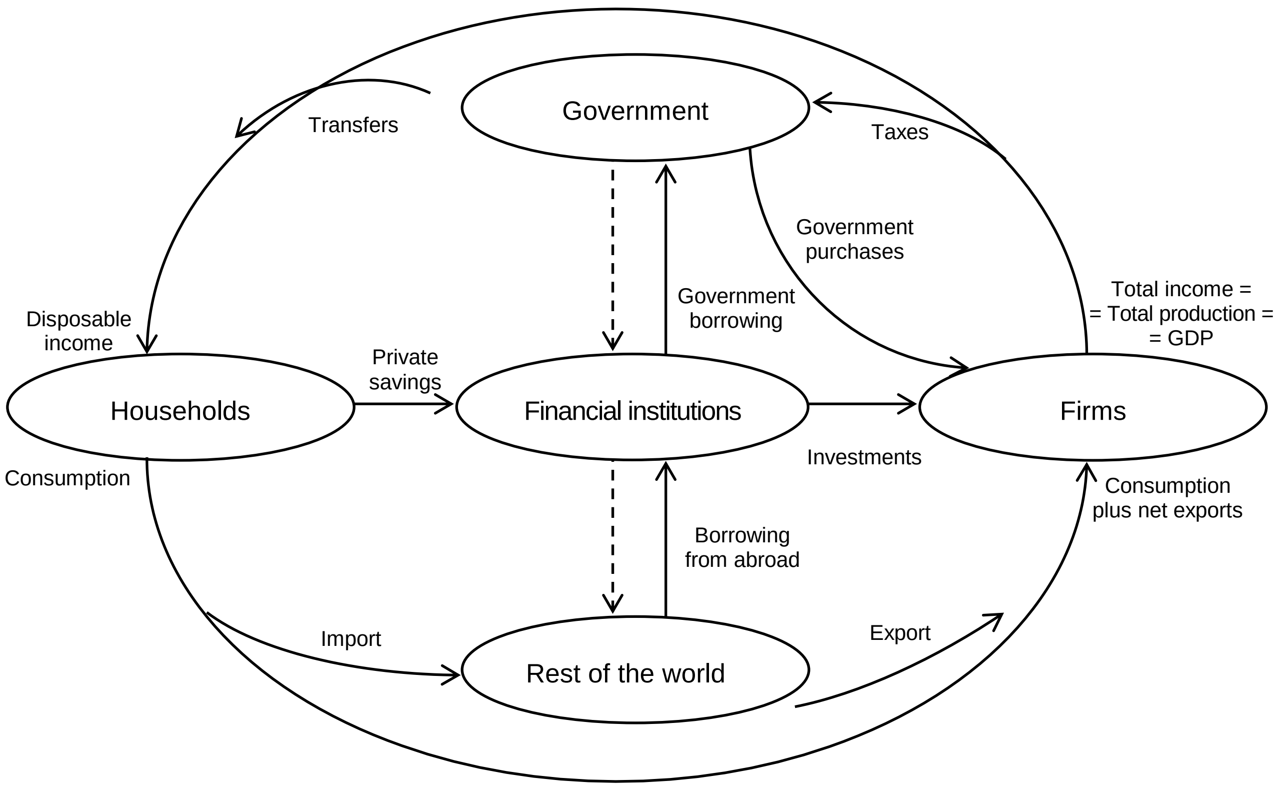

Fig. 2.1. **The circular flow of money** [46]

The flows of money and goods exchanged in a closed circuit correspond in value, but run in the opposite direction. The circular flow analysis is the basis of national finance [31].

The complete circular flow of income describes the flows of money among the different sectors of an economy. This representation includes the five main sectors: households, firms, government, the financial, and foreign sectors.

The firm sector. The flows in and out of the firm sector of an economy must balance. The total flow of money from the firm sector measures the total value of production in the economy. The total flow of money into the firm sector equals total expenditures on the GDP, which are divided up into four categories.

The national income identity is the condition that

production = consumption + investment + government purchases + net exports.

It is the most fundamental relationship in the national accounts.

Consumption refers to total expenditures of households on final goods and services. Investment refers to the purchase of goods and services that, in one way or another, help to produce more output in the future. Government purchases are all the purchases of goods and services by the government. Net exports are the difference between exports and imports: they measure the total expenditure flows associated with the rest of the world.

The household sector. Households receive income from firms. They also receive money from the government (transfers) and must pay money to the government (taxes). Households spend some of their disposable income and save the rest. In other words,

income + transfers − taxes = consumption + private savings.

Some individual households are net borrowers, but, overall, the household sector saves. There is, on net, a flow of money from the household sector to the financial sector of an economy. This money is then available to firms to borrow to build new factories, install up-to-date equipment, and so on. That is, it is available for investment.

The government sector. Here, the key functions of government are as follows: it purchases goods and services, collects revenues through personal and corporate taxes and other fees, gives transfers to households.

The amount that the government collects in taxes does not need to equal the amount that it pays out for government purchases and transfers. If the government spends more than it gathers in taxes, then it must borrow from the financial markets to make up the shortfall.

Since the flows in and out of the government sector must balance,

government purchases = tax revenues − transfers + government borrowing.

Government borrowing is commonly referred to as the budget deficit. It is also possible that the government takes in more than it spends, in which case the government is saving rather than borrowing, so there is a budget surplus rather than a deficit.

The financial sector. The financial sector of an economy is at the heart of the circular flow. It summarizes the behavior of banks and other financial institutions. Most importantly, this sector of the circular flow shows us that the savings of households provide the source of investment funds for firms. On the left-hand side, the figure shows a flow of dollars from the household sector into financial markets, representing the saving of households. Firms also save, by means of profits that they retain to finance new investment rather than distribute to their shareholders. As far as the national accounts are concerned, it is as if firms sent these funds to the financial market and then borrowed them back again. When the country borrows from other countries, there is a second flow of money into the financial markets. On the right-hand side, there is a flow of money from the financial sector into the firm sector, representing the funds that are available to firms for investment purposes.

The financial sector is also linked to the government sector and the foreign sector. These flows can go in either direction. The flows in and out of the financial sector must balance, so

investment + government borrowing = private savings + borrowing from other countries.

The foreign sector. Some of the goods produced in an economy are not consumed by domestic households or firms in an economy but are instead exported to other countries. Whenever one country sells something to another country, it acquires an asset from that country in exchange. Exports are equivalent to a loan to the rest of the world. Imports are equivalent to borrowing from the rest of the world.

If our country imports more than it exports, then it is borrowing from the rest of the world:

borrowing from abroad = imports − exports.

If our country exports more than it imports, then – on net – it is lending to the rest of the world, and there is a flow of money from the financial markets to the rest of the world [31].

Elements of the circular flow model are used to calculate the GDP (**Gross Domestic Product**) – the most popular measurement of the monetary value of final goods and services – that is, those that are bought by the final user – produced in a country in a given period of time. The GDP is composed of goods and services produced for sale in the market and also includes some nonmarket production, such as defense or education services provided by the government. An alternative concept, the Gross National Product, or the GNP, counts all the output of the residents of a country.

Theoretically, the GDP can be viewed in three different ways [44]:

✓ *the production approach* sums the value added at each stage of production, where value added is defined as total sales less the value of intermediate inputs into the production process;

✓ *the expenditure approach* adds up the value of purchases made by final users, for example, the consumption of food, televisions, and medical services by households; the investments in machinery by companies; and the purchases of goods and services by the government and foreigners;

✓ *the income approach* sums the incomes generated by production, for example, the compensation employees receive and the operating surplus of companies (roughly sales less costs).

2.2. The essence, the structure and the general characteristics of the financial system and its elements

The financial system exists in each state regardless of its level of economic development. The financial systems of countries may differ in their structure as they represent the existing model of the economy. Today, in the world, there are more than 20 different models of financial systems. The main types of financial systems are shown in Fig. 2.2.

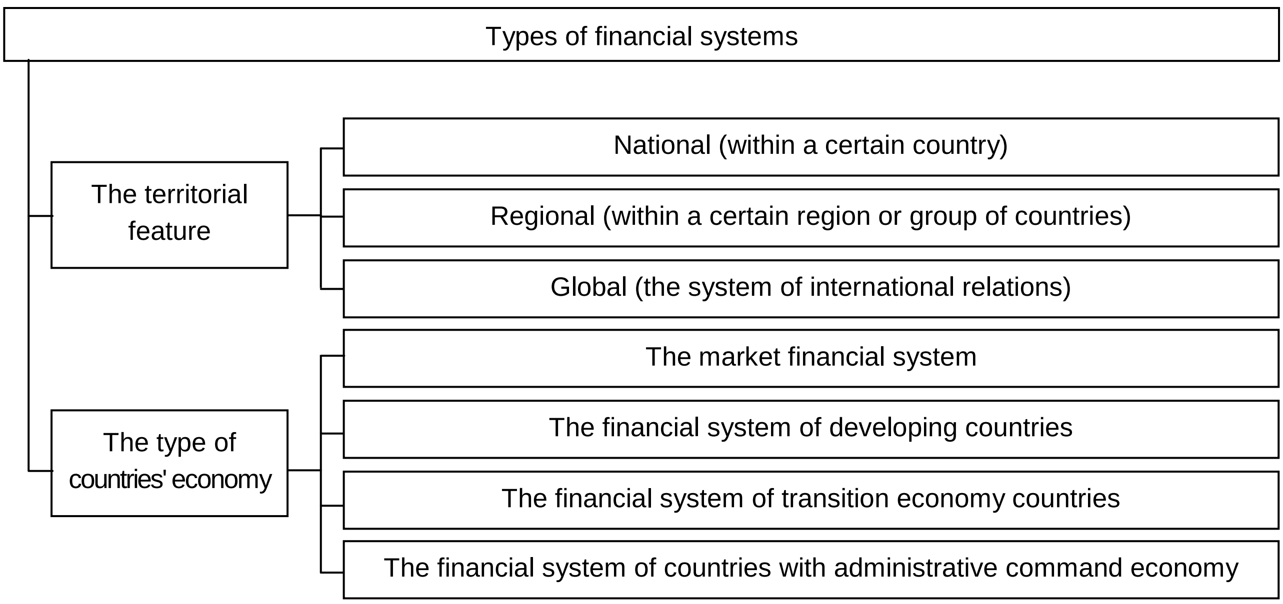

Fig. 2.2. **The main types of financial systems** [8]

The financial system concentrates significant financial resources, which constitute over 80 % of the GDP. The structure of the financial system is always dynamic. In transition economies, financial systems are characterized by the fact that some of their links are in the formation stage.

✍ **The financial system** is a set of arrangements embracing the lending and borrowing of funds by non-financial economic units and the intermediation of this function by financial intermediaries in order to facilitate the transfer of funds, to create additional money when required, and to create markets in debt and equity instruments (and their derivatives) so that the price and allocation of funds are determined efficiently [26]

The financial system is a set of separated but interrelated sectors and branches of financial relations that reflect the specific forms and methods of exchange, distribution and redistribution of the GDP, as well as the corresponding system of financial agencies and institutions.

The financial system could be considered in two ways: in terms of its internal structure and organizational structure (Fig. 2.3).

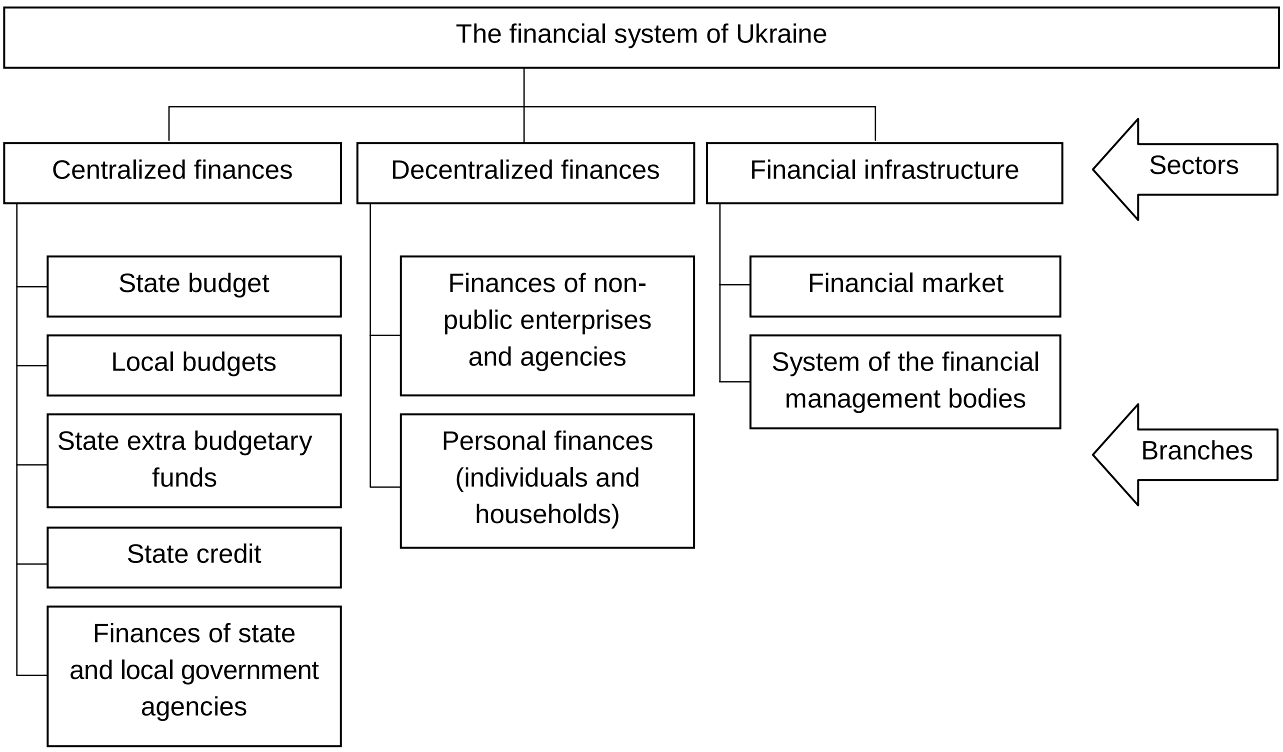

Fig. 2.3. **The structure of the financial system of Ukraine** [8]

The internal structure of the financial system is a set of relatively separated and interrelated areas and branches that reflect specific forms and methods of financial relations.

The organizational structure of the financial system is a set of financial agencies and institutions that manage cash flows in the economy and characterize the financial management system in the country.

All sectors of the financial system are divided into separate branches with close multilateral interconnections. Every sector and branch of the financial system occupies a certain place in the regulation of financial relations, affects the process of reproduction, and has its own functions.

✍ **Centralized finance** is an area of financial relations related to the formation of centralized monetary funds that are concentrated in the state authorities' bodies and are used to fulfill their functions, namely: administrative, defense, social, economic and legal

This is the main area of the GDP redistribution. The level of centralization of the GDP by the state, on the one hand, should be sufficient to provide the state with a certain amount of financial resources, and on the other hand – sufficient to form a strong financial base of enterprises for effective management.

The main element of the centralized finance is **a budget system** that organizationally depends on the form of government, and usually consists of the state and local budgets.

✍ **The state budget** is the main centralized monetary fund of the state, the main tool of the GDP redistribution (through it, the redistribution of about 40 % of the country's GDP happens)

The main revenues of the state budget are taxes, which make up from 70 to 90 % of the total revenue. The main taxes include: personal income tax, corporate profit tax, value added tax (VAT), excise tax, duty. The main expenditures of the state budget include: expenditures related to the political functions of the state (maintenance of the army, state apparatus of administration and government); expenditures for social needs (education, science, health care, social insurance and provision); expenditures related to the economic functions of the state (state investments in the field of economic infrastructure, subsidies to private capital and state corporations, expenditures for foreign economic activity, etc.).

✍ **Local budgets** (local finances) make up the financial base of local authorities and management

They provide regional needs for financial resources and income, their intraterritorial redistribution. Local budgets have complete independence, owned and secured sources of income and the right to determine the areas where to use them. In local budgets, much of the expenditure is directed towards social needs. Local budgets are chronically scarce and receive the necessary additional funds in the form of subsidies, subventions, grants from the state budget, as well as by issuing local loans under certain state obligations – municipal bonds.

Centralized and decentralized special purpose funds represent a centralization of funds for solving specific tasks and problems. Their specific feature is the fact that the sources of formation and areas of use are clearly defined. The creation of such funds is determined by specific needs, so their composition is quite diverse in different countries and at different times. Among them are those of a stable nature, such as pension funds and employment funds, as well as those that represent relatively temporary needs.

The state credit is a rather specific element of the state finances; it is directly related to the budget deficit, as a source of its coverage. This is a set of economic relations between the state, on the one hand, and individuals and legal entities, on the other; for such relations the state is a borrower, a creditor and a guarantor.

✍ **Decentralized finances** include finances of non-public (private) enterprises and agencies

The finances of enterprises and agencies are the basis of the entire financial system, since this is where much of the GDP is created, which is the subject of distribution through financial relations. The finance of enterprises constitutes a system of money funds which are created and used to finance the production process, provide expanded reproduction, material incentives and social security for employees.

Depending on the type of activity, the finances of enterprises are divided into finances of commercial enterprises, non-profit enterprises, and public organizations.

The peculiarity of the finances of commercial enterprises is that they operate on the basis of commercial account, which involves making a profit, compensation at the expense of the owned funds of all expenditures for the main activity, as well as its expansion and development.

Non-profit enterprises (agencies) include institutions that provide services or perform works for free or for a nominal fee. These are, above all, hospitals, general education schools, preschool institutions, libraries, museums, etc. The purpose of such institutions is not profit making. Their payments to the budget are negligible or absent at all. The main source of financing of expenditures of such institutions is budget funds.

Public organizations and charitable foundations also belong to non-profit enterprises. The main source of their functioning is entrance fees and membership fees, voluntary and sponsorship donations. In addition, public organizations may own commercial enterprises, which send them a part of the income received.

Depending on the sectorial focus, the finances of commercial enterprises can be divided into finances of industrial, transport, construction, agricultural enterprises, etc.

Depending on the form of ownership, finances of enterprises are divided into finances of public, municipal, collective (joint-stock, cooperative, joint, lease), and private enterprises.

Personal finances are a set of money funds that are accumulated by the individuals from the following sources: income from employment; income from capital; income from movable and immovable property; income received in the form of an inheritance; income from other sources.

The financial infrastructure is a set of institutions and elements that create favorable conditions for the functioning of the entire financial system. These include: the system of financial management; the legislative and regulatory framework; training of specialists; the financial market infrastructure; specialized production (securities, money bank notes, and financial documentation). It is the financial infrastructure that creates favorable conditions for the harmonious functioning of the entire financial system and each of its sectors, in particular.

✍ **The financial market** is a subsystem of the financial infrastructure, a specific sphere of economic relations in which relations between financial market participants regarding the sale and purchase of financial funds are formed and implemented

The main precondition for the existence of the financial market is the divergence of needs in the financial resources of one or another subject of market relations with the availability of sources to meet such needs. The financial market mediates the movement of financial resources between enterprises, industries, spheres of the economy, population, and the state. The main function of the financial market is the transformation of temporarily free funds (savings) into loan capital for investments in the economy.

The financial market as a sector of the financial system includes the market of money, credit resources, securities and financial services, etc. (Fig. 2.4).

The **financial system** deals with the following **tasks**:

1) to form, concentrate and find an optimal place for sufficient financial resources to produce a certain amount of the GDP;

2) to maximize the efficient use of available financial resources;

3) to establish the optimal proportions of distribution and redistribution of the GDP in order to fully meet the needs of individuals, enterprises, the state;

4) to comprehensively promote the attraction of all temporarily free funds and incomes received through the financial market institutions for the needs of financial support for the GDP production;

5) to form insurance funds in order to provide compensation for losses of financial resources and incomes and to establish the maximum pre-requisites for the use of these funds in the circulation of resources.

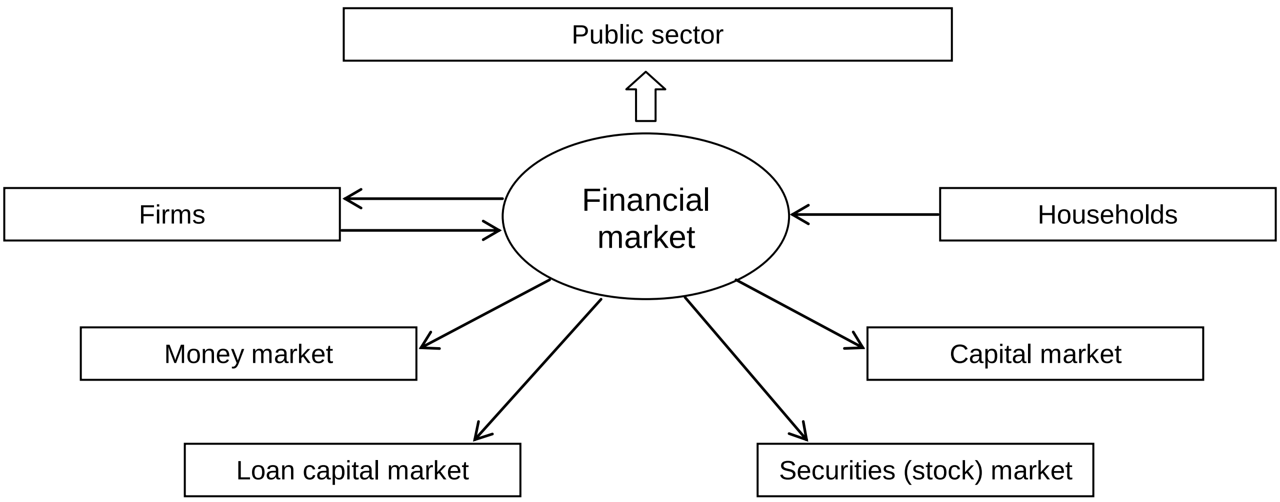

Fig. 2.4. **The place of the financial market in the financial system** [8]

Therefore, **the main task** of building the **national financial system** is maximal mobilization of the available financial resources and reasonable involvement of resources from the outside, setting conditions for the effective use of these resources and maximization of the GDP on this basis. The movement of cash flows through the branches and sectors of the financial system should contribute to the formation of income for each entity which shows its performance and is sufficient to meet its needs.

2.3. The organizational foundations of the financial system of Ukraine

The financial system is a rather complex mechanism. The **effectiveness** of its functioning depends on two determinants: the establishment of financial relations in society and the organization of management. In each country, the financial management is carried out through the existing system of financial relations. It is caused by the historical, economic and political conditions of state development and is subject to the state's financial policy.

The **objects** of financial management are various types of financial relations. The subjects are the organizational structures that control (financial departments of enterprises, financial state bodies, tax administrations, insurance bodies, etc.). The aggregate of all organizational structures that carry out financial management forms a financial apparatus.

In financial management, there are several important functional elements: planning, strategic and operational management, and control.

Planning occupies an important place in the financial management system. During planning, economic entities assess the conditions of their finances, identify the possibility of increasing financial resources, areas of effective use of finances. The object of financial planning is the financial activity of the state and business entities, and the result is the preparation of financial plans.

Strategic financial management in Ukraine (long-term financial management) is carried out by the highest authorities of the state and administration: the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, and the President's apparatus. When implementing strategic financial plans, there is a need for operational management as an activity related to the need for intervention in distribution processes in order to eliminate imbalances, overcome shortcomings, timely redistribute the funds, ensure the achievement of planned results.

Operational financial management is carried out directly by the financial apparatus, which includes financial management bodies (the Accounting Chamber of Ukraine, the Verkhovna Rada of Ukraine, the Ministry of Finance, the State Treasury Service, the State Financial Inspection, the State Tax Service, the Pension Fund, social insurance funds, etc.) and financial institutions (the National Bank of Ukraine, banks and non-bank credit institutions, insurance companies, stock exchanges, joint investment institutions, etc.).

Effective functioning of each component of the financial system is possible under the conditions of a clear legislative regulation of their interaction [5; 9; 13 – 20; 22]. At the same time, the cash flow should be coordinated through the management of financial flows provided by the financial apparatus.

The general financial management in accordance with the Constitution of Ukraine is entrusted to the supreme bodies of state power – the Verkhovna Rada of Ukraine, the President, the Government (Fig. 2.5).

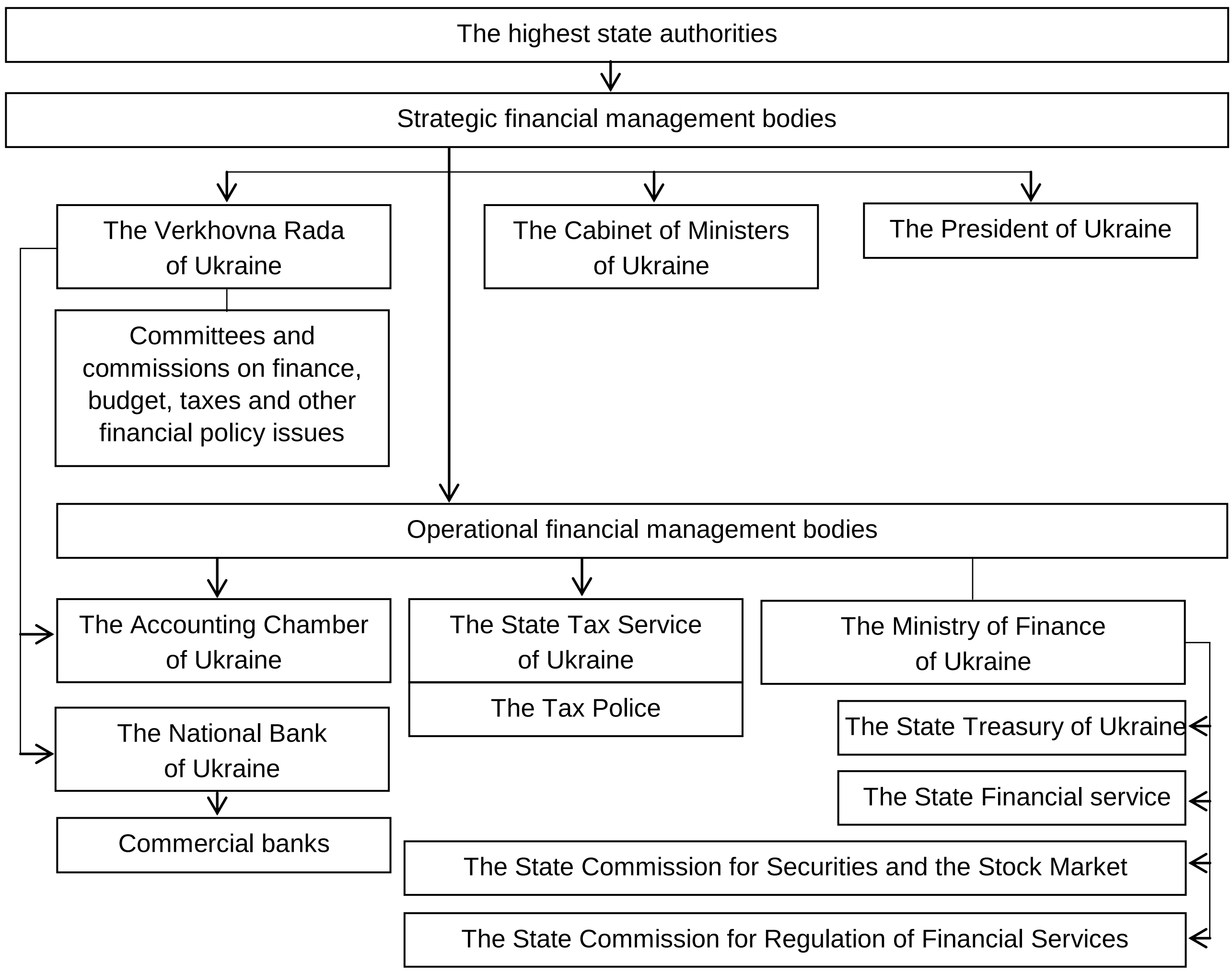

Fig. 2.5. **The system of public financial management in Ukraine** [23]

The state policy in the financial sphere is exercised by **the Verkhovna Rada of Ukraine**, which approves the national programs, the State Budget and brings about changes in it, exercises control over the use of the State Budget of Ukraine, makes decisions on the report on its implementation. The most important issues in the financial sphere are regulated exclusively by the laws of Ukraine.

The President of Ukraine has certain powers in the financial sphere: appoints the Minister of Finance, puts up a candidature for the Chairman of the National Bank to the Verkhovna Rada for approval.

The Cabinet of Ministers of Ukraine has significant powers in the field of financial management. It ensures: provision of the financial, pricing, investment and tax policy; drafting the Law on the State Budget of Ukraine; performance of the approved State Budget of Ukraine; reporting on the implementation of the State Budget of Ukraine.

The system of financial institutions of Ukraine which carry out operational management of finances is headed by the Ministry of Finance of Ukraine – the central executive body on financial management: it forecasts the development of the economy, develops a draft State Program of Economic and Social Development, a draft State Budget of Ukraine. Local bodies of the Ministry of Finance develop draft budgets, organize budget execution, provide funds, set local councils based on council decisions and organize local voluntary loans.

The main tasks of the **State Treasury of Ukraine** are: organization of implementation of the State Budget of Ukraine; control over its implementation and regulation of relations between the State Budget of Ukraine and extra-budgetary funds; short-term forecasts of volumes of state financial resources and provision of information to the Verkhovna Rada and the President of Ukraine.

The functioning of the money market, the status of the national currency, foreign currencies in the territory of Ukraine are established exclusively by laws. The control over the conduct of monetary policy is the responsibility of the National Bank of Ukraine. The National Bank of Ukraine regulates monetary circulation by a set of defined norms for cash and by policy concerning rates, transactions with securities, etc. It determines the official exchange rate of hryvnia, based on the currency (exchange) rate. The hryvnia exchange rate against foreign currencies is provided by the National Bank of Ukraine through the use of the foreign exchange reserve, the purchase and sale of securities, the establishment and change of fees for loans and other instruments for regulating money supply in circulation.

2.4. Financial policy and its tools

✍ **Financial policy** is the management of the formation, distribution and use of financial resources in order to solve the set tasks

The financial policy is conducted taking into account the requirements of the financial and credit mechanism operating in the country, as well as regional, sectoral and other features of financial development. The financial policy aims to solve certain tasks by using the appropriate tools [11].

The financial policy is carried out by various entities: state authorities, managers of enterprises and institutions, boards of joint ventures, individuals and their associations, foreigners, etc.

The financial policy implemented **at the enterprise level** is financial management; its functions are planning and forecasting the development of finance of the enterprise. Financial management conducts analysis and control over the formation and use of resources. Its important direction is the achievement of the optimum volumes of financial transactions. This involves reducing unproductive costs and increasing the efficiency of the use of the enterprise assets.

The main tasks of financial management are:

- ✓ cash flow control and analysis of the enterprise;
- ✓ organization of planning and forecasting of financial activity of the enterprise;
- ✓ definition of the optimal level of production and sales of products as well as sources of their financing;
- ✓ capital budgeting and production efficiency analysis;
- ✓ definition of credit policy directions of the enterprise;
- ✓ optimization of taxation;
- ✓ securities transactions management;
- ✓ risks insurance.

The financial management is evaluated according to the following indicators:

- ✓ the size and dynamics of the enterprise's capital;
- ✓ the level of the enterprise liquidity and solvency;
- ✓ the enterprise cash flows stability;
- ✓ the owned funds to debt obligations ratio;
- ✓ dividends per share;
- ✓ dynamics of the securities rates.

The main goals of the financial management are:

- ✓ achievement of the set return on capital;
- ✓ obtaining a sufficient level of profits;
- ✓ reduction of capital investments risks;
- ✓ provision of capital gains;
- ✓ realization of investors' interests;
- ✓ creation of conditions for financing the enterprise stable work.

In the process of the enterprise financial activity management, macro-economic factors are taken into account. Based on their dynamics analysis, managers justify and propose capital management projects to the board of directors to choose the most rational and most effective ones. Financial management (as well as management in general) is a combination of science and art. The financier is focused on active search, analysis, selection of the most rational, optimal solutions from many possible options.

The financial policy **at the state level** in Ukraine is conducted by the President of Ukraine, the Verkhovna Rada of Ukraine, the Cabinet of Ministers of Ukraine, the Ministry of Finance of Ukraine, the National Bank of Ukraine and other bodies of state executive power. *The main tasks* of the financial management at the state level are financing of many important areas of development of the country, which, in particular, are:

- ✓ ensuring the implementation of social programs;
- ✓ financing development of the economic system of the country;
- ✓ providing structural adjustment of the economy;
- ✓ providing financing for the country's defense capability;
- ✓ financing the state administration bodies;
- ✓ ensuring the international relations development;
- ✓ creation of appropriate conditions for the development of the territories.

In the process of conducting financial policy at the state level, the following *tools* are used:

- ✓ taxes, fees, deductions;
- ✓ investments;
- ✓ prices and tariffs;
- ✓ government expenditures;
- ✓ securities;
- ✓ grants, subsidies and subventions;
- ✓ other tools.

Using all possible financial instruments, financial management organizes the achievement of the goals set by the owners. In this case, the most optimal methods for financial transactions for enterprises (institutions, organizations) are selected. The activities of the financial manager are carried out by analyzing the development of the entity, developing directions for improving its efficiency and hedging risks, monitoring the implementation of the projects developed, etc.

Questions for self-assessment

1. What is the circular flow of money model?
2. What are the main elements of the circular flow, their relations?
3. What is the GDP as the basis of financial resources?
4. Give a definition to the term "financial system".
5. What are the main types of financial systems?
6. Describe the main sectors of the financial system.
7. Describe the main branches of the financial system.
8. What is the financial market? How is it related to the financial system?
9. Characterize a strategic financial management and operational financial management.
10. Describe the system of public financial management in Ukraine.
11. What is the essence, goals and tasks of the financial policy at the level of enterprises?
12. What is the essence, tasks and tools of the financial policy at the level of the state?

3. The essence of credit. The banking system

The purpose of the theme is to study the specifics of the economic category "credit", the peculiarities of the financial intermediaries acting in the financial market, particularly the banking system.

The main competence: the ability to understand the specifics of credit relations in the society and know the main principles of the banking system functioning.

Agenda

3.1. The necessity and nature of credit in the market economy.
3.2. The types of credits.
3.3. Financial intermediaries.
3.4. The banking system.

3.1. The necessity and nature of credit in the market economy

The reasons for the emergence of credit are: free funds available to some economic entities and the lack of free funds with others; fluctuations in the need for funds and sources of their formation that arise in the activity of legal entities, individuals and the state; providing for temporary use of funds for future, distant in time, revenues.

Credit (from the Latin *Credere* – trust, *Credo* – faith) is:

✓ the value transferred by one subject to another in the form of a loan;

✓ the relationship between individuals or legal entities in providing each other with certain values (money, property) for a certain period of time for a fee and on condition of return.

The main principle of credit management is "buy now, pay later". **The principles of crediting** are:

➢ timeliness;
➢ reciprocity;
➢ payment;
➢ security;
➢ target use.

> ✍ **The essence of credit** is not in the mass of the borrowed value, but in those economic relations that arise in connection with the movement of value on the basis of reciprocity and payment

These relationships are characterized by a number of specific features constituting the phenomenon of credit and distinguishing credit from other economic phenomena.

> ✍ The **necessity for credit in the sphere of circulation** is explained by the fact that credit facilitates the sale of goods

Credit originated and developed on the basis of the function of money as a means of circulation. With its occurrence, money, in addition to the function of measure of value and means of circulation, also began to perform the function of the means of payment, one of the signs of which is a break in time between the transfer of goods and money from hand to hand.

The necessity for credit in the field of production is caused by:

✓ fluctuating demand for working capital;

✓ fluctuating demand for fixed capital;

✓ need for capital to create a new production or start a business.

The necessity for credit in the field of consumption is conditioned by fluctuations in capital requirements when the needs of individuals, legal entities or the state exceed their revenues.

Specific prerequisites for the emergence of credit are:

1) the need for the accumulation of temporary free value to provide it with a loan;

2) trust, guarantees of loan repayment;

3) the coincidence of the economic interests of the creditor and the borrower: the establishment of the main parameters of the loan agreement beneficial to both parties;

4) the material liability of participants in credit relations for fulfilling their obligations (participants must be legally independent persons, and individuals must be able to act);

5) the borrower receives regular revenues through which he can repay the loan.

✍ **Credit** is a value category and from this point of view it has much in common with other economic categories – money, finance, trade, capital, etc. However, it is an independent category which has its own functions and special purpose in the economic life of society

The subjects of credit are creditors and borrowers.

✍ **Creditors** (lenders) are participants in credit relations, having free funds in their ownership (or disposal) which they transfer to other entities for temporary use

✍ **Borrowers** (debtors) are participants in credit relations who need additional funds and receive them as a loan from creditors

The borrower is not the owner of borrowed funds, but only a temporary administrator.

The object of credit is the value which one entity transfers to another loan – loan capital. In other words, credit is a form of movement of loan capital.

Credit is a phenomenon of movement, which is carried in different directions and at different levels. **Credit movement** in connection with its participation in the reproduction process takes place in five steps:

- formation of a free value;
- placement of the free value in loans;
- use of the borrowed value for the needs of the borrower;
- release of the borrowed value from the turnover of the borrower;
- return of the released value to the lender and payment of interest.

✍ **A loan capital** is a cash loan that is provided on credit and gives its owner an income in the form of interest

The source of the loan capital is free funds that arise as a result of:

- temporary dismissal of funds from enterprises due to non-coincidence in time of cash receipts and expenses of the enterprise;
- accumulation of money savings of the population.

Accumulated funds can be placed on accounts in various credit and banking institutions (or invested in securities), which, in turn, leads to their further use in the form of credit resources.

Free money is capital only if it produces value added and generates profit in the form of entrepreneurial income, interest, rent, etc. In the case when monetary capital does not function, it does not act as a capital, but as a treasure.

The features of the loan capital (unlike industrial or trade capital) are:

1. The loan capital is a capital in the form of money offered on the market, but the object of sale is not the capital itself, but its function – the ability to make a profit.

2. The loan capital is characterized by its distribution between the owner of money and the entrepreneur rather than by the appropriation of the produced value added (like industrial and trade capital).

Using borrowed funds and receiving business profits, the borrower pays part of the profit to the lender in the form of interest for the temporary use of the creditor's funds. And only part of the profit remains for the entrepreneur as a profit. That is, profit is received both by the entrepreneur-borrower and the owner of loan capital.

The ability of loan capital to generate profit in the form of interest is its decisive feature.

In financial calculations (as opposed to mathematics), the category "interest" means the amount of money paid by the borrower for the use of money borrowed, that is, for the use of loan capital.

The cost of loan capital is interest, the fee for using it. The source of interest is the value added created during the production process.

The indicator by which interest is calculated is the **interest rate** – the ratio of income received (interest money) to the amount of debt per time unit.

The interest rate is influenced by:

- profit margin (which must be > 0); the average profit margin is the maximum limit for the interest rate;
- demand and supply of loan capital;
- the size of monetary savings in society;
- the scale of production, the level of its specialization and cooperation;
- seasonality of production and sales conditions;
- the rate of inflation; its acceleration leads to an increase in interest rates, which serves to protect the loan capital from depreciation;
- the level of credit and monetary regulation of the economy by the Central Bank with the help of discount rates;
- international factors, especially the free transfer of capital from country to country.

3. In the circulation, the loan capital is always in the form of capital (both during the transfer of money in the loan and at the time of its return). It does not undergo the transformation of goods into money and vice versa, in contrast to other forms of capital.

4. While the dispossession of other forms of capital occurs both through sale and loan, the dispossession of the loan capital happens only through

its transfer to a credit. In addition, lending money is dispossessed as a commodity, while during the dispossession, for example, of industrial capital, the commodity acts in the form of capital.

5. The movement of loan capital goes through two stages:

- the creditor lends the capital of the entity. This stage is preceded by the flow of industrial capital;
- the creditor receives his capital from the debtor together with interest. This stage is final in relation to the movement of industrial capital.

The patterns of the credit movement are:

- the reversibility of the movement of the value transferred to the loan;
- temporality of the stay of the borrowed value in the turnover of the borrower;
- saving of the borrowed value in the process of movement and returning it to the lender in full;
- dependence of the amount of the loan provided on the available volumes of free funds.

At the macroeconomic level:

- quantitative parameters of the development of credit (in terms of growth of loan investments) should be adequate to the dynamics of the GDP. If the pace of development of credit investments outstrips the GDP growth rate, excessive accumulation of monetary capital occurs, there is a threat of financial crisis, inflation. If the pace of development of the loan lags behind the GDP growth, the economy is threatened by demonetization, the crisis of non-payment;
- the transfer of free value from the household sector to the sector of firms. Credit is the main tool for financing capital growth in the real economy;
- directing funds from sectors and industries of the economy with low profitability to highly profitable industries, productions.

There are two **basic theoretic concepts of credit**: naturalistic and capital-based.

The naturalistic theory of credit (Adam Smith, 1723 – 1790, David Ricardo, 1772 – 1823, James Mill, 1773 – 1836) which interprets the essence of credit from the point of view of its role in ensuring the movement of real capital in natural form, underestimates the relative independence of the movement of monetary capital and its influence through credit on the development of social production.

The main statements of this theory are as follows.

The object of credit is temporarily free capital in kind in the natural material form.

Credit is a form of movement of material goods, and therefore the role of credit is to redistribute these benefits in society. Loan capital is a real capital, that is, capital in the material form. Banks are only intermediaries in credit relations which initially accumulate free funds, and then provide them with a loan. Passive banking operations are primary as compared to active ones. Production is primary, and credit is secondary. Credit itself cannot create real capital, since the latter arises only in the process of production.

Interest is a part of the profit generated during the production process. The rate of interest depends on the rate of profit.

The naturalistic theory of credit, implies that:

- there is no difference between loan and real capital;
- the reverse effect of credit on the production sphere, on the turnover of real capital is not considered;
- the role of banks is reduced to the usual mediation in credit relations, they do not significantly affect the reproduction process;
- the interest does not depend on changes in demand and supply of loan capital and its impact on the changing market conditions.

The capital-based theory of credit (John Law, 1671 – 1729, Joseph Alois Schumpeter, 1883 – 1950) interprets the essence of credit as a mechanism for capital creation, reevaluating the independence of the movement of monetary capital and the ability of banks to expand in the interests of production development.

The main statements of this theory are as follows.

- ✓ credit, like money, is directly a capital, wealth, and therefore the expansion of credit means capital accumulation;
- ✓ with the help of credit, it is possible to attract unused production opportunities of the country, accumulate wealth and capital. Banks are not only intermediaries in credit relations, but also the creators of capital. Active banking operations are primary in relation to passive ones. Credit does not depend on the reproduction process and plays an important independent role in the development of the economy. Capital formation with the help of credit cannot be infinite. Credits and banks are decisive factors in the development of production.

The functions of credit and their roles are listed in Table 3.1.

Table 3.1

The main functions of credit

Function	Description	Role
Redistri-bution	With the help of credit, value is redistributed on the principles of return: monetary capital is accumulated through the preservation of economic agents, and they are placed among other market agents	Helps to focus capital in the first priority areas of economic activity, reorient the production and stabilize the economy
Emission	On the basis of credit, the issue of money as a means of payment happens; with the help of credit expansion and restriction methods, the amount of money in circulation is regulated	Contributes to saving the cost of money circulation, acceleration of the circulation of money, introduction of progressive payment systems
Control	When crediting, control over compliance with the conditions and principles of granting loans by the subjects of the loan agreement is provided; at the same time the bank carries out both preliminary and current control over the borrower's activities	Makes it possible to minimize credit risk, to realize the target nature of a loan: stimulates the borrower to rationally and effectively use the borrowed funds

3.2. The types of credit

Classification of the credit types is given in Table 3.2.

Table 3.2

Classification of the credit types

Classification feature	Types of credit
1	2
The credit term	short-term (up to one year); medium-term (up to five years); long-term (over five years)
The type: depending on the subjects of credit relations – creditors	bank credit; non-bank financial and credit institutions; public credit (state, municipal); intercommercial credit (enterprise); international financial institutions; personal (private) credit (individuals)

Table 3.2 (the end)

1	2
The direction of use: depending on the direction of the borrowed value	production credit, used for the formation of fixed and working capital in the sphere of production and trade, that is, for the production purpose; credit for replenishment of working capital; consumer credit aimed at satisfying the personal needs of people
The industry orientation	for industry; for agriculture; for trading; for construction, etc.
The forms of granting the credit	cash; commodity
The way of providing the credit	direct (provided without intermediaries); indirect
The terms of credits	secured with material values; unsecured
The actual organizational and legal features of the credit repayment	term and overdue, prolonged; real, doubtful, hopeless

Characteristics of short-term credits:

1. **Intercommercial credit** – between operating entities.

➢ **Commercial credit** is credit in the form of commodity which is provided as a delay in payment. It is executed with the help of a bill or arrangement.

Open credit (open account) allows the buyer to buy goods with a delay in payment. This is an informal agreement whereby the buyer receives the product before it pays for it.

A simple bill is a written obligation of the buyer to pay a certain amount of money to the supplier in a specific term.

Such credit is available (it can always be provided, since lenders are counting on the continuation of business relations), has a low cost (when such credit is used, interest is either zero or minimal, and there is a possibility of extending the loan period. However, extending its term or receiving it is often problematic, either because of the ineffectiveness of such credit relations for the seller, or because of the unreliability of delivery).

➢ **Advance payment** is a sum of money provided at the expense of future payments for inventories, works and services in order to ensure the guarantee of their receipt by the buyer or in order to guarantee their purchase.

➢ **Intracorporate credit** (for example, in multinational companies) – commodity deliveries between corporation's participants in credit (for example, transferring equipment to branches), as well as providing credit in cash. Often, an intracorporate loan intersects with the bank, because the banks are also part of multinational companies.

➢ **Tolling** (work on "tolling raw materials") is a way of obtaining raw materials by the processor without financial costs on his part with the subsequent return of the final product to the supplier as a payoff.

2. **Bank credit:**

One-time credit – the bank makes a decision to provide separately for each borrower on the basis of documents provided by the borrower.

Permanent credit is granted within the established credit limit by means of payment from the credit account by the payment documents of the borrower (payment orders, checks, etc.) without the consent of the bank each time within the terms of credit.

Guarantee credit – the bank undertakes a contractual obligation to provide, if necessary, a credit within a specified period in a specified amount. Such credits may be due to a specific date or cause for a certain reason.

Credit line – an agreement between the bank and its client, according to which the bank promises to provide a certain amount of money to a client within a specified period. Often, the credit line is restarted after the bank receives an annual report on the company's activities certified by the auditor and the opportunity to examine the results of this activity.

The credit line could be:

➢ *conditioned* – the bank provides the company with the opportunity to use cash only for a certain purpose;

➢ *unconditioned* – the company can use the credit received for any purpose.

Revolving – credits that are automatically renewed within the limits stipulated by the credit agreement.

Current account credit – the bank opens a current account to the client from which all payments of the client are made, including those made at the expense of the credit within the established limit, and all proceeds are credited, including those made at the expense of repayment of the credit.

Overdraft is a form of short-term credit within the limits set by the bank which allows the client to make transactions with insufficient funds in the current account. Under the overdraft, the bank gives credit to the client for payment of settlement documents in case of lack or absence of funds in the client's current account. **Overdraft** differs from ordinary credit by the fact that all the money received on the customer's account is sent to pay off the debt.

Credit on request is provided for an indefinite period. It is repayable as far as the borrower's options are concerned or on the bank's first demand.

Bilateral credit – the subjects of a credit agreement are the bank and the borrower.

Consortium (syndicated) credit – for the purpose of reducing the risk or impossibility of lending to a bank, a banking consortium is created where one bank acts as a manager who concludes a loan agreement with a borrower and provides credit, as well as levies and distributes debts and interest between the members of the syndicate. For performing such functions the bank manager receives commission rewards from other participants in the consortium.

Parallel (multilateral) credit – each bank in its share in the total amount of the credit granted to one borrower under certain agreed terms concludes its own credit agreement with the borrower.

Standard credit is provided to borrowers that previously repaid their credits in time and have the ability to secure repayment of the credit in the future.

Prolonged credit – extending the maturity of the credit (interest) due to the financial insolvency of the borrower.

3. **Factoring** is sale of receivables to a specialized financial institution, a factoring company.

Types of factoring:

- with the right to invoice;
- without the right to invoice;
- open factoring – debtors are informed about the sale of their accounts and that the payment for these accounts should now be directed to the factoring company;

➢ hidden factoring – debtors are not reported on the sale of their debts. Debtors continue to send funds to the firm, which, in turn, transfers them to the benefit of the factoring company.

4. **Leasing** is a contract concluded by two parties, under which one party (the lessor) provides the other party (the lessee) with the object of leasing (machines, equipment, etc.) for a specified period and for a fee.

3.3. Financial intermediaries

The financial market is composed of a number of financial institutions that perform a variety of functions. In most contexts, **financial institutions** can be considered synonymous with financial intermediaries in the financial markets. In a nutshell, **financial intermediaries** are the financial institutions that pool resources and channel funds from savers/lenders to spenders/ borrowers. Smooth functioning of these institutions is very important for an efficient financial market and for the conduct of fiscal and monetary policies. Due to their crucial importance, almost all financial intermediaries are regulated – some are subjected to very tight regulations whereas others operate under less stringent regulations [51].

The functions of financial intermediaries (FI):

1. Consolidation (accumulation) of savings of individual investors into a single fund and the subsequent diversified investment of accumulated capital into various projects.

2. Ensuring increased liquidity of financial investments through professional portfolio management of trusted and acquired assets.

3. Ensuring equilibrium in the capital market by agreeing supply and demand for financial resources.

4. Redistribution and reduction of financial risks.

Performance of the above functions of financial intermediation is mandatory for financial intermediaries of different types. The implementation of these functions by financial intermediaries of different types is determined by certain legislative restrictions on individual aspects of their activities (regarding the formation of an investment portfolio, raising funds, participating in transactions in the stock market, etc.). In addition, individual groups of financial intermediaries perform additional operations inherent in their functions only.

Generally, there are three classes of the financial intermediaries: depository institutions, contractual savings institutions and investment intermediaries. Each class includes a variety of different financial institutions with their specifics. The most widespread of them are described in Table 3.3 (based on [29; 53]).

Table 3.3

The main types of financial intermediaries

Type of intermediary	Description	Primary liabilities (source of funds)	Primary assets (uses of funds)
1	2	3	4
Depository institutions (accept deposits from savers and transform them into loans)			
Commercial banks	Offer a full range of retail banking products and services, such as checking and savings accounts, loans, credit cards, and lines of credit to individuals and businesses; some also sell certain investments and many offer full brokerage and financial planning services	Deposits	Business and consumer loans, mortgages, government securities, municipal bonds
Savings and loan associations	Primarily engaged in making loans on real estate; owned by their depositors, or organized as profit-making institutions with stock that is publicly traded	Deposits	Mortgages
Mutual savings banks	Make mortgage loans; organized much like savings and loan associations; technically are not depositor-owned, although all are state-chartered	Deposits	Mortgages
Credit unions	Nonprofit cooperative financial institutions that provide credit to their members; often pay slightly higher rates of interest on passbook-type savings accounts and charge lower rates on consumer loans	Deposits	Consumer loans
Contractual savings institutions (acquire funds at periodic intervals on a contractual basis)			
Life insurance companies	Pay a certain benefit to the survivors of the policyholder upon his/her death in exchange for a premium	Premiums for policies	Corporate bonds and mortgages
Property and casualty insurance companies	Very much like life insurance companies, insure their policyholders against loss from theft, fire, and accidents	Premiums for policies	Municipal bonds, corporate bonds and stock, government securities

Table 3.3 (the end)

1	2	3	4
Pension funds, government pension funds	Collect regular contributions from employers to provide retirement income for employees	Employer and employee contributions	Corporate bonds and stock
Investment intermediaries (serve different forms of finance)			
Finance companies	Lend money with goods as security	Commercial papers, stocks, bonds	Business and consumer loans
Mutual funds	Are capitalized by the constant sale of their stock which they are obligated to repurchase from their shareholders on demand	Shares	Bonds and stocks
Money market mutual funds	Mutual funds that invest exclusively in short-term, low-risk securities	Shares	Money market instruments

In general view, despite the type of financial institution, the mechanism of financial intermediary functioning looks as follows (Fig. 3.1).

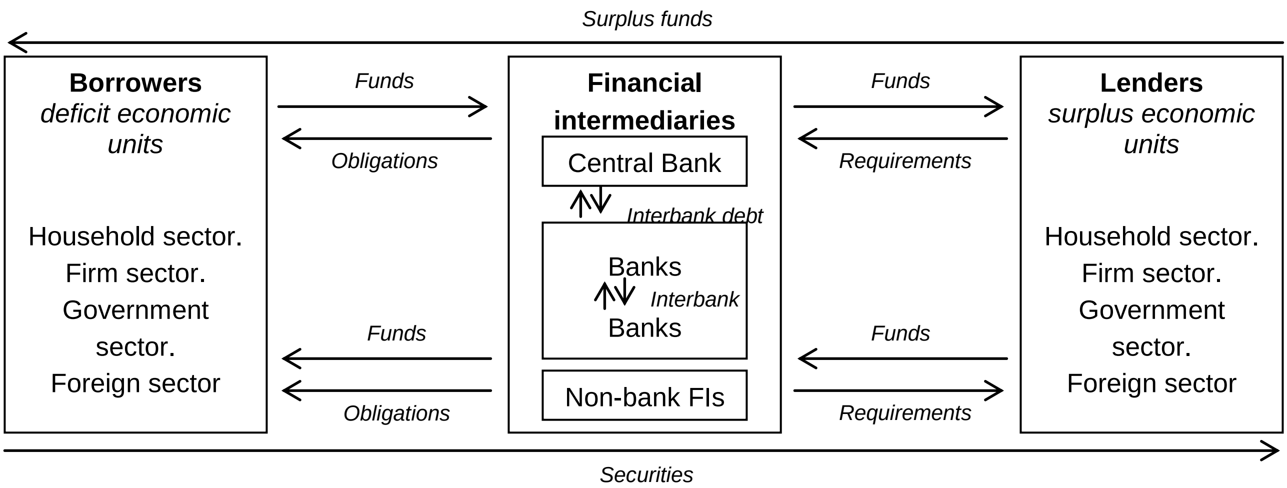

Fig. 3.1. **The general mechanism of the financial intermediaries functioning** (on the basis of [26])

Financial intermediaries operate on the market on their own behalf and at their own expense, creating their own obligations and their own requirements.

Therefore, their profits are formed as the difference between revenues from the placement of accumulated funds and the costs associated with their involvement.

3.4. The banking system

Banks are the most important actors among financial intermediaries as far as they:

- have the largest share in the redistribution of loan capital in the money market as compared with any other type of FIs, through transaction operations;
- take part in the formation of money supply and have the opportunity to directly influence market conditions and economic growth, while other FIs do not have such an opportunity;
- have the opportunity to provide economic entities with a wide range of services, while other intermediaries specialize in individual, often limited financial transactions.

The basic functions and roles of banks are presented in Table 3.4.

Table 3.4

The functions and roles of banks

Functions	Roles
Transformation function – changing (transformation) of qualitative characteristics of cash flows passing through banks: • transformation of terms; • transformation of volumes; • transformation of risks; • spatial transformation	Affecting the qualitative changes in the money supply and accelerating the turnover of capital in the reproduction process, promoting the expansion of volumes and raising the efficiency of social production
Emission function – creating additional means of payment and directing them into turnover, increasing the supply of money or withdrawing it from the turnover, reducing the supply of money	Affecting the quantitative changes in the money supply (its increase or decrease); contributing to meeting the needs for circulation of payment means, strengthening of the contractual and payment discipline in the economy, improvement and strengthening of monetary turnover

Banks implement their functions through the execution of a specific set of **banking services**, in particular:

a) *primary services*:

- deposit services (accepting cash from customers);
- loan services;
- transactions services (making transactions between clients);

b) *secondary services*:

- investments;
- portfolio management;
- trust, mortgage, consulting services;
- mediation in financial markets;
- depository operations, etc.

A bank is:

- a financial intermediary (the macroeconomic approach), since the bank is a participant in the movement of capital in the process of social reproduction;
- an enterprise that produces its own product (microeconomic approach), since the bank is a commercial entity that offers its financial services to the market as a manufactured product.

The purpose of the bank is profit.

A banking system is a legally defined, structured set of financial intermediaries engaged in banking on a permanent professional basis and functionally linked to an independent economic structure.

The subjective structure of **banking relationships in Ukraine** is determined by the following levels (Fig. 3.2):

- authorities that carry out the functions of state regulation of banking activities and interaction with the banking system;
- the National Bank of Ukraine, acting as the center of the banking system and as a body of the state executive power;
- banks and derivative banking formations;
- clients of banks – individuals and legal entities.

The following legal facts may serve as the basis for the **emergence of banking relationships**:

- an administrative act, for example, issuance of a license or its revocation;
- a contract or a one-way transaction;
- causing harm (this one is controversial or needs additional substantiation);

➢ the norm of the law, for example, in the case of implementing the monetary policy of the state, the establishment of mandatory reserves.

It should be noted that in the **legal regulation of banking activity**, imperative and dispositive methods are used.

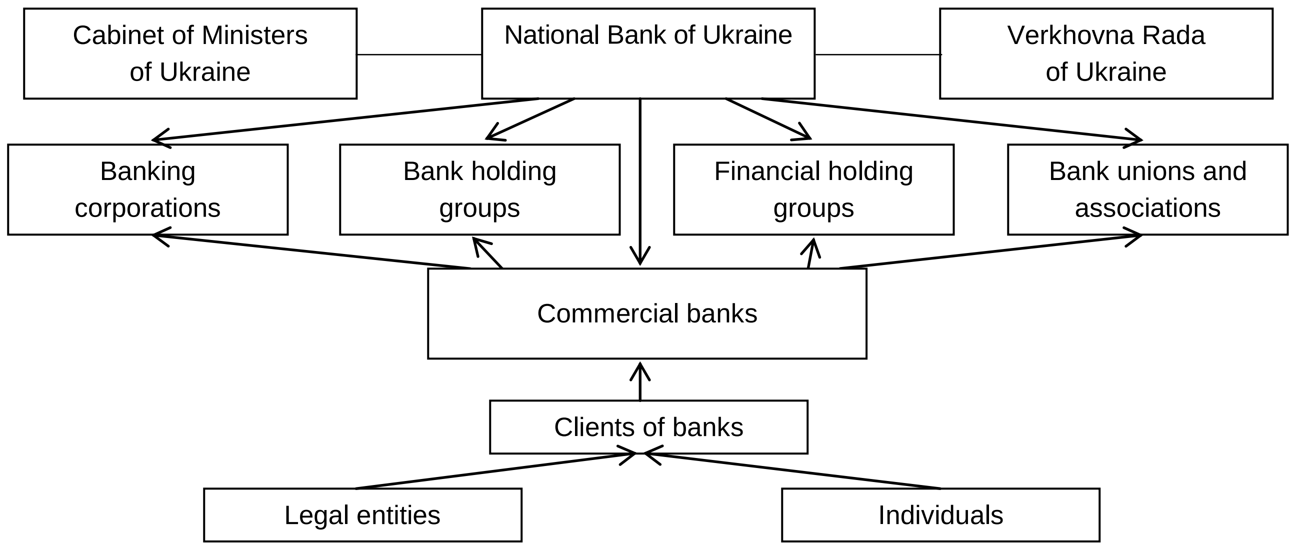

Fig. 3.2. **Banking relationships in Ukraine** [36]

The imperative method is conditioned by the need for a state monetary policy, the main provisions of which (in accordance with Art. 100 of the Constitution of Ukraine) are developed and implemented by the Council of the National Bank. The following bodies participate in the process of imperative regulation of banking activities:

➢ the President of Ukraine (creates decrees);

➢ the Verkhovna Rada of Ukraine (adopts laws, decrees);

➢ the Cabinet of Ministers of Ukraine (adopts resolutions);

➢ the National Bank of Ukraine (adopts special acts of banking legislation).

The National Bank of Ukraine is a bank of Ukraine, a specific central body of public administration; the legal status, tasks, functions and principles of organization of which are determined by the Constitution of Ukraine, the Law of Ukraine "The National Bank of Ukraine" [8] and other laws.

The National Bank of Ukraine performs traditional functions typical of central banks of the two-level banking system (Fig. 3.3).

The dispositive method of legal regulation of banking activity is implemented in Part 2, Art. 2 of the Law of Ukraine "Banks and Banking

Activities" [15], where it is determined that banks are economically independent and completely independent of the executive and administrative bodies of state power in decisions related to their operational activities.

Functions of the National bank of Ukraine

The central bank of the state	The emission center	The body of the monetary regulation and control	Control over other banks' activity	The bank of the banks
• ensures the monetary unit stability; • develops directions of the fiscal policy; • represents the interests of Ukraine in relations with the central banks of other countries; • establishes the order of issuance of banking licenses; • registries banks, their branches and representative offices	• decides on the issue of Ukrainian currency; • has the exclusive right to introduce the hryvnia and the coin into circulation, organize their turnover and withdrawal; • has a banknote factory, which is its subdivision	• determines the procedure for making payments in foreign currency; • organizes and carries out currency control over the commercial banks; • establishes standards for foreign exchange rates for banks; • creates a gold and foreign currency reserve; • together with the Cabinet of Ministers of Ukraine makes the balance of payments; • determines the foreign currencies rates	• determines mandatory economic standards; • determines the calculation period for these standards	• is the lender of last resort for banks; • determines the rules for conducting banking operations; • organizes methodological support for the system of banking statistics; • determines the order, system and forms of payments between banks

Fig. 3.3. **The functions of the National bank of Ukraine as a central bank** [18]

The modern banking system can be classified as follows (Fig. 3.4).

Fig. 3.4. **The structure of the modern banking system of Ukraine** [36]

Banks independently determine the amount of resources and directions of banking activity, the structure of banking operations, which exemplifies the dispositive method of regulation of banking activities.

Questions for self-assessment

1. Describe the essence of credit. What are its main principles?
2. Explain the need of society for credit.
3. Who are the main participants in the credit relations? What is loan capital?
4. What is interest, the interest rate? What factors influence its value?
5. Compare the naturalistic and capital-based theories of credit.
6. Define the main functions of credit and the roles of credit when performing a certain function.
7. Provide the classification of credit types based on its main features.
8. Compare commercial and bank credits. Compare leasing and factoring.
9. Who are financial intermediaries? What is the difference between depository, contractual saving and investment intermediaries?
10. Explain the general mechanism of financial intermediaries functioning.
11. What are the main functions of a bank? How do they correspond with the basic bank services?
12. Compare the imperative and dispositive methods of legal regulation of banking.
13. Describe the banking system of Ukraine.

4. The budget and the budgetary system of the state

The purpose of the theme is to study the specifics of the budgetary system of the state, the definition of the peculiarities of the budget revenues and expenditures, as well as the main methods of balancing the system.

The main competence: the ability to identify the specifics of the budgetary system of the state and understand the relations between its components.

Agenda

4.1. The essence of the budgetary system, the budgetary process, budget regulation.

4.2. State budget revenues.
4.3. State budget expenditures.
4.4. Budget deficit.

4.1. The essence of the budgetary system, the budgetary process, budget regulation

The totality of all budgets of the country forms its **budgetary system**. Usually, the budgetary system consists of the state budget and local budgets, like provincial, municipal, district, regional, city budgets, etc.

Budgetary systems in each country have their own characteristics: composition, structure, interrelationship between budgets. The form of government and the administrative-territorial division of the country have a decisive influence on the budgetary structure.

The principles of constructing the budgetary system of Ukraine are as follows [35]:

1) **the principle of unity** which is ensured by a unified legal framework, a single budget classification, a single account of incomes and expenditures of each level of the budgetary system, the unity of the forms of budget documentation, etc.;

2) **the principle of completeness** which implies representation of all revenues and expenditures in the budget;

3) **the principle of reliability** which means the formation of budgets on the basis of real indicators, scientifically substantiated standards;

4) **the principle of transparency** which ensures divulgation of the budgets and reports on their implementation in the mass media;

5) **the principle of visibility** that is the representation of budget indicators in conjunction with general economic indicators in Ukraine and abroad through the results of comparative analysis, determination of rates and proportions of economic development;

6) **the principle of independence** which is ensured by the availability of owned sources of income and the right to determine the areas of their use in accordance with the law.

In Ukraine, the organization of interbudgetary relations is carried out vertically, that is, between budgets of different levels, and horizontally – between budgets of the same level. In a vertical structure, relationships are allowed only between budgets located nearby.

The composition of the budgetary system is shown in the consolidated budget of Ukraine. The Budget Code defines the consolidated budget as a set of budget indicators used to analyze and forecast the economic and social development of the state [5].

A prerequisite for fiscal policy is the balance of budgets that are part of the budgetary system. This problem is of particular importance in today's development of Ukraine.

The state budget has the force of law. This, in particular, means that all relations regarding drafting the budget, its review, approval and implementation are governed by laws. This also applies to the distribution of functions between the government bodies. The activity of these bodies, connected with the budget, is regulated by the budget law. Hence, **budgetary rights** are a set of legal norms that regulate the activities of state authorities and government in drafting, reviewing, approving and executing the state budget.

The main budgetary rights of the Verkhovna Rada of Ukraine are:

- to identify the key areas of fiscal policy, drawing up special regulations (budget resolution);
- to review the draft budget;
- to amend the draft budget;
- to approve the state budget;
- to exercise control over the execution of the state budget;
- to approve of the report on the implementation of the state budget;
- to establish a list of taxes and mandatory fees.

In Ukraine, there are four legally established stages of the **budgetary process** (Fig. 4.1):

1) drawing up a draft state budget;
2) review and approval of the state budget;
3) execution of the state budget and control over its implementation;
4) drawing up a report on the implementation and its approval.

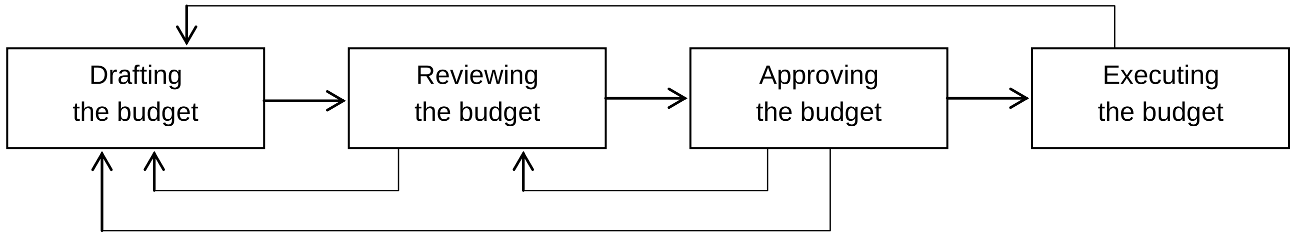

Fig. 4.1. **Relations between the stages of the budgetary process** [5]

The duration of the stages of the budgetary process varies in some countries, but in most cases, the whole process goes on for over a number of years. The budget is for a year, this period is called the budget period, in Ukraine it coincides with the calendar year.

The organization of the budgetary process in Ukraine is carried out on the basis of the Budget Code [5]. The preparation of the draft budget of Ukraine is preceded by a long and lengthy preparatory work by the Cabinet of Ministers, the Ministry of Economy and the Ministry of Finance. The Cabinet of Ministers of Ukraine shall provide the local councils of people's deputies, their executive bodies, with the instructional materials explaining the peculiarities of compilation of calculations for draft budgets for the next fiscal year.

The Ministry of Economy of Ukraine, with the participation of the Ministry of Finance of Ukraine and the National Bank of Ukraine, develops the main forecasted macroeconomic indicators of Ukraine's economic and social development for the planned year which contain the volumes of the GDP, the national income, the consolidated balance of financial resources, the balance of incomes and expenditures of population, the balance of payments, the currency plan. The above indicators should be developed before June 1 of the year preceding the planned one.

The Verkhovna Rada of Ukraine, no later than June 15 of the same year, develops and passes a special resolution called a **budget resolution** to the President. It highlights the priorities of fiscal policy for the coming year.

The Cabinet of Ministers organizes works on the drafting of the State Budget of Ukraine. The Ministry of Finance directly draws up the **preliminary draft consolidated budget of Ukraine** on the basis of the main forecasted macroeconomic indicators of Ukraine's economic and social development and the financial capacity of the state. The relevant indicators are presented by the Ministry of Finance to the ministries, departments, state committees, bodies of the state executive power which, within two weeks, consider them and submit their proposals to the Ministry of Finance with appropriate calculations and justification. All proposals are considered by the Ministry of Finance and then **drafts of the consolidated and State Budget** are prepared. Moreover, this work must be completed by August 15 of the same year and the draft is to be submitted to the Cabinet of Ministers of Ukraine.

The Cabinet of Ministers **reviews a draft law** about the State Budget of Ukraine, adopts a final resolution and submits it to the President of Ukraine, who reviews this draft and, if agrees, submits it to the Verkhovna Rada by September 15 for consideration and approval.

The draft Law about the State Budget of Ukraine should be presented by the President of Ukraine at a session of the Verkhovna Rada, and the Minister of Finance makes a more detailed report. The Verkhovna Rada, as the highest legislative body in Ukraine, **approves** the Law about the State Budget of Ukraine, which states:

1) the amounts of income according to the budget classification;

2) the amount of expenditures for each manager of funds according to the budget classification;

3) the limit of the deficit of the State Budget of Ukraine and its source of financing;

4) the amount of subsidies, subventions and the amount of deductions from the regulatory incomes to the local budgets;

5) the amount of cash in circulation of the State Budget of Ukraine.

The Budget Code approved by the Verkhovna Rada of Ukraine is published in the press for general familiarization.

The law about the State Budget must be approved before the beginning of the planning year. However, under the difficult modern conditions, the practical implementation of this provision of the current legislation is not ensured. Budget laws in recent years have been adopted with significant (several months') delay, which, of course, negatively affects the activities of business entities.

If the Verkhovna Rada does not approve the Law about the State Budget of Ukraine until December 2 of the year preceding the planned one, a resolution on the financing of current losses is passed. If this resolution is not adopted before December 30, then the Law of Ukraine about the State Budget of Ukraine for the current year is automatically continued, except for indicators on development expenditures.

The **execution** of the State Budget of Ukraine is organized by the Cabinet of Ministers through the Ministry of Finance, ministries, departments, other bodies of state power, executive bodies of local authorities. The cash execution of the State Budget of Ukraine is carried out by banking institutions.

The Verkhovna Rada of Ukraine exercises **control** over the implementation of the State Budget of Ukraine.

After the end of the fiscal year, the Ministry of Finance of Ukraine makes a **report on the implementation** of the State Budget of Ukraine, which, by May 1 of the year following the reporting year, must be submitted by the President of Ukraine at a session of the Verkhovna Rada of Ukraine, which reviews and approves the report [5; 35].

In budgetary balancing, **budget regulation** is important, which is to provide funds from the State Budget of Ukraine to the local budgets to balance the incomes and expenditures of each budget. Part of the income can be transferred in the form of i**nterest deductions from national taxes and mandatory payments**, which are settled in a certain territory or in the form of **subsidies and subventions**.

The most widespread method of budgetary regulation is interest deductions from national taxes and fees. The essence of this method is as follows. All budget revenues are divided into two groups:

1) **assigned**, which are fully received in the budget;

2) **regulatory**, which are divided into a certain percentage between individual budgets.

For example, such revenues as follows are assigned to local budgets:

- local taxes and fees;
- the tax on the owners of vehicles and other self-propelled machinery and mechanisms;
- the tax on fishing;
- the state customs duty;
- the trade patent fee;
- the income from the lease of integral property complexes that are in communal ownership;
- the funds from municipal loans, etc.

Of course, these revenues are not enough to finance local budget expenditures, and therefore regulatory revenues are used. These include revenues that come to the local budgets at regular intervals. These are: the value added tax, the corporate income tax, the excise tax, the personal income tax, the land fee.

In addition, balancing of budgets can be carried out by providing subsidies and subventions from the state budget. **Subsidies** are funds that are allocated from the state budget on a nonrefundable basis. Provision of **subventions** involves the sending of funds for the financing of specific measures, and in case of misuse, the funds must be returned.

4.2. State budget revenues

✍ **State revenues** are the amount of money mobilized by the state to secure its activities

They express the economic relations that arise in the process of the formation of funds, and come to the disposal of the authorities (Fig. 4.2).

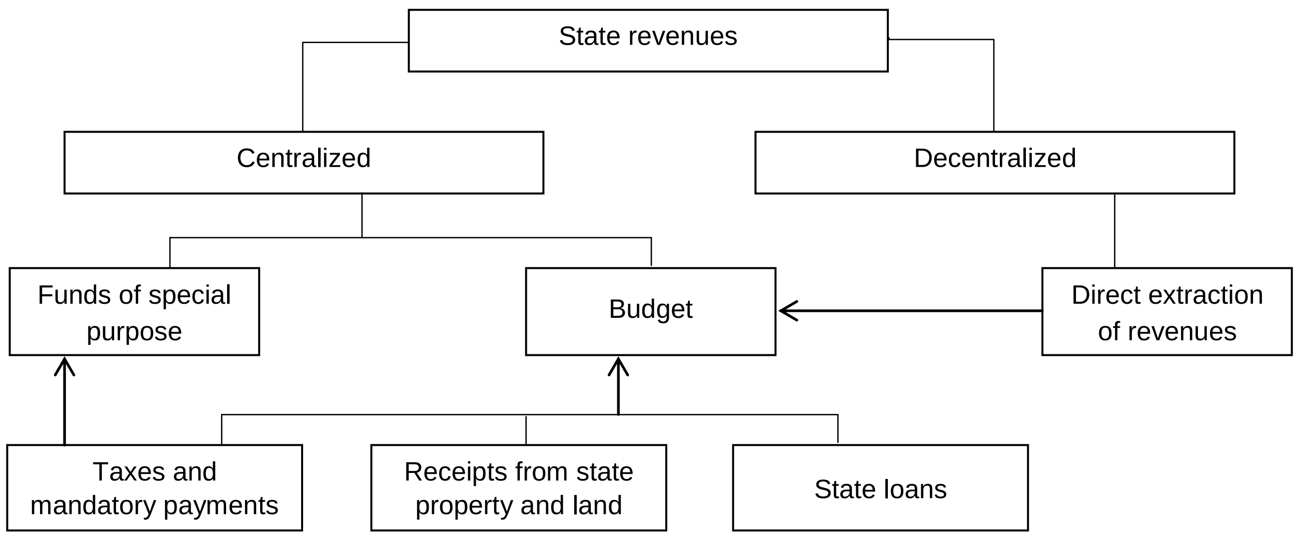

Fig. 4.2. **The system of state revenues** [35]

✍ **Centralized revenues** are concentrated in the state budget and funds of special purpose

Depending on the methods of mobilization, they are divided into taxes, loans, receipts from state property and land.

Budget revenues are part of the centralized financial resources of the state necessary for the performance of its functions.

Depending on the form of government of the country, there are: revenues of the central (state) budget and revenues of local budgets in a unitary state; in the federal (union) state, these two types of income are supplemented by the revenues of the budgets of members of the federation.

The main source of budget revenues is the **national income**. When the national income is not enough to cover financial needs, the state attracts national wealth. Reception of national income is carried out by the state by different methods. The main methods used by public authorities to redistribute national income and generate budget revenues are taxes, loans and issue of money. The relationship between them in different countries and in time is determined by the economic situation in the country, the degree of severity of economic, social and other contradictions, conditions of finance and financial policy of the state.

Taxes are the main method of redistribution of national income; they provide the bulk of budget revenues. Thus, in the central budget revenues of different states they make about 90 %. The share of taxes in the income of members of the federation and local budgets is much smaller. These budgets are formed at the expense of assigned and regulatory revenues.

The second (by their financial value) financial source of budget revenues is government **loans**. The state takes loans under budget deficit, which is foreseen when the budget for the coming year is drawn up. As the financial tensions in the countries increase and the deficit increases, the state is increasingly turning to loans. There are two ways of obtaining loans:

✓ from the population through the free sale of government bonds and other securities;

✓ from the Central Bank and commercial banks under securitization of the state. An increase in the volume of credit operations of the state leads to an increase in public debt.

A public debt is closely tied to taxes. Repayment of loans, payment of interest on them is largely due to additional tax payments or the issuance of new loans.

In extraordinary circumstances, when receiving tax payments and loans is difficult, the state turns to the **issue of paper money**. This method is unpopular because it causes the growth of money supply without adequate product support and leads to an intensification of the inflationary process, which has severe social and economic consequences.

Budget revenues are classified according to different characteristics (Fig. 4.3).

Taxes play a crucial role in budget revenues.

✍ **Taxes** are compulsory payments levied by the state (central and local authorities) on individuals and legal entities

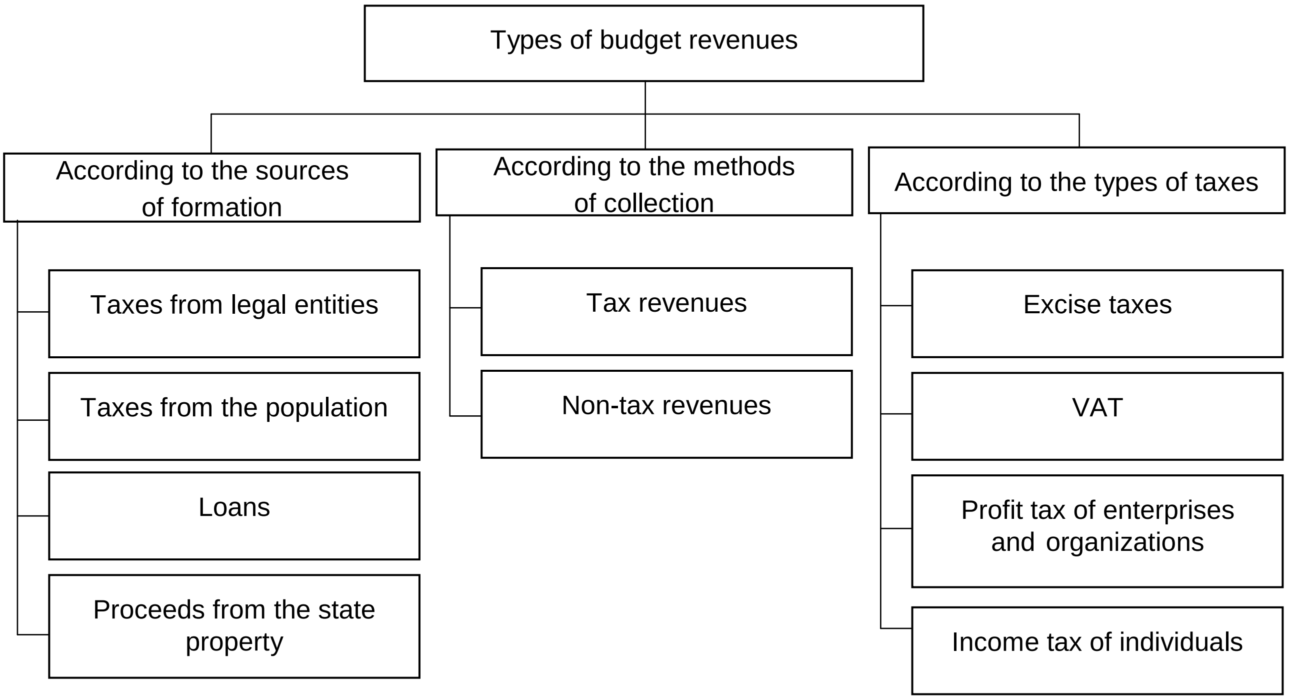

Fig. 4.3. **The main types of budget revenues** [35]

Decentralized state revenues are placed on state-owned enterprises. In turn, some of them can be centralized (and are centralized) in the budget and funds of special purpose. At the same time, the state can apply to its enterprises a tax method of mobilizing funds, as well as direct extraction of part of income. The method of relations between the state and its enterprises is determined by the nature of the economic system. In an administrative economy, direct extraction of income prevails while in a market environment, state enterprises build their relationship with the state on generally accepted tax bases.

The main purpose of the system of state revenues is to create a reliable financial base for ensuring the financial activity of the state.

The first section of the budgetary classification of Ukraine "Classification of Budget Revenues" contains the codification of all types of revenues to be credited to the State Budget and local budgets of Ukraine [34]. According to the budget classification, budget revenues are grouped depending on the sources and forms of ownership of taxpayers, which makes it possible to determine their economic essence (Table 4.1).

Tax revenues are defined by the tax laws of Ukraine for national and local taxes, fees and other mandatory payments.

Table 4.1

Classification of budget revenues of Ukraine [24]

Group	Types
Tax revenues	• income taxes, profit taxes, taxes on the increasing market value; • property taxes; • fees and charges for special use of natural resources; • internal taxes on goods and services; • taxes on international trade and external operations; • specific taxes and charges payable to local budgets; • rental fees, charges for fuel and energy resources; • local taxes and fees; • other taxes and fees
Non-tax revenues	• income from the ownership and entrepreneurial activity; • administrative fees and payments, revenues from non-commercial activities; • other non-tax receipts; • budget institutions' owned receipts
Revenues from operations with capital	• receipts from the sale of state inventories of goods; • proceeds from the sale of land and intangible assets; • taxes on financial and capital transactions
Transfers	• from the public administration; • from governments of foreign countries and international organizations; • from the other parts of the budget
Funds of special purpose	• the Pension Fund of Ukraine; • charge for compulsory social insurance to the Social Insurance Fund of Ukraine for Temporary Disability; • charge for compulsory state social insurance of Ukraine in case of unemployment to the Fund of Obligatory State Social Insurance of Ukraine in Case of Unemployment; • payments to the Fund for Social Insurance against Accidents at Work and Occupational Diseases in Ukraine; • receipts to the Fund for Social Protection of Disabled People; • other funds

Non-tax revenues include all irrecoverable receipts (except for proceeds from the sale of capital), all proceeds from fines and penalties (except for fines for violation of tax laws), as well as voluntary, non-repayable current proceeds from non-state sources.

Revenues from operations with capital cover the sale of fixed capital, state stocks, land and intangible assets.

Transfers are funds received from other bodies of public power, local self-government, and other public or international organizations on a gratuitous and irrevocable basis.

State funds of special purpose are a set of financial resources that are at the disposal of public and local authorities and have a special purpose.

Together, tax and non-tax revenues are current income. If we add the amount of income from operations with capital to the current income, then we will get the total income.

The composition of budget revenues and their structure are organically linked to the volume of gross domestic product and defined by financial policy of the state.

The internal sources of the budget revenues are the GDP and the national wealth. The external sources are revenues from an international reallocation of income and financial resources.

When forming budget revenues, the state can use general methods common to all subjects of financial relations (from productive activity, from property and state lands, borrowing), and specific methods, inherent only to the state (tax, emission) (Table 4.2).

State revenues from entrepreneurial activity are the profit of state enterprises. Owned by the state, it belongs to the state. However, as a rule, the state never completely centralizes this source in the budget, but leaves a certain part at the enterprise. Mobilization of part of the profit of state enterprises to the budget can be done by direct withdrawal or on the basis of the tax method. In any case, this is an internal relationship in the system of public finances.

Revenues from public services come to the budget in the form of a state duty – fees for notarial services, issuance of permits, patents, documents, etc. and in the form of compensatory revenues for work performed by the state – exploration, road works, etc.

Table 4.2

The methods of forming budget revenues

Method	Revenue	Source
1	2	3
Productive activity: entrepreneurial	Part of the profit of state enterprises	GDP

Table 4.2 (the end)

1	2	3
Productive activity: public services	State customs duty	
	Compensatory revenues	
From property and property rights	Permanent (from the lease and the state corporate rights)	
	One-time (from the sale of property)	National wealth
From state land	Payment for resources	
	Concessions	
Tax	Taxes	Internal (GDP)
		External
Loan	External loans	
	Internal loans	Internal and external
Emission	Income from emission	–

Revenues from state property and property rights can be received on a permanent and one-time basis. Permanent income is rent and dividends from shares that represent the corporate rights of the state to share ownership of joint-stock companies owned by the state. The state receives one-time revenue from the sale of its property or corporate rights (for example, privatization proceeds).

Revenues from state lands are connected with the state property in the land and mineral resources. They can be received in the form of payments for the use of forest and water resources, for the extraction of minerals, as well as in the form of income from concessions – the transfer of rights to use land and resources.

The tax method of generating budget revenues involves the redistribution of income of legal entities and individuals in favor of the state. The bulk of taxes shows the redistribution of the GDP produced in the country [16].

A certain part of tax revenues represents international reallocation of income and is formed at the expense of external sources (customs fees paid by non-residents in the import, export or transit of goods across the customs border, taxes paid at the expense of income received abroad, etc.).

The use of **the loan method** of budget formation by the state has a specific character. After all, if the entities' financial activity is based on the circulation of resources (including loans that after their use in one or several turns can be returned to the owner), then the state finances from the budget, as a rule, on an irrevocable basis. That is, using loans requires the implementation of expenditures for servicing public debt, which, in addition to the amount of debt, includes the payment of interest. This means that for the financial activity of the state, borrowing is appropriate when loans are provided by a proper financial performance, first of all the GDP growth. If this is not ensured, both internal and external loans are only temporary revenues. At the same time, from the point of view of the current year's budget this is an income that finances its expenditures. Under the globally recognized methodology, public loans do not belong to budget revenues, but to sources of funding, that is, they are used to cover the deficit.

If the revenues from loans are temporary, then **the emission income**, which is the difference between the nominal value of money issued and the cost of printing it (quite significant, but practically insignificant in comparison with the nominal value), is, in fact, fictitious. It does not show either the value of the created GDP or the realized national wealth. From the position of the current fiscal year, the emission income, as well as public loans, provides financing for the provided expenditures. However, taking into account its specifics, it does not belong to budget revenues either, but to the sources of its financing.

According to various estimates, the share of taxes in budget revenues should be about 90 – 95 %. This is explained, firstly, by their nature – compulsory, irreversible, non-equivalent, regular payments. It is they who most closely correspond to the scheme of financial activity of the state and put it on a stable basis. Secondly, other methods of budget formation have significant limitations. So, emission income is generally undesirable and is used as a last resort. Loan revenues are limited by real sources of repayment. At the same time, it is generally considered that the budget deficit should not exceed 2 – 3 % of the GNP (GDP), which is 5 – 7 % relative to the budget (with an average level of budgetary centralization of the GNP 40 – 45 %). Revenues from the state's entrepreneurial activity in a market economy are quite limited, since the public sector functions, as a rule, in unattractive that is, low-income or generally unprofitable sectors of the economy. Revenues from government services, state property and land in the vast majority of countries are extremely limited and unstable [35].

Since the budget is a system of comprehensive redistributive relations, its formation and state are of particular importance for the state, each legal entity and individual and society as a whole. **Budgeting** involves solving a triple **task**. First, the definition of real revenues. Second, optimizing the structure of expenditures ensuring the maximum level of the GDP growth when meeting the minimum social needs. Third, balancing the budget. Balancing problems lie in the fact that, as a rule, the needs of any subject, including the state, exceed opportunities.

Balancing the budget is possible due to:

a) increase in revenues – the introduction of new taxes, raising rates or expanding the object of taxation from existing taxes, increasing the use of non-tax revenues;

b) reduction of expenditures – proportional or selective;

c) on the basis of the adoption of a budget deficit with the establishment of sources of its coverage (government loans or money issues).

In the presence of significant financial problems, all these methods of balancing the budget can be used in a complex.

4.3. State budget expenditures

Execution of any function of the state requires direct expenses of financial resources. Therefore, the expenditures of the state are one of the important aspects of the financial activity of the state, which is directly related to its activity in mobilizing funds in the state and local budgets and state funds of special purpose.

Public expenditures are an integral part of financial relations, which consist in the continuous targeted use of state money resources accumulated in:

- ✓ the state budget and local budgets;
- ✓ state and local budgetary and extrabudgetary funds;
- ✓ owned funds of state and municipal enterprises, institutions and organizations for the fulfillment of state functions, financing of state and municipal social and cultural spheres, state target programs, as well as financing of the expansion of production of certain state and municipal enterprises, institutions and organizations in accordance with the current legislation of the state.

The aggregate of all types of public expenditures is a **system of public expenditures**. This system includes:

- ✓ public expenditures from the state budget;
- ✓ public expenditures from local budgets of all levels;

✓ public expenditures from budgetary and extrabudgetary centralized state and local funds;

✓ expenditures of state and municipal enterprises, organizations and institutions.

The general principles of legal regulation of budget expenditures are set out in the Budget Code of Ukraine [5].

The funds of the State Budget of Ukraine are spent only for the purposes and within the limits approved by the Law about the State Budget of Ukraine.

The State Budget of Ukraine does not include expenditures that are not provided by the laws of Ukraine. The State Budget of Ukraine points to the legal significance of laws and decisions on the budget, as well as the importance of the principle of legality in the field of budget expenditures. The distribution of expenditures between budgets is carried out in accordance with the Law of Ukraine about the Budget System of Ukraine. The law categorically prohibits the use of budget funds to finance extrabudgetary funds that can be formed by the proceeds from non-compulsory payments, voluntary contributions from individuals and legal entities, and other non-budget sources.

Budget expenditures of all levels are grouped on the subject basis according to the budget classification of Ukraine. In addition, there is a functional separation of expenditures of all budgets into current expenditures and development expenditures.

Current expenditures are budget expenditures for financing the network of enterprises, institutions, organizations and bodies operating at the beginning of the fiscal year, as well as for financing measures for social protection of the population and other measures not related to development expenditures. As a part of current expenditures, there are budget expenditures allocated due to the growth of the network of the above-mentioned objects, indicating all factors that influence the volume of expenditures.

Development expenditures include budget expenditures for financing investment and innovation activities, in particular, financing of capital investments of production and non-production purposes, financing of structural adjustments of the Ukrainian economy, subventions and other expenditures related to expanded reproduction.

The composition and structure of expenditures of state and local budgets are determined by many factors, in particular their subject-oriented nature (in general, it is seen in the budget classification), economic content, etc.

But in any case, the state, when allocating expenditures, has to decide on the priority of funding the objects [35].

Since Ukraine, like any other country in the world, does not have enough money to finance all needs, the process of planning the expenditures is reduced to the problem of choice between competing needs.

The allocation of expenditures between individual units of the budgetary system of Ukraine is governed by such general principles as the significance, jurisdiction, subordination of the objects of financing, their territorial placement, and others.

The State Budget of Ukraine includes a **reserve fund** for the Cabinet of Ministers of Ukraine in the amount of up to two percent of the volume of expenditures of the State Budget. It can be used to finance urgent expenditures in the national economy, socio-cultural and other measures that could not be foreseen at the time of approval of the State Budget.

In the State Budget of Ukraine, reversible cash in the amount of up to two percent of the volume of expenditures of the State Budget is generated. It can be used during the year to cover temporary cash gaps and should be restored in the same year to the amounts established during the approval of the state budget of Ukraine.

The list of specific **expenditures** for each of the **local budgets** is set by the relevant Council. Councils and their executive agencies dispose of their respective local budgets, determine the directions of their use.

As in all budgets, expenditures of local budgets are divided into current and development expenditures. In addition, local budget expenditures are divided into two parts:

a) expenditures related to the needs of the local self-government;

b) expenditures related to the implementation of powers delegated by the central executive power bodies.

Local budgets create reserve funds of up to one percent of the expenditures of each of the respective budgets to finance urgent measures that could not be foreseen at the time of approving these budgets. A reversible cash fund is also created similar to the state budget.

4.4. Budget deficit

If the available budget revenues are insufficient to finance all the necessary needs, then there is a **budget deficit**, that is, an excess of expenditures from the budget over its revenues. A negative feature of the budgets of Ukraine, is chronic deficit.

The reasons for the budget deficit can be:

1. Significant investments in the development of the economy. Such a budget deficit is not a consequence of crisis phenomena, but a result of a certain policy of the government, which conducts significant structural changes in the national economy.

2. Negative, devastating consequences of unforeseen events, such as war, catastrophe, natural disasters.

3. The crisis in the economy, which affects the budget deficit. Such a budget deficit is hardest to overcome, for these measures should be taken to financially improve the economy, but only if this condition can be expected to balance the budget.

One of the most important directions of the modern financial policy of the Government of Ukraine is overcoming the budget deficit. In developing measures to address this difficult problem, it should be taken into account that the budget deficit itself is not an evil as such. The most powerful countries of the West lived and live in debt in a market economy. The main thing is the size of the budget deficit, which is commensurate with the size of the established gross national product. The experience of Western countries proves that the admissible budget deficit is 2 – 3 % of the GNP, in such limits it does not only avoid negative consequences, but even contributes to the development of the economy, the revitalization of business activity. This practice is called "deficit financing" [35].

The ways of overcoming the budget deficit are:

- recovery of the national economy;
- restructuring of the tax system in the direction of reducing the tax burden and stimulating business activity;
- reduction of budget subsidies;
- reduction of financing of state investments;
- introduction of compulsory medical insurance;
- economical and targeted spending of budget funds;
- strengthening control over timely and full payment of taxes;
- reduction of expenditures for management and defense;
- use of non-emission sources for covering the budget deficit, etc.

Under current conditions, the state budget deficit is legally limited, and its sources are internal and external loans, loans from the National Bank of Ukraine.

Questions for self-assessment

1. What is a budgetary system, its main principles?
2. What are the main budgetary rights?
3. Characterize the budgetary process.
4. What is budget regulation? What methods are usually used in this process?
5. What are state budget revenues?
6. Describe the system of state revenues.
7. What are the main types of centralized state revenues?
8. What are the main types of decentralized state revenues?
9. What are the main types of the state budget revenues?
10. Characterize the classification of the budget revenues of Ukraine.
11. What are the main methods of forming the budget revenues?
12. What are public expenditures? What is the difference between expenditures of the state and local budgets? What is the difference between current and development expenditures?
13. What is budget deficit? Its reasons and ways of overcoming?

Practical tasks for content module 1

Tests (single answer)

1. Which of the following do banks not do:
a) print money;
b) make loans;
c) take deposits;
d) invest money?

2. When you give money to a bank, what are you:
a) a borrower;
b) a lender;
c) a depositor;
d) a withdrawer?

3. What is the primary role of the Central Bank:
a) earning interest;
b) providing protection;
c) making deposits;
d) making loans?

4. Which of the following is not a primary use for deposits:
a) loans;
b) payment of employees;
c) investment;
d) withdrawals?

5. What is the principle of a loan:
a) the interest paid;
b) the interest unpaid;
c) the total amount paid;
d) the initial amount loaned?

6. When a bank uses fractional reserve banking, which of the following remains unaffected:
a) the money supply;
b) the price level;
c) customers;
d) loans?

7. What do you call deposits that are covered by cash:
a) paper deposits;
b) nominal deposits;

c) cash deposits;
d) real deposits?
8. Which of the following best describes how banks make loans:
a) without limitation;
b) reasonably, depending upon risk;
c) reasonably, not depending upon risk;
d) blindly with equal offers to all customers?
9. Which of the following best describes bank systems:
a) regulated and safe;
b) unregulated and unsafe;
c) regulated and unsafe;
d) unregulated and safe?
10. Financial markets are used for trading:
a) both real assets and financial assets;
b) the goods and services produced by a firm;
c) securities, such as shares of corporation;
d) the raw materials used in manufacturing.

Task 1

Match the financial institutions with their definitions (Table 1). Only one answer is possible.

Table 1

Financial institutions

Definition	Concept
1	2
1. Legal entities which act as fiduciaries, agents or trustees on behalf of a person or business entity for the purpose of administration, management and the eventual transfer of assets to a beneficial party	A. Brokerages
2. Investment companies which offer a fixed portfolio, generally of stocks and bonds, as redeemable units to investors for a specific period of time	B. Commercial banks
3. Banks concerned with the social and environmental impacts of its investments and loans	C. Credit unions
4. Banks that provide financing to large corporations that do business overseas	D. Direct or Internet-only bank

Table 1 (the end)

1	2
5. Banks which combine the services of a commercial bank and an investment bank, providing all services from within one entity	E. Ethical banks
6. Banks which offer customers just about every service traditionally available through a local branch, including deposits, which is done online or through the mail, and online bill payment	F. Insurance companies
7. Banks which provide various financial services (accepting deposits and issuing loans); make money by using their customers' deposits for loans with interest rates above the rates they pay to depositors	G. Investment banks
8. Banks which specialize in large and complex financial transactions (underwriting, acting as an intermediary between a securities issuer and the investing public, facilitating mergers and other corporate reorganizations, and acting as a broker and/or financial adviser for institutional clients); are subject to low regulation	H. Islamic banks
9. Banks which use equity-participation systems (if a bank loans money to a business, the business pays back the loan without interest, but it gives the bank a share in its profits; if the business defaults on the loan or does not earn any profits, the bank does not receive any profit either)	I. Management investment companies
10. Banks located outside the country of residence of its depositors, with most of its account holders being non-residents of the jurisdiction	J. Merchant banks
11. Companies that actively manage a portfolio of securities to achieve its investment objective	K. Mortgage loan companies
12. Companies which offer secured loans to people, with items of personal property used as collateral	L. Offshore banks
13. Companies which pool risk by collecting premiums from a large group of people who want to protect themselves and/or their loved ones against a particular loss, such as a fire, a car accident, illness, a lawsuit, disability or death	M. Pawnshops
14. Companies which resemble banks in many respects; typically offer lower borrowing rates than commercial banks and higher interest rates on deposits	N. Pension funds
15. An entity that is responsible for evaluating and assuming another entity's risk, for a fee such as a commission, a premium, spread or interest	O. Savings and loan associations
16. Firms engaged in the business of originating and/or funding mortgages for residential or commercial property	P. Trust companies
17. Member-owned financial co-operatives which are created and operated by their members with profits shared amongst the owners; members pool their money in the bank in order to be able to loan money to each other and achieve these financial benefits	Q. Underwriters
18. Middlemen who connect buyers and sellers to facilitate a transaction	R. Unit investment trusts
19. Superannuation funds which provide retirement income	S. Universal banks

Task 2

Based on Table 2, calculate:

1) the annual growth rate of:

- monetary base;
- cash in circulation (M0);
- money supply (M2);

2) the money multiplier;

3) the share of cash in the money supply (M2), in %.

Table 2

Data for calculation

	Jan. 1, 2016	Jan. 1, 2017	Jan. 1, 2018
Reserve money ($ billion)	164.9	210.4	269.7
Including cash money outside the banks	103.8	130.4	187.8
Demand deposits	87.3	162.5	149.5
Time and savings deposits	97.2	81.2	111.0

Task 3

Define the quantity of money necessary for a turn, if:

1) the cost of a unit of goods released in the country is $450 billion, including 14.8 % released on credit;

2) the cost of the goods for which the payment term has expired is $18 billion, 5.3 % of which is repaid by offset of mutual requirements;

3) the monetary unit turns around 15 times a year.

Task 4

Cash in circulation (M0) amounted to $1093.1 billion, M2 was $2746.9 billion, the rate of mandatory reserves in the Central Bank was 10 %.

Define:

1) the share of cash in turnover in the money supply (M2);

2) the money multiplier;

3) the bank multiplier.

Task 5

Define the monetary turn in the country using formula (1) and the volume of the realized goods if the yearly weight of money in the turn has made 300 billion monetary units, the speed of the turn is 14, the average level of the prices makes 210 monetary units.

$$M \cdot V = Q \cdot P, \tag{1}$$

where M is the weight of money in the turn;

V is the speed of the money turn;

Q is the volume of the realized goods;

P is an average level of prices;

$M \cdot V$ is the volume of a monetary turn;

$Q \cdot P$ is total national product.

Task 6

Based on Table 2, determine M0, M1, M2, M3.

Table 2

Data for calculation

Indicator	Value
Small time deposits	300
Large time deposits	645
Demand deposits	448
Government bonds	300
Cash	170

Unit 2
The foundations of the enterprise finance

5. Finance of an enterprise

The purpose of the theme is to form knowledge of the basis of enterprise's finance and understanding of the corporate finance sources.

The main competence: the ability to understand the essence of the corporate finance, its specific functions and main sources for forming the capital of an enterprise.

Agenda

5.1. The essence and the main features of an enterprise's finance.
5.2. Classification of an enterprise's finance.

5.1. The essence and the main features of an enterprise's finance

Finance can be defined as the art and science of managing money. Finance consists of three interrelated areas as presented in Fig. 5.1.

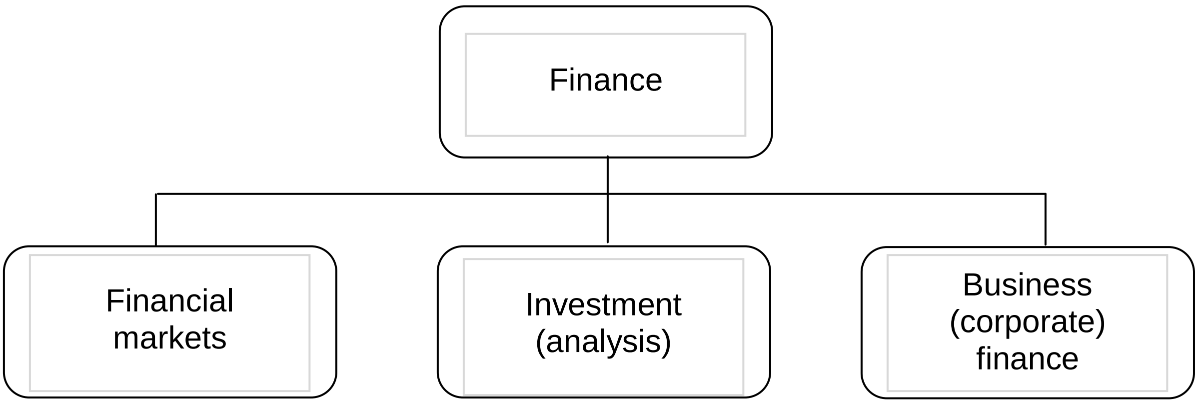

Fig. 5.1. **Financial areas**

Financial markets are characterized by the following features:

➢ it is a place where firms issue and investors buy and sell financial securities;

➢ these markets assist investors in buying and selling stock and other securities;

➢ these markets involve a variety of financial intermediaries (financial institutions), commercial banks, stock brokers, insurance companies, finance companies, pension funds, etc.;

➢ financial instruments: stocks, bonds, certificates, deposits, mortgages, etc.

Investment (analysis) is made by financial consulting firms which advise individual investors (based on either their own or investors' analysis) on how to invest their funds.

There are three main functions in the investment area:

➢ sales;

➢ the analysis of individual securities;

➢ determining the optimal mix of securities.

Business (corporate) finance or financial management (planning and control) is defined as the management and use of capital sources in order to achieve the desired goal (value creation).

The relationship between investments, financial markets and financial management is presented in Fig. 5.2.

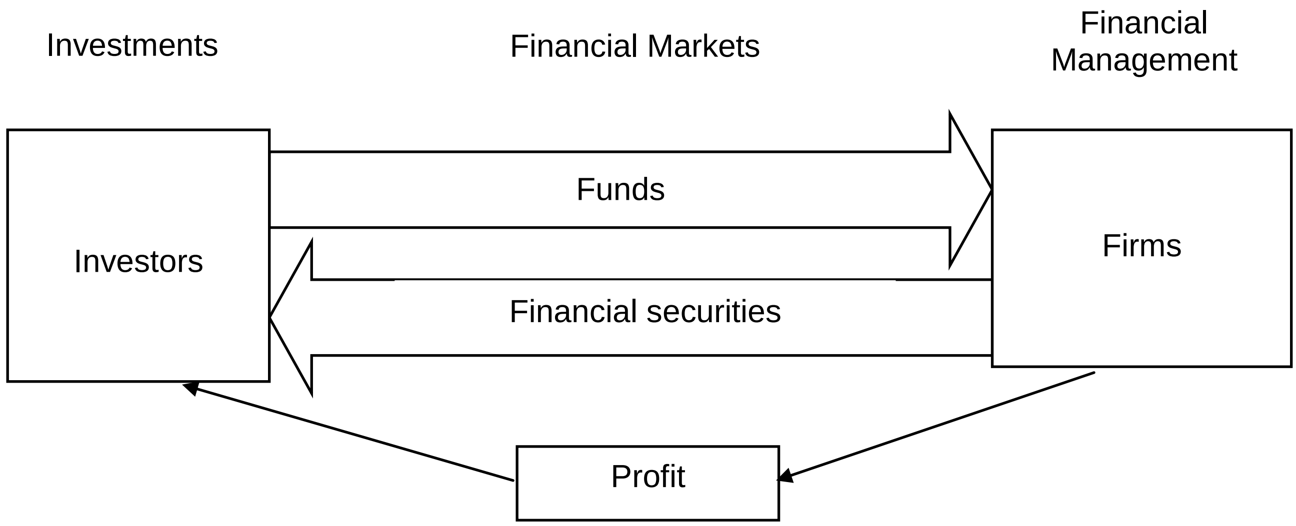

Fig. 5.2. **The relationship between financial areas**

Finance is the study of how people and businesses evaluate investments and raise capital to fund them.

Three questions addressed by the study of finance at an enterprise are:

1. What long-term investments should the firm undertake?
2. How should the firm fund these investments?
3. How can the firm best manage its cash flows as they arise in its day-to-day operations?

Whether managing money for home, or for a firm, we have to make the following decisions based on the same general principles. These principles instruct us to make three main types of decisions by performing three primary duties:

✓ the capital budgeting decision – the answer to the question *"How to spend the money? "*;

✓ the capital structure decision – the answer to the question *"How to get the money? "*;

✓ the working capital decision – the answer to the question *"How to manage cash (liquid) money? "*.

So, one of the main questions is: "Why do businesses need finance?" The answer to this question is given in Fig. 5.3.

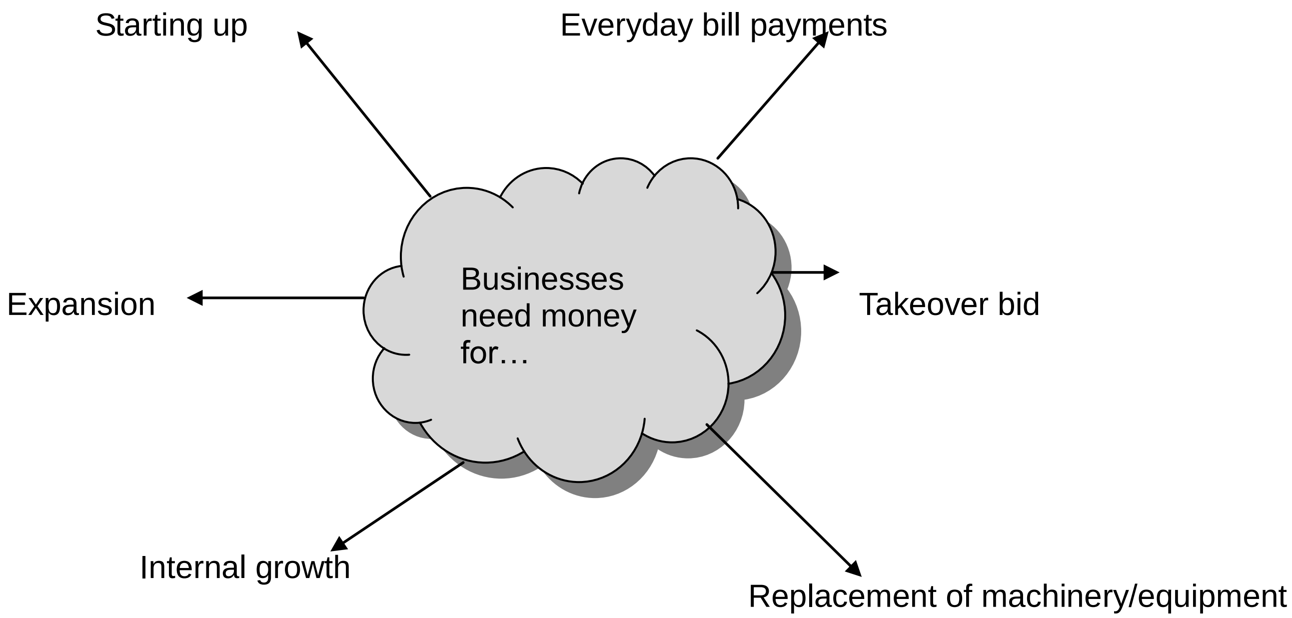

Fig. 5.3. **Business finance needs**

With the capital budgeting decision, the financial manager of an enterprise decides where best to invest money in the long term [27]. The purchase of a new delivery truck or a new warehouse is a capital budgeting decision; the payment of a utility bill is not. With the making of this decision, an enterprise considers three features of the cash flows deriving from the decision:

✓ the *size* of the cash flows;

✓ the *timing* of the cash flows;

✓ the *risk* of the cash flows.

✍ **Capital budgeting** is the process of planning and managing a firm's investment in physical or intangible assets; capital assets

The assets are expected to be used over a long period of time e.g. when a firm acquires a plant and equipment or replaces the old equipment or when you invest in research and development.

With the capital structure decision, the financial manager decides from where best to *acquire* money in the long-term. The purchase of that new delivery truck for cash or on a loan from GMAC or Ford Motor Credit is a capital structure decision; the use of long-term borrowing to fund a franchise purchase is another example [26].

Perhaps the most important thing is the following: the decision to fund a firm's growth with equity – such as with funds invested by the firm's founders, angel investors, venture capitalists or public stock offerings – or debt, is a critical capital structure choice. Two features of this choice should be mentioned:

✓ the risk of debt;

✓ the loss of control and reduced potential cash flows to the founders with an equity or stock sale.

Capital structure choice consists of:

✓ choosing the mix of debt and equity used by a firm;

✓ capital liabilities.

With the working capital decision, current assets and current liabilities become the focus of the financial manager. Such items as cash balances, accounts receivable, inventory levels and short-term accruals (such as pre-paid rent or utilities) are included along with the short-term assets that comprise one component of working capital. Also with the working capital decision, we concern ourselves with short-term obligations such as accounts payable to vendors, and other debt that is expected to be paid off within one year. Net working capital is a meaningful outcome of the working capital decision-making matrix. Net working capital is merely the difference between current assets and current liabilities [26].

Working capital management consists of:

✓ managing short-term operating cash flows;

✓ short-term assets and liabilities.

The main features of corporate finance are presented in Fig. 5.4 (based on [39]).

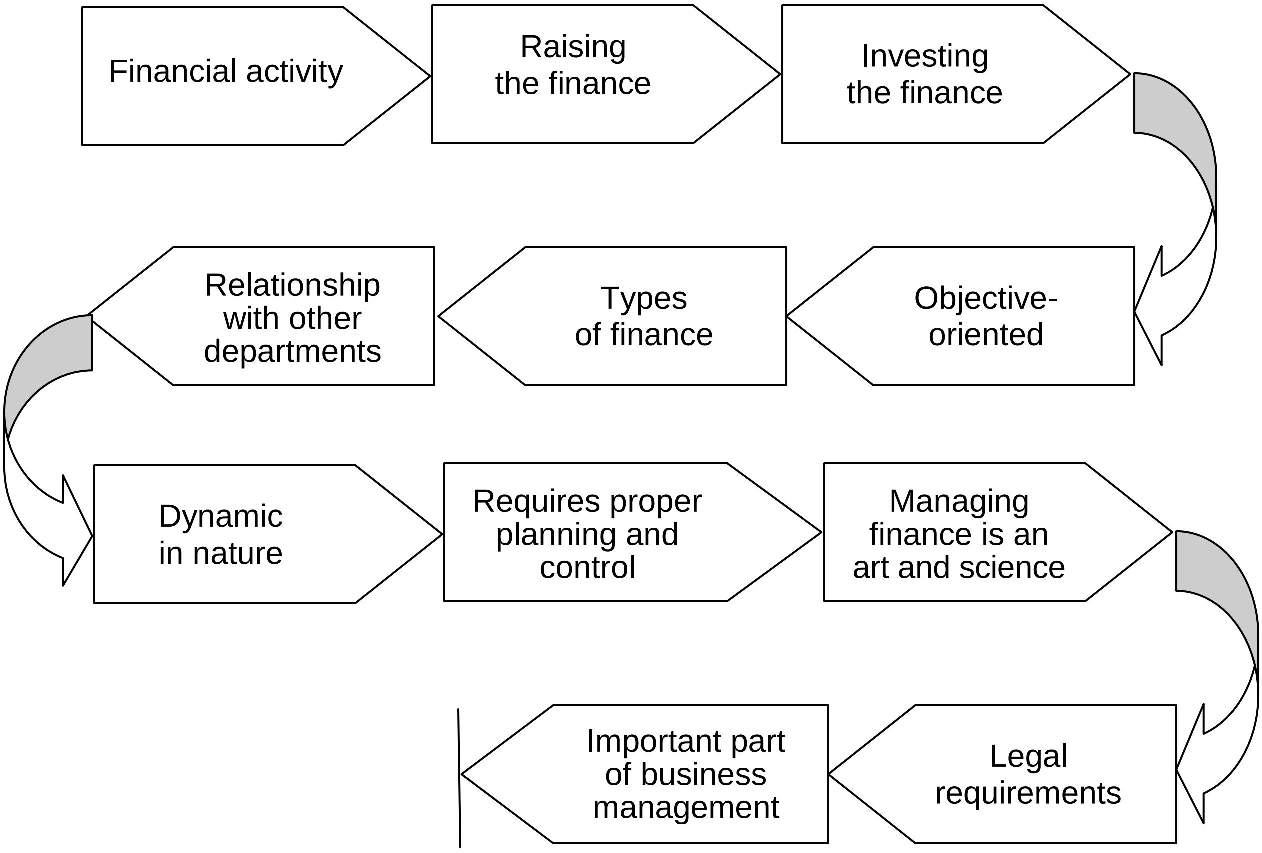

Fig. 5.4. **The features of corporate finance**

Let's consider the features of corporate finance in detail [39]:

1. Financial activity. Corporate finance is a financial activity. It includes planning, raising, investing and monitoring the finance of the company. In short, it includes all the financial aspects of the company. This work is done by the financial department headed by the finance manager.

2. Raising the finance. Corporate finance includes raising (collecting) finance for the company. Finance can be collected through shares, debentures, bank loans, etc. It is very difficult for new companies to collect finance because the investors do not have confidence in new companies. However, it is very easy for reputed companies to collect finance due to their well-established goodwill in the market.

3. Investing the finance. Corporate finance also includes investing (using) the finance. The finance is used to achieve the objectives of the company. It is used to purchase fixed assets. It is also used for running the company. The finance must be used profitably.

4. Objective-oriented nature. Corporate finance is objective-oriented. That is, it is used to achieve the objectives of the company. The main objectives are:

- ✓ to earn maximum profits;
- ✓ to give proper dividends to the shareholders;
- ✓ to create a proper reserve for future growth and expansion, etc.

5. Types of finance. There are two types of corporate finance, viz., fixed capital and working capital. Fixed capital is also called long-term finance. It is used to meet the long-term needs of the company. It is used to purchase fixed assets. Working capital is also called short-term finance. It is used to meet the short-term needs of the company. It is used to pay the day-to-day expenses of the company. Medium-term finance is also used to meet the medium-term needs of the company.

6. Relationship with other departments. Corporate finance has a close relationship with all other departments in the company, i.e. production department, marketing department, etc. This is because all departments need finance continuously.

7. Dynamic nature. Corporate finance is dynamic in nature. It goes on changing according to the changes in environment, circumstances, times, etc. So, the finance manager must use new and innovative ideas for collecting and investing money. He must use creativity while doing his job.

8. The requirement of proper planning and control. Corporate finance requires proper planning and control. Planning is required to collect finance from the investors. It is also required for investing the finance. Control is required to find out whether the finance is invested properly or not. If the finance is not invested properly, then corrective measures must be taken.

9. Managing finance is an art and science. Managing finance is an art because it requires human skills and judgement. It is a science because it follows a systematic approach.

10. Legal requirements. There are many legal requirements to corporate finance.

11. An important part of business management. Corporate finance is an important part of business finance. Finance is the life blood of business.

Finance of an enterprise fulfils a lot of specific functions (Table 5.1).

Different sources of finance have different implications for a business, so it is important that the most appropriate method of finance be chosen for the purpose that the business has in mind.

Table 5.1

The specific functions of finance of an enterprise (based on [55])

Function	Description
Research and development	Today, a company cannot survive without continuous research and development. The company has to go on making changes in its old products. It must also invent new products. If not, it will be get automatically thrown out of the market. This requires financial resources
Motivating the employees	Managers and employees should be continuously motivated to improve their performance. They must be given financial incentives, such as bonuses, higher salaries, etc. They must also be given non-financial incentives such as transport facilities, canteen facilities (eatery). All this requires finance
Promoting a company	Finance is needed for preparing projects, reports, memoranda of association, prospectuses, etc.; for purchasing fixed assets, raw materials, paying wages, salaries and other expenses. It is impossible to start a company without finance
Smooth conduct of business	Finance is needed as working capital, for paying day-to-day expenses, for advertising, sales promotion, distribution, etc. A company cannot run smoothly without finance
Expansion and diversification	Expansion means increasing the size of the company. Diversification means producing and selling new products. All this requires finance
Meeting the contingencies	The company has to meet many contingencies using finance, e.g. a sudden fall in sales, losses due to natural calamity, a court case, strikes, etc.
Government agencies	The company has to pay taxes and duties to different government agencies. Finance is needed for this
Dividend and interest	The company has to pay dividends to the shareholders and interest to the debenture holders, banks, etc.
Replacement of assets	Assets (plant, machinery) are used for producing goods and services. However, after some years, these assets become old and outdated. They have to be replaced by new assets. Finance is needed to buy new assets for replacing the old assets

5.2. Classification of an enterprise's finance

Basically, finance sources are divided into two groups:

1. Internal sources of finance.
2. External sources of finance.

✍ **Internal sources of finance** are those where finance is raised internally; they do not increase the debts of the business

The main examples of internal sources of finance are: retained profit, personal savings, sale of unwanted assets, sale and leaseback.

✍ **External sources of finance** are people or institutions outside the business; they create a debt that will require payment

The main examples of external sources of finance are: loans, overdraft, shares, debentures.

At the same time finance is classified according to the time periods (Fig. 5.5).

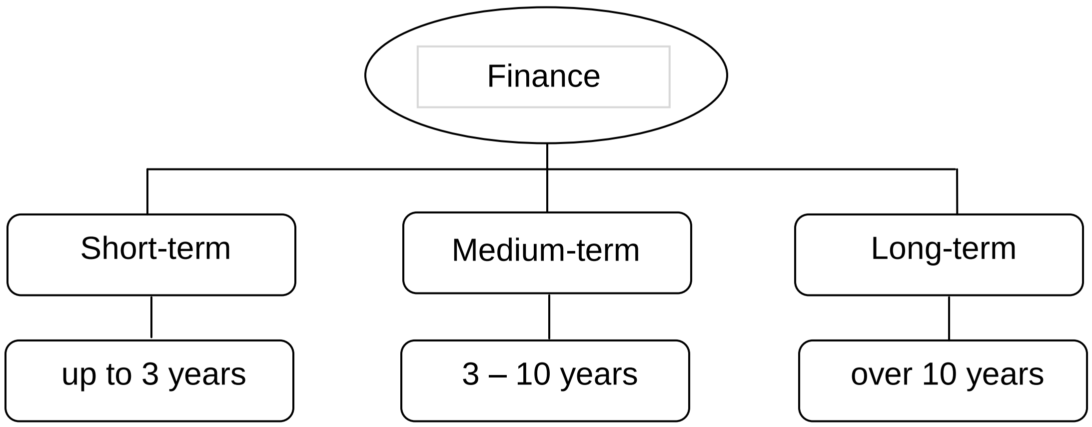

Fig. 5.5. **Types of finance according to the time periods**

✍ **Short-term finance** is needed for the day-to-day running of a business and is usually for a period of up to 3 years

In order to understand short-term finance, it is necessary to understand the concept of **cash flow**.

✍ **Cash flow** – a business needs sufficient inflows of cash to finance its day-to-day outgoings

A very interesting approach to the explanation of the cash flow importance is presented in [48]: "Think of a business as a bath without a plug…" (Fig. 5.6).

Cash flows in...

There should always **be cash available** – so the bath is never empty!

If the bath is ever empty the business is in **trouble** – it has a **cash flow**

Cash flows out...

If this is not the case, the business needs short-term finance to overcome this problem!

Fig. 5.6. **Business as a bath without a plug…** [48]

✍ **Inflows** refer to money received by the business

The main examples of inflows are: sales revenue, capital, loans, grants.

✍ **Outflows** refer to money paid out by the business

The main examples of outflows are: purchases, rent and rates, wages and salaries.

There are some sources of short-term finance:

1. All commercial banks offer various methods of short-term finance for businesses:

✓ **overdraft** – the bank allows the business to draw more money from their bank account than they actually have in it.

All resources have advantages and disadvantages. The advantages and disadvantages of the overdraft are given in Table 5.2.

Table 5.2

Advantages and disadvantages of the overdraft

Advantages	Disadvantages
Very quick to arrange	Only suitable for small amounts
Only pay interest on the amount overdrawn	Has to be repaid within a short period of time
A good short-term solution to a cash flow problem	Interest or charges are paid

✓ **a short-term loan** is an amount of money borrowed from the bank, then repaid (with interest) over a set period of time (0 – 3 years).

The main features of the short-term loan are:

➢ tends to be used to buy specific pieces of equipment or to purchase a particular consignment of raw materials in order to fulfil a contract;

➢ not a safety net in the way an overdraft is.

Advantages and disadvantages of the short-term loan are given in Table 5.3.

Table 5.3

Advantages and disadvantages of the short-term loan

<table>
<tr><th>Advantages</th><th>Disadvantages</th></tr>
<tr><td>Easy and quick to set up</td><td>Interest payable</td></tr>
<tr><td>Small or large amounts of money can be borrowed</td><td rowspan="2">If repayments cannot be kept up, the business risks getting a poor credit rating or being made bankrupt</td></tr>
<tr><td>A structured repayment term</td></tr>
</table>

It is not easy for companies to get a loan. There are some factors influencing a bank's decision to lend (Fig. 5.7).

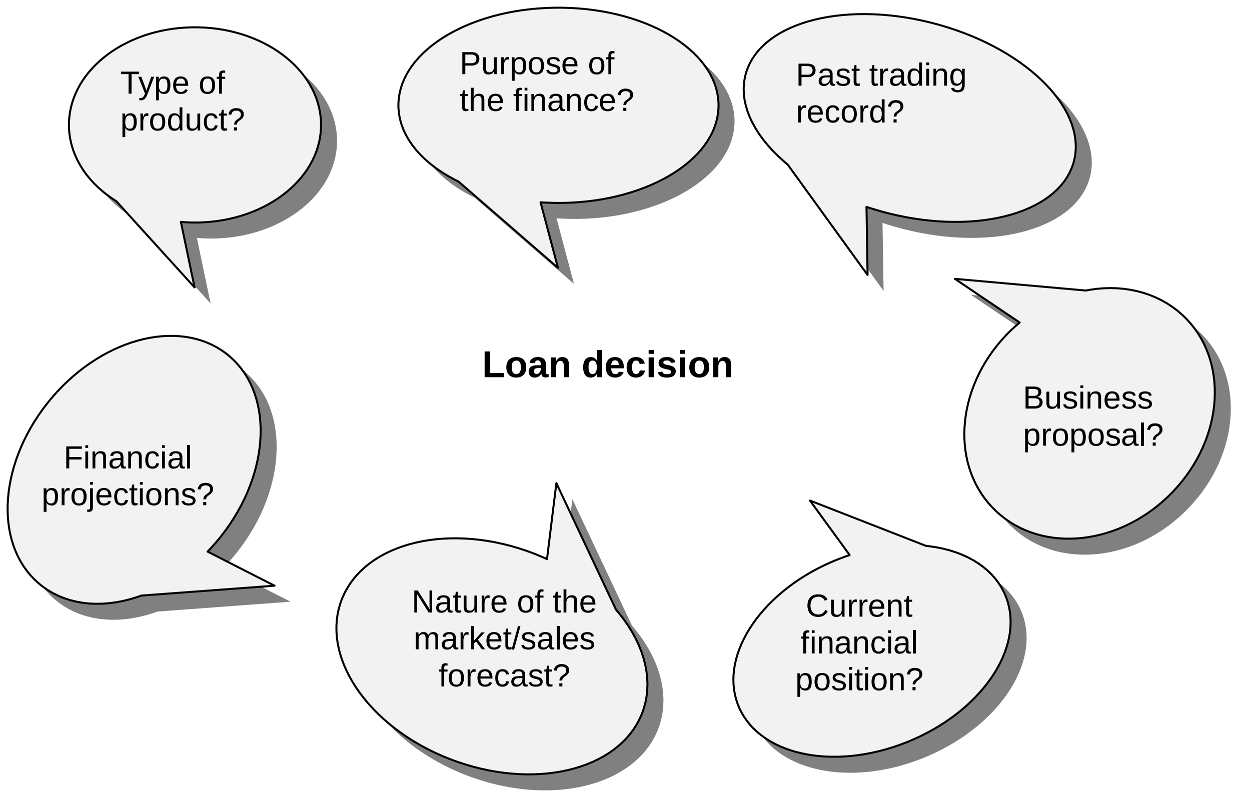

Fig. 5.7. **The factors influencing the loan decision**

2. Other sources of short-term finance:

✓ **hire purchase** is paying for an item in instalments to a hire company, over a set period of time. The item is being hired until the last payment is made. This is an external source of finance. Advantages and disadvantages of the hire purchase are given in Table 5.4.

Table 5.4

Advantages and disadvantages of the hire purchase

Advantages	Disadvantages
A large sum of money does not have to be found at once	High interest is often charged
Spread payment over a period of time	The item doesn't belong to the business until the end of the term
Improved cash flow	

✓ **trade credit** is buying items from suppliers on a "buy now pay later" basis. This is an internal source of finance. Advantages and disadvantages of the trade credit are given in Table 5.5.

Table 5.5

Advantages and disadvantages of the trade credit

Advantages	Disadvantages
Gives the business more cash to use in the immediate future	Can only be used to buy certain goods
Does not incur interest charges	Bills usually have to be settled within 30, 60 or 90 days

✍ **Medium-term finance** is normally thought of as being for 3 – 10 years

The purpose of obtaining medium-term finance is:

- to replace the expensive equipment;
- to expand;
- to convert the persistent overdraft into a formal medium-term loan.

Various forms of medium-term finance are available to a business. As a rule, they are external:

✓ a medium-term loan when an amount of money is borrowed from the bank, then repaid (with interest) over a set period of time (3 – 10 years). The *rate of interest* charged is particularly important here! The rate of interest payable on a medium-term loan depends on:

how much is borrowed;

how long the money is wanted for;

the security that is provided.

Businesses have the option to choose either a variable rate or a fixed rate loan. In the case of a v*ariable rate,* interest varies with whatever decisions the National Bank makes with regard to interest rates. With the *fixed rate* interest remains unchanged for the duration of the loan.

Advantages and disadvantages of different kind of rates are presented in Table 5.6.

Table 5.6

Advantages and disadvantages of rates

Advantages	Disadvantages
1	2
Fixed rate	
You know what repayment costs are going to be	If the rate falls, you still have to pay the higher fixed rate

Table 5.6 (the end)

1	2
Financial planning is easier	
Variable rate	
If the rate falls, the business pays the new lower rate	You don't know what repayment costs are going to be
	Financial planning is more difficult

✓ hire purchase which has been mentioned in short-term finance. It can also be medium-term finance;

✓ leasing – paying in instalments over a set period of time to rent an item – business never actually owns the item. Advantages and disadvantages of leasing are presented in Table 5.7.

Table 5.7

Advantages and disadvantages of leasing

Advantages	Disadvantages
A large sum of money does not have to be found at once	High interest is often charged
Spread payment over a period of time	The item doesn't belong to the business
An improved cash flow	
The leasing company is responsible for the maintenance of the item	

✍ **Long-term finance** is usually thought of as being for periods in excess of 10 years

This finance is for securing the resources for long-term growth. For a long term, a business essentially has the choice of raising finance by borrowing or through the issue of shares.

The sources of long-term finance can be:

1. External:

✓ long-term loans;

✓ issue of shares.

2. Internal:

✓ sale and leaseback;

✓ retained profit.

A long-term loan – an amount of money is borrowed from the bank, then repaid (with interest) over a set period of time (10 years and more). There are some features:

- used for expensive pieces of machinery;
- loans for buildings – mortgages;
- variable rate or fixed rate;
- fixed rate (not fixed for the whole length of the loan).

Issue of shares – a share in the business is sold to an individual or another business – also known as equity finance. This money is then used to purchase new assets. Advantages and disadvantages of the issue of shares are presented in Table 5.8.

Table 5.8

Advantages and disadvantages of the issue of shares

Advantages	Disadvantages
No need to repay the money invested	The need to pay the shareholders a share of future profits
Cheaper than a loan	Original owners may lose control of the business
Some businesses can raise large sums of money this way	Risky for the shareholder – the investment may be lost if the business fails

Sale and leaseback – an asset is sold but then leased back – usually for a long period of time. Advantages and disadvantages of the sale and leaseback are presented in Table 5.9.

Table 5.9

Advantages and disadvantages of sale and leaseback

Advantages	Disadvantages
A large sum of money is created	High interest is often charged
The business can operate as normal after the sale	The item doesn't belong to the business anymore
The leasing company is responsible for the maintenance of the item	No guarantee that the lease will be renewed

Retained profit – profit is retained for the purpose of using in the future. Advantages and disadvantages of retained profit are presented in Table 5.10.

Table 5.10

Advantages and disadvantages of retained profit

Advantages	Disadvantages
No need to pay interest on the money	Could have been invested elsewhere, earning a higher profit
	The business may not have enough retained profit to meet its needs
	Shareholders may become unhappy if this means lower dividend payments

Other sources of finance are:

✓ **venture capital** characterized by the following features:

pooling of capital in the form of limited companies – venture capital companies;

looking for investment opportunities in fast growing businesses or businesses with highly rated prospects;

buying out firms in trouble;

providing advice, contacts and experience;

✓ **business angles** having the following features:

individuals looking for investment opportunities;

generally small sums up to \$100,000 – 200,000;

could be an individual or a small group;

generally, have some say in the running of the company.

Finance is one type of resources, respectively, that inputs into the production process.

In terms of finance control, financial resources are structured as follows:

✓ business funds – cash, deposits with financial institutions and cash equivalents (securities, checks, etc.);

✓ corporate capital – the sum of all money invested in the organization's total assets (equity capital + liability (loan capital);

✓ other financial resources – resources of creation of funds and corporate capital (a flow variable is the sum of "inflow" of money into the company for a certain period).

The business's choice of the source of finance depends on several factors:

- the type of business – sole traders and partnerships cannot issue shares;
- the amount of control desired – becoming a partnership or company can weaken control;
- security – a lack of security may mean that banks are unwilling to grant a loan;
- existing levels of debt – if high banks will think twice about lending;
- internal funds – if the business uses them for finance, there will be no interest to pay; but once used the firm has no cushion to fall back on;
- length of time – how long it will take to generate the funds to pay back the investment;
- current methods of finance being used – inappropriate financial management will discourage the bank from lending.

Questions for self-assessment

1. Characterize the main financial areas.
2. What are the main financial decisions at an enterprise?
3. Describe the features of capital budgeting.
4. What are the features of corporate finance?
5. Describe the specific functions of the enterprise's finance.
6. What are the main differences between the external and internal sources of finance?
7. Explain the features of short-term financing.
8. Describe the medium-term finance of enterprises.
9. What are the features of long-term financing?
10. Give the list and main characteristics of factors influencing the choice of finance sources.

6. The fundamentals of finance at an enterprise

The purpose of the theme is to form the knowledge of the money moving business model and skills in the formation and distribution of assets at an enterprise.

The main competence: the ability to identify the ways of the formation and distribution of current and fixed assets at an enterprise.

Agenda

6.1. The basis of a business model at an enterprise.
6.2. Fixed assets.
6.3. Current assets.

6.1. The basis of a business model at an enterprise

There are four basic principles of enterprise's finance:

1. Money has a time value. A dollar received today is more valuable than a dollar received in the future (due to interests, investment returns, etc.).
2. There is a risk-return trade-off. One *shall* take extra risk only if one expects to be compensated for extra return.
3. Cash flows are the source of value. Profit is an accounting concept designed to measure a business's performance over an interval of time. A cash flow is the amount of cash that can actually be taken out of the business over the same interval.
4. Market prices provide information. Investors respond to new information by buying and selling their investments.

To understand business finance, two things must be made clear [28]:

1. How money moves in any business.
2. How information evolves from the questions raised by those concerned with business investment – investors and managers.

The main business model which illustrates movements of money is presented in Fig. 6.1.

The model illustrates that every business starts with **capital** (circle 1) and that this is introduced into the business as **cash** (circle 2). This in turn is invested either into items which are:

1) not intended for resale (circle 3), the **fixed assets**, also called the capital expenditure or;

2) into items intended for resale. These are set out as circles 4, 5, 6, 7, 8 less 9, and it is these items which go into the investment area termed the **working capital**.

Let's consider the given business model in detail.

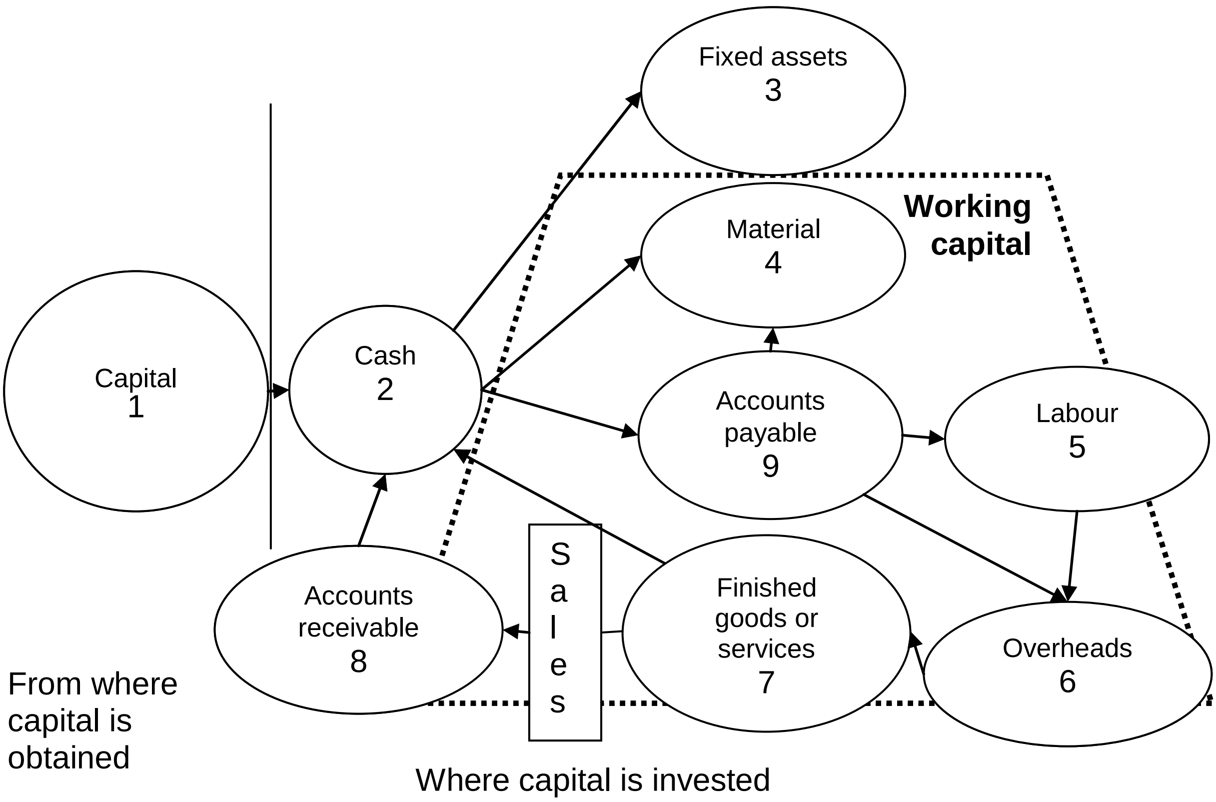

Fig. 6.1. **The business model** [28]

Capital (circle 1) stands for the sources of money invested in business [46]. These are either the owner's funds, for example in the case of a corporation share capital, or funds obtained from lenders – the loan capital. The significance of these two sources is as follows:

- In the case of the **owner's capital,** the amount invested is not repayable and the rewards – dividends – are only payable when the business's prosperity allows this to happen.
- In the case of the **loan capital,** the amount invested is repayable at a fixed future point in time, and the reward – the interest as it is known – is payable however the business has prospered.

From this it can be seen that the more obtained from borrowed sources, the greater the pressure is on the business to pay the necessary interest and eventually to repay the loan itself when it becomes due.

This leads to two questions. Can the business take the pressure? Or should there be more pressure? After all, just as business needs to be able to take the pressure, so it may also need at times to have pressure put upon it. It has been found that pressure upon a business created by borrowing, may make the business, and everyone employed within it, work a little bit harder.

The proportion of capital obtained from these two sources is termed the **leverage** of a business. More than 50 per cent of capital obtained from owners is termed low gearing, and more than 50 per cent of the capital obtained from lenders is termed high leverage.

Cash (circle 2) is the resource reservoir that is going to be affected by each corporate action [28]. Such reservoir is going to be increased by inflows resulting from share or loan capital operations, by cash sales, and by collections from the firm's debtors.

On the other hand, it is going to be depleted by outflows resulting from investments, from the production process that ultimately will end with finished goods and services, and from the delayed payments to suppliers.

Fixed assets (circle 3) are items such as land and buildings, motor vehicles, office equipment not bought for resale [32]. Although they are purchased with no intention of resale, they will in many cases, because of their nature, wear out and become obsolete. Consequently, two points should be borne in mind if a successful business is to stay successful. It must:

- have the fixed assets needed for the particular business' purpose. After all, once a business has purchased a fixed asset, it is stuck with it!
- be able to replace such investments when they wear out and/or become obsolete.

Working capital (current assets) (circles 4, 5, 6, 7, 8 less 9). These circles stand for materials, labour and overheads which go into the finished goods or finished services (circle 7), which the business sells either for cash or to debtors (accounts receivable, circle 8), the customers who hesitate before they pay.

However, just as a business has customers who do not pay immediately for the services and goods sold to them, so in the same way a business delays payment of what it owes – its bills. This is shown by circle 9 which is connected in the business model to circles 4, 5 and 6 and represents the fact that material suppliers are often not paid immediately when the goods are received or again wages are paid at the month or week end and many other expenses like electricity, telephone and advertising are not paid until after their benefits have been received by the business. Where such delays take place, the people or businesses who are awaiting payment are referred to – as shown in circle 9 – as the creditors (accounts payable).

6.2. Fixed assets

Fixed assets are held and used by a business for a number of years, but they wear out or lose their usefulness over time. Every tangible fixed asset has a limited life. The only exception is land held freehold or on a very long leasehold.

✍ **Fixed assets** are long-lived assets acquired for use in business operations

The major categories of fixed assets are presented in Fig. 6.2.

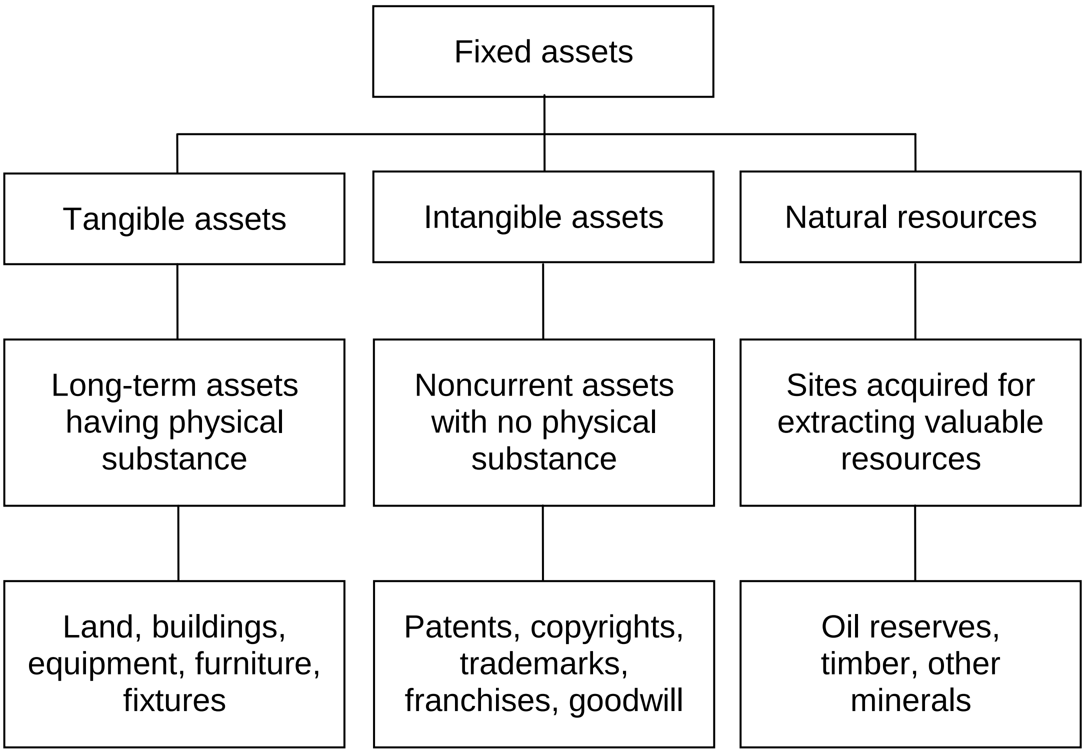

Fig. 6.2. **The categories of fixed assets**

Fixed assets are similar to long-term prepaid expenses.

Accounting of fixed assets consists of:

✓ acquisition;

✓ allocation of the acquisition cost to expense over the asset's useful life (depreciation);

✓ sale or disposal.

Let's consider them in detail.

The acquisition cost of **tangible fixed assets** includes the asset price and other expenses (Fig. 6.3).

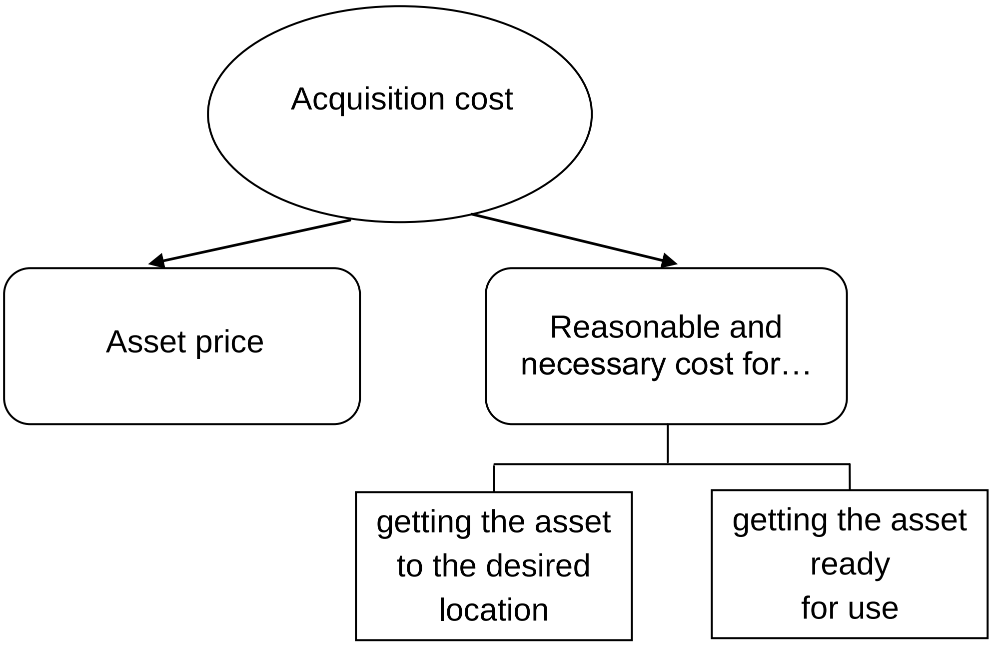

Fig. 6.3. **The structure of the acquisition cost**

The cost of plant assets is the *advance purchase* of services. As years pass, and the services are used, the cost is transferred to *the depreciation expense*.

✍ **Depreciation** is the allocation of the cost of a plant asset to expense in the periods in which services are received from the asset

The causes of depreciation:

✓ obsolescence – this is the process of becoming out of date. For instance, replacing a computer with an old operating system with a new computer with, for example, Windows 10 system;

✓ inadequacy – this arises when an asset is no longer used because of the growth and changes in the size of the firm. For instance, a small ferryboat that is operated by a firm at a coastal resort will become entirely inadequate when the resort becomes more popular. To be more efficient and economical, the firm may replace it with a large ferryboat.

The factors that affect the calculation of depreciation are:

✓ **the time factor (the effluxion of time).** Some assets might have a legal life fixed in terms of years, for example, the patents, and leasehold.

A company can agree to rent some buildings for 10 years. This is normally called a lease. When the years have passed, the lease is worth nothing to you, as it has finished. Whatever you paid for the lease is now of no value;

✓ **depletion.** Other assets are of wasting nature, perhaps due to the extraction of raw materials from them. These materials are then either used by the firm to make something else, or are sold in their raw state to other firms. Natural resources such as mines, quarries and oil wells come under this heading.

There are different methods of depreciation:

1. Straight-line depreciation:

$$Depreciation\ expense\ per\ year = \frac{Cost - Residual\ value}{Years\ of\ useful\ life}.$$

Example

On January 1, 2018, Bass Co. buys a new boat. Bass Co. pays 720,000 UAH for the boat. The boat has an estimated residual value of 90,000 UAH and an estimated useful life of 5 years. Compute depreciation for 2018 using the straight-line method.

$$Depreciation\ expense\ per\ year = \frac{720\ 000 - 90\ 000}{5} = 126\ 000\ UAH.$$

Bass Co. will record 126,000 UAH depreciation each year for five years

When an asset is acquired during the year, depreciation in the year of acquisition must be prorated based on the half-year convention. In the year of acquisition, six months of depreciation are recorded.

Example

Using the half-year convention, calculate the straight-line depreciation on December 31, 2018, for equipment purchased in 2018. The equipment cost 2,250,000 UAH, has a useful life of 10 years and an estimated salvage value of 15,000 UAH.

$$Depreciation\ expense\ per\ year = \frac{2\ 250\ 000 - 15\ 000}{10} = 223\ 500\ UAH$$

223,500 UAH is depreciation for a full year. Depreciation for the asked period of time is

$$Depreciation = 223\,500 \times \frac{1}{2} = 111\,750\ UAH$$

2. The declining-balance method – depreciation in the early years of an asset's estimated useful life is higher than in later years. According to this method:

$$\boldsymbol{Depreciation = Remaining\ book\ value \times Accelerated\ depreciation\ rate.}$$

The accelerated depreciation rate – the double-declining balance depreciation rate is 200 % of the straight-line depreciation rate of 1/useful life.

Example

On January 1, 2018, Bass Co. buys a new boat. Bass Co. pays 720,000 UAH for the boat. The boat has an estimated residual value of 90,000 UAH and an estimated useful life of 5 years.

Compute annual depreciation using the double-declining balance method.

$$Depreciation = 720\,000 \times (2 \times \frac{1}{5}) = 720\,000 \times 40\ \% = 288\,000\ UAH$$

The total depreciation over the estimated useful life of an asset is the same using either the straight-line method or the declining-balance method.

Characteristics of **intangible assets** are presented in Fig. 6.4.

Intangible assets are recorded at the current cost of cash equivalent, including purchase price, legal fees, and filing fees. There are:

- ✓ patents;
- ✓ copyrights;
- ✓ leaseholds;
- ✓ leasehold improvements;
- ✓ goodwill;
- ✓ trademarks and trade names.

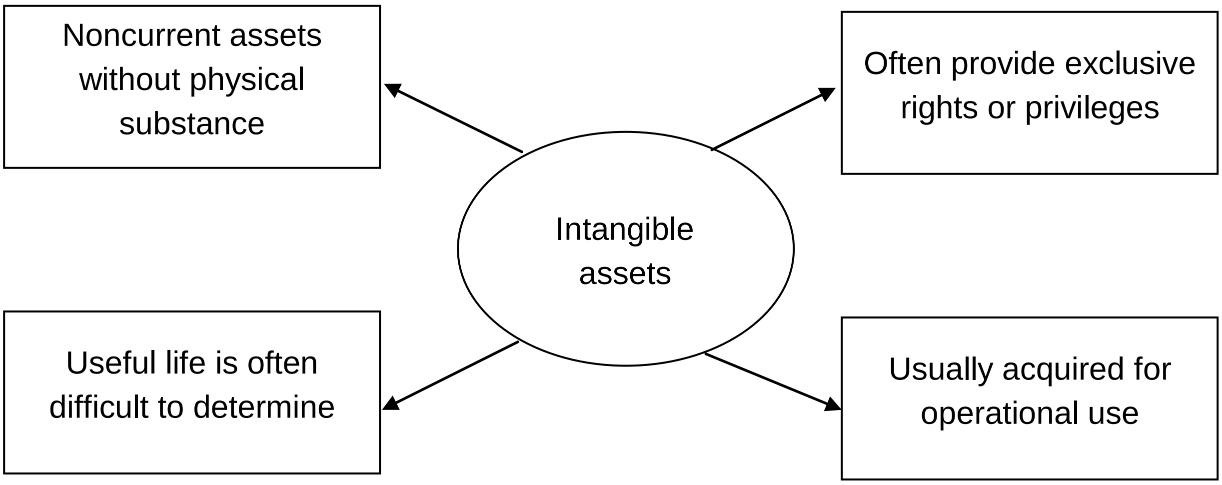

Fig. 6.4. **The characteristics of intangible assets**

Intangible assets amortize over shorter economic life or legal life, subject to a maximum of 40 years and use the straight-line method. Research and development costs are normally expensed as incurred.

Let's consider intangible fixed assets in more detail.

✍ **Goodwill** is the amount by which the purchase price exceeds the fair market value of net assets acquired

Goodwill occurs when one company buys another company. Goodwill is an intangible but saleable asset, almost indestructible except by indiscretion. It is built painstakingly over the years generally with [43]:

heavy and continuous expenditure in promotion;

creation and maintenance of durable customer and supplier relationships;

high quality of goods and services.

Goodwill includes the worth of corporate identity, and is enhanced by corporate image and a proper location. Its value is not recognized in account books but it is realized when the business is sold, and is represented in the firm's selling price by the amount in excess over the firm's net worth.

✍ **Patent** is an exclusive right granted by federal government to sell or manufacture an invention

Patent cost is the purchase price plus legal cost to defend. Amortization cost is shorter than useful life or 17 years.

✍ **Trademarks and trade names** are a symbol, design, or logo associated with a business

Internally developed trademarks have no recorded asset cost. Purchased trademarks are recorded at the cost, and amortized over a period shorter than legal or economic life, or 40 years.

✍ **Franchises** are a legally protected right to sell products or provide services purchased by the franchisee from the franchisor

The purchase price of a franchise is the intangible asset which is amortized over a period shorter than the protected right or 40 years.

According to [38] the Top 10 franchises are presented in Table 6.1.

Table 6.1

Top 10 Franchises in 2018

Rank	Company	Investment, $
1	McDonald's	1M – 2.2M
2	7-Eleven Inc.	38K – 1.1M
3	Dunkin' Donuts	229K – 1.7M
4	The UPS Store	178K – 403K
5	RE/MAX LLC	38K – 225K
6	Sonic Drive-In Restaurants	1.1M – 2.4M
7	Great Clips	137K – 258K
8	Taco Bell	252K – 2.6M
9	Hardee's	1.4M – 1.9M
10	Sport Clips	189K – 355K

✍ **Copyright** is an exclusive right granted by the federal government to protect artistic or intellectual properties

Legal life of copyrights is life of the creator plus 50 years. The amortized cost is the cost over a period not to exceed 40 years.

Natural resources are a fixed asset extracted from the natural environment and reported at a cost less accumulated depletion. Examples are: oil, coal, gold, etc. The total cost, including exploration and development, is charged to depletion expenses over the periods benefited.

6.3. Current assets

✍ **Current assets (working capital)** are the assets of a company that are reasonably expected to be converted to cash or consumed within 12 months from the date of the Balance Sheet

The structure of current assets is given in Fig. 6.5.

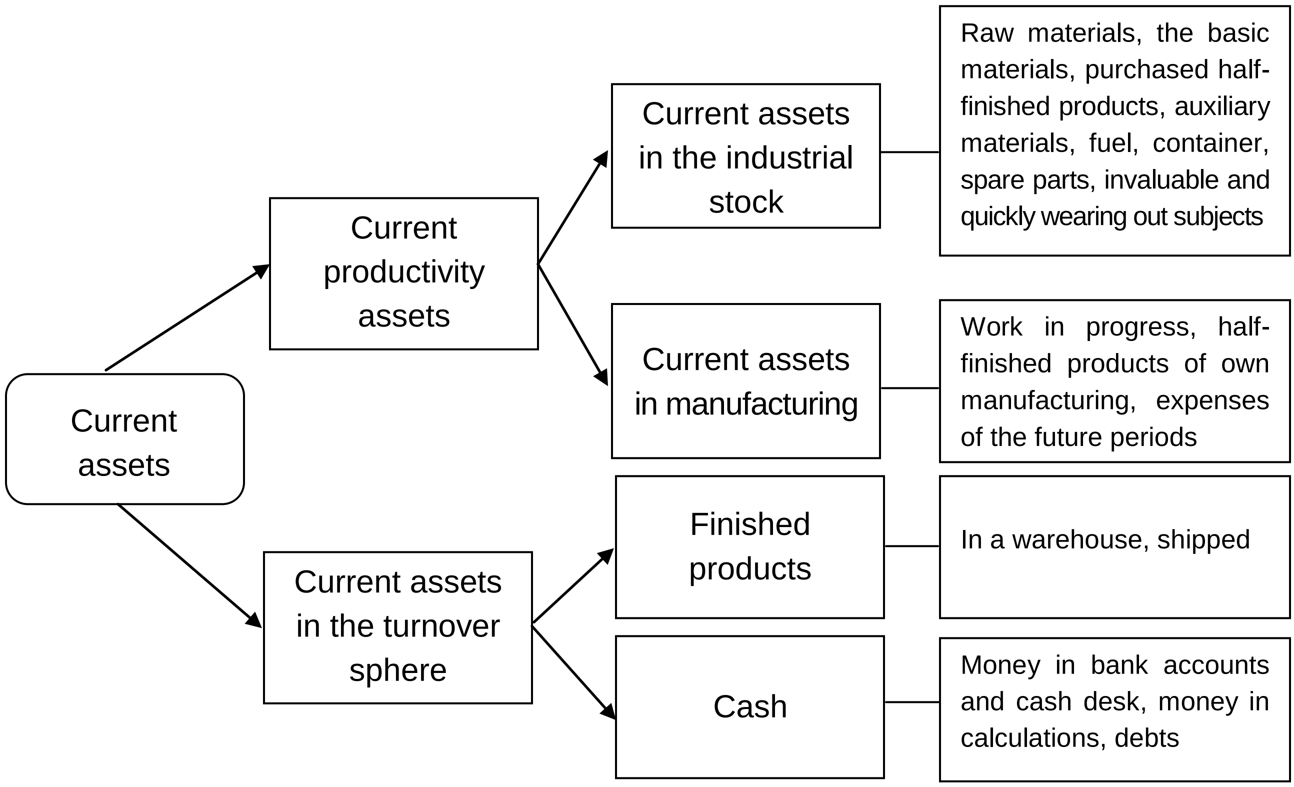

Fig. 6.5. **The structure of current assets**

Current assets (working capital) are seen as four connected investments, each dependent upon what is sold, how it is sold, or to whom it is sold (Table 6.2).

Table 6.2

Investments [28]

Investments	Description
a) raw material stock	materials not sold yet
b) work in progress stock	made up of materials, labour overheads which have gone
c) finished goods stock	into the partly finished or finished goods unsold
d) debtors	the amount owed for the materials, labour and overheads which have gone into the inventory and debtors
e) less creditors	amounts the company owes to suppliers for goods and services purchased on credit

Current assets are financed by equity/liability:

✓ cash and marketable securities;

✓ accounts receivable;

✓ inventories.

Cash and marketable securities are earning costs. Accounts receivable and inventories are unearning costs.

Classification of receivables:

✓ accounts receivable are used for selling merchandise or services on credit, and normally expected to be collected in a relatively short period;

✓ notes receivable are used to grant credit on the basis of a formal instrument of credit, called a promissory note;

✓ other receivables include interest receivable, taxes receivable, and receivables from officers and employees.

Companies often sell their receivables to other companies. This transaction is called *factoring* the receivables, and the buyer of the receivables is called a *factor*.

Accounts receivable are common accounts used by company accountants to track the revenue earned but not yet collected [49]. It is a balance of money owed to the business by buyers who make purchases on account and agree to pay later. Collecting payments on account in a timely manner is important to financial efficiency for a business.

The functions that the accounts receivable should perform for any enterprise are [16]:

➢ maintaining an up-to-date system that calculates what customers owe the enterprise, in a timely and accurate way;

- utilizing the computerized accounting software programs of the enterprise;
- monitoring customer account details for non-payments, delayed payments and other irregularities and reporting where necessary;
- follow-up on outstanding payments owed by customers and managing the recovery of money process;
- periodical reconciling the customer account totals with the general ledger control accounts;
- issuing receipts for cash or checks received;
- preparing bank deposits;
- investigation and resolution of customer queries;
- communicating regularly with customers via phone, email, mail or personally;
- processing, transmitting and running credit card transactions for customer sales and refunds;
- processing customer account adjustments;
- generating customer statements and management reports.

Current assets are generally listed first on a company's balance sheet and will be presented in the order of liquidity. That means they will appear in the following order: cash (which includes currency, checking accounts, petty cash), temporary investments, accounts receivable, inventory, supplies, and prepaid expenses. Supplies and prepaid expenses will not literally be converted to cash. They are included because they will allow the company to avoid paying cash for these items during the upcoming year.

It is important that the amount of each current asset not be overstated. For example, accounts receivable, inventories, and temporary investments should have valuation accounts so that the amounts reported be not greater than the amounts that will be received when the assets turn to cash. This is important because the amount of company's working capital and its current ratio are computed using the current assets' reported amounts.

After establishing the level of current assets, the firm must determine how these should be financed.

The investment in current assets may be broken into two parts: permanent current assets and temporary current assets. The former represents what the firm requires even at the bottom of its sales cycle. The latter shows a variable component that moves in line with seasonal fluctuations.

Several strategies are available to a firm for financing its capital requirements. Three strategies are illustrated below [47]:

1. Long-term financing is used to meet the fixed asset requirement as well as the peak working capital requirement. When the working capital requirement is less than its peak level, the surplus is invested in liquid assets (cash and marketable securities).

2. Long-term financing is used to meet the fixed assets requirement, the permanent working capital requirement, and a portion of the fluctuating working capital requirement. During seasonal swings, short-term financing is used; during seasonal downswing, surplus is invested in liquid assets.

3. Long-term financing is used to meet the fixed asset requirement and the permanent working capital requirement. Short-term financing is used to meet the fluctuating working capital requirement.

Net working capital is the excess of current assets over and above the current liabilities. From the above definition the reader can conclude that a part of the current assets is financed by a source other than the current liabilities. This source is long-term finance. Various short-term sources of finance that may be employed to finance current assets are [47]:

1. **Spontaneous liabilities**:

✓ accruals are liabilities covering expenses incurred on and prior to a specified date, payable at some future date. For example, if a company is following a wages policy as paying wage once in a month. With the change in policy the firm is deferring the payment of wages for three weeks. Thus, the amount of accrued wages increases because of deferring the wage payments;

✓ provisions are changes in an estimated expense. These provisions do not involve an immediate cash outflow. A cash outflow occurs when the actual amount of liability is known and paid for. Examples for provisions are provisions for dividends, provision for taxes, etc.

These spontaneous liabilities constitute a very small fraction of the current liabilities, thus usefulness of this source to the financing of current assets is very limited.

2. **Trade credit** is the credit extended by the supplier of goods and services. Trade credit is an important source for financing current assets. On an average, trade credit accounts for nearly 40 percent of current liabilities. The suppliers generally extend credit based on the financial soundness of the buyer and the relations between them.

3. **Short-term bank finance**. The major source for financing current assets is bank finance. The various ways in which the banks finance current assets are:

- ✓ a loan arrangement;
- ✓ an overdraft arrangement;
- ✓ a cash credit arrangement;
- ✓ bills purchased and bills discounted;
- ✓ a letter of credit;
- ✓ the note-lending system.

4. **Public deposits** – the deposits mobilized from public by non-financial manufacturing companies – are known as public deposits or fixed deposits.

5. **Inter-corporate deposits**. Under this arrangement one company makes a deposit with another company, normally for a period above six months. For example, Firm "A" deposited an amount of Rs 5 lakhs for a period of 6 months in Firm "B". This is referred to as an inter-corporate deposit.

6. **Short-term financial assistance from financial institutions**.

7. **Commercial papers**.

So, current assets are important because they indicate how much cash a company essentially has access to within the next 12 months outside of third-party sources. It is indicative of how the company funds its ongoing, day-to-day operations, and how liquid a firm is. The ratio of current assets to current liabilities is particularly important in judging liquidity.

Questions for self-assessment

1. Characterize the main principles of enterprise's finance.
2. Describe money movement using a business model.
3. What are the main differences between fixed and current assets?
4. Compare the major categories of fixed assets.
5. Explain the implementation of different depreciation methods.
6. What are the features of intangible fixed assets?
7. Describe the structure of the current assets.
8. Characterize the current assets functions.
9. What are the strategies for financing the assets?
10. Describe the sources of financing the current assets.

7. Financial recourses (capital) of an enterprise

The purpose of the theme is to identify the essence, the principles of formation and the main features of the owner's and borrowed capital of an enterprise.

The main competence: the ability to form the financial capital structure of an enterprise.

Agenda

7.1. The essence of the enterprise capital and the principles of its formation.

7.2. The owner's capital of an enterprise.

7.3. The borrowed capital of an enterprise.

7.1. The essence of the enterprise capital and the principles of its formation

Capital is an economic category that has been known for a long time, but has gained new content in terms of market relations. As the main economic base for the creation and development of an enterprise, capital, in the process of its operation, ensures the interests of the state, owners and personnel.

✍ **The capital of the enterprise** is an economic category that characterizes the total value of funds in the monetary, material and non-material forms that are invested in the formation of its assets

Considering the economic essence of the company's capital, it is necessary to indicate the characteristics given in Table 7.1.

C**apital management** is the system of principles and methods for developing and implementing managerial decisions related to its optimal formation from a variety of sources, as well as ensuring its effective use in different types of economic activities of the enterprise [3].

The sources of funding vary according to how they are involved: owned and borrowed. The cost of capital is the interest rate that an enterprise pays to investors.

Table 7.1

Classification of the enterprise capital [3]

Characteristics of the enterprise capital	Justification of the characteristics of the enterprise capital
1. The dynamics of the enterprise capital is an important barometer of the level of efficiency of its economic activity	The ability of the equity capital to grow at a high rate is characterized by a high level of formation and effective distribution of profits of an enterprise, its ability to maintain a financial equilibrium at the expense of internal sources. Conversely, a decline in equity is, as a rule, a consequence of inefficient, loss-making activity
2. Capital is the main source of welfare formation for its owners	Capital provides the necessary level of welfare of its owners in both current and prospective periods. Part of the capital, aimed at meeting the current or future needs of its owners, ceases to fulfill the function of capital. The accumulated capital must meet the needs of its owners in the long-term period, that is, they shape the level of their future prosperity
3. The capital of an enterprise is the main measure of its market value	In this capacity, first of all, the equity of the enterprise is, which determines the volume of its net assets. At the same time, the volume of the owner's capital used by the company simultaneously characterizes the potential of attracting the borrowed funds that provide additional profit. Together with other, less significant factors, the basis for evaluating the market value of the enterprise is formed
4. The capital of an enterprise is a major factor of production	There are three factors of production: capital, land and other natural resources, workforce. In the data system of the factors of production capital is assigned a priority role, since it combines all factors into a single production complex
5. Capital characterizes the financial resources of enterprises that provide income	In this capacity, capital can act in isolation from the production factor – in the form of debt capital, which ensures the formation of incomes of the enterprise, in the financial (investment) sphere of its activities rather than in the production (operational) sphere

✍ **The financial structure of capital** is a collection of financial means of the organization from various sources of long-term financing. It is also the ratio of the owner's and borrowed capital

The general structure of the enterprise's capital is presented in Fig. 7.1.

To manage capital within the framework of financial management, it is necessary to allocate the financial structure of capital.

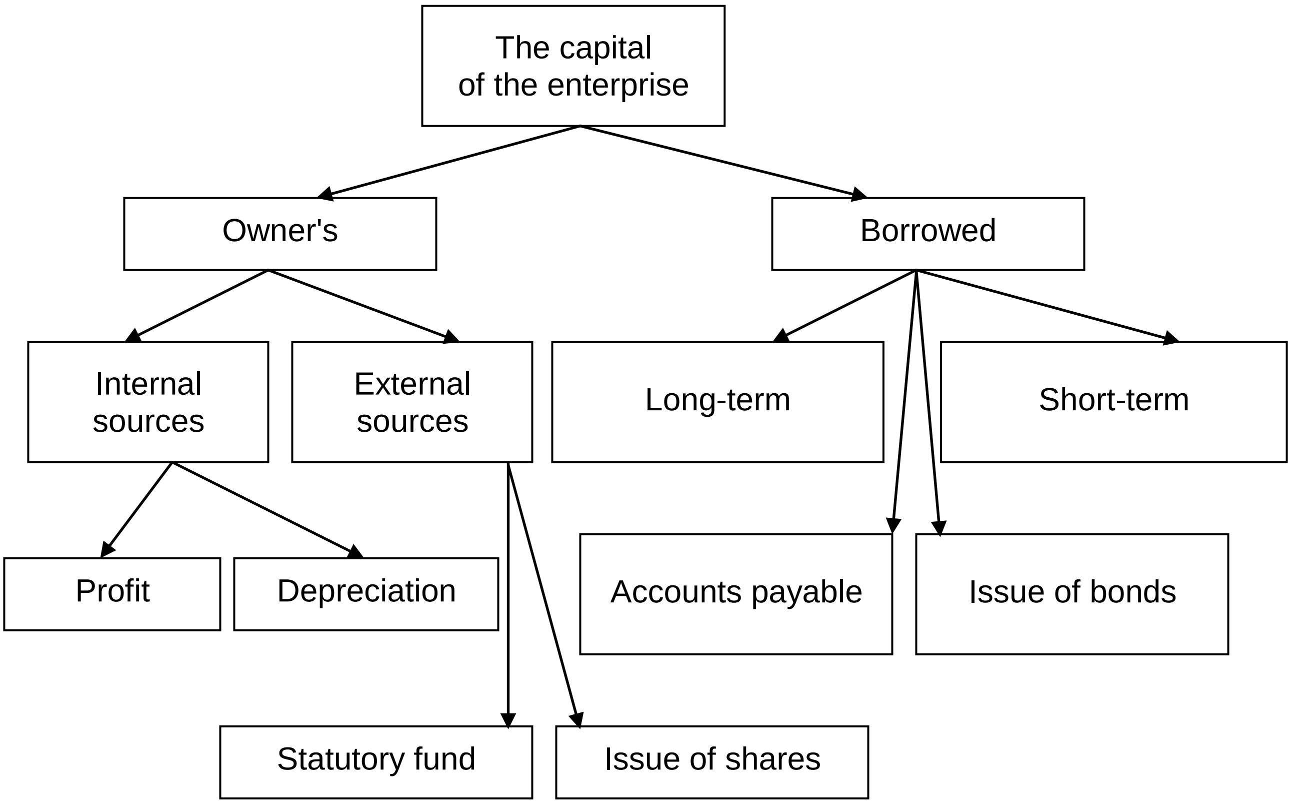

Fig. 7.1. **The capital structure of the enterprise** [24]

Determining the scope of the application of the indicator of the cost of capital of an enterprise enables us to find out the level of the value of capital of a particular small enterprise, to evaluate not only the real market value or yield of certain financial investment instruments, but also the use of profitable directions for the formation of the main productive assets for the enterprise, the ability of the enterprise to conduct aggressive, compromise or a conservative type of asset financing policy, etc.

The importance of evaluating the value of capital for managing its formation necessitates the correct calculation of this indicator at all stages of the development of a small enterprise.

The main stages of the formation of the financial structure of capital are:

1. Determination of the total capital requirement of the enterprise. To determine the total capital requirement, it is necessary to determine the costs of its creation: initial costs and start-up costs.

Two methods are used to determine the size of the start-up capital of an enterprise:

a direct method in which the amount of capital equals the total assets. In this case, it is possible to determine the minimum and maximum limits of capital requirements, depending on the aggregate of required assets;

an indirect method in which the total amount of capital is determined as the average over the period. This method is based on the calculation of the indicator of capital intensity of products (CI_{pr}) according to the branches of the economy:

$$CI_{pr} = \frac{C}{V_{pr}}, \tag{7.1}$$

where C is the total capital (owner's and borrowed);

V_{pr} is the total volume of produced (sold) products.

The total capital requirement (TCR) for this method is calculated by the formula:

$$TCR = CI_{pr} \cdot V_{pr} + IC, \tag{7.2}$$

where IC is the initial costs associated with the establishment of the enterprise.

The indirect method gives only a rough estimate of capital requirements.

2. Estimation of the cost of raising capital. The total amount of money that needs to be paid for using a certain amount of financial resources, expressed as a percentage of this volume, is called the cost of capital [24].

The process of valuing capital is based on the following basic principles [4]:

- The principle of preliminary elemental estimation of the cost of capital. This principle takes into account that all capital is divided into owner's and borrowed, and they, in turn, differentiate according to the sources of formation. Therefore, it is necessary to evaluate each element of capital separately.
- The principle of a generalized assessment of the value of capital. The generalized indicator of the capital cost estimation is its weighted average (WAC):

$$WAC = \sum_{i=1}^{n} \mathrm{CRi} \cdot P_i, \qquad (7.3)$$

where *WAC* is the weighted average cost of capital;

CR_i is the cost of raising capital from the *i*-th source (obtained on the basis of elementary estimation);

P_i is the proportion of the *i*-th source in the total amount of capital.

- The principle of comparing the assessment of the value of the owner's and loan capital. Loan capital is valued in current market prices, while equity costs may be understated due to the influence of the inflation factor. In order to compare the cost of the owner's and borrowed capital, the net asset value of the enterprise (*NAV*) is calculated:

$$NAV = TA - CL, \qquad (7.4)$$

where *NAV* is the net asset value of the enterprise;

TA is the total assets of the enterprise;

CL is the cost of the loan capital.

- The principle of dynamic valuation of capital. Due to the fact that factors affecting the weighted average cost of capital are dynamic, it is always necessary to adjust the cost of individual elements of capital and, as a consequence, the weighted average cost of capital.
- The principle of the relationship between the assessment of the current and future weighted average cost of capital and the sum of each new (additional) unit. This is ensured by calculating the marginal cost of capital (*MCC*):

$$MCC = \frac{\Delta WAC}{\Delta C}, \qquad (7.5)$$

where *ΔWAC* is the growth of the weighted average cost of capital.

The dynamics of the marginal cost of capital must be taken into account in the process of managing the financial activity of the enterprise.

- The principle of determining the limits of the effective use of additional attracted capital. In order to decide on the efficiency of attracting additional capital, the marginal efficiency of capital (*MEC*) is calculated:

$$MEC = \frac{\Delta P_C}{\Delta WAC}, \tag{7.6}$$

where ΔP_c is the increase in profitability of capital.

3. Optimization of the financial structure of the enterprise capital. **The optimal structure of capital** is the ratio of the use of the owner's and loan capital, which provides the most effective proportionality between the coefficient of financial profitability and the coefficient of financial stability of the enterprise, i.e., maximizes its market value [3].

Optimization of the financial structure of capital is carried out from several positions:

• *Maximization of the level of financial profitability*. In order to determine the change in the return on equity, the effect of the financial leverage is used when borrowing.

✍ **The financial leverage effect (EFL)** is an indicator that shows the level of additional gain (or losses) that is generated by equity for a different percentage of the borrowed funds

Financial leverage is an indicator used to measure the effect of:

increasing the profitability of equity with an increase in the share of debt capital in its total amount;

reduction of the weighted average cost of capital that is achieved.

The fundamental algorithm for calculating the EFL is given by I. Blank [3]:

$$IFL = (EP - AWLC) \cdot \frac{BC}{OC} \cdot (1 - PTR), \tag{7.7}$$

where *EP* is economic profitability, %;

AWLC is the average weighted loan capital rate of an enterprise;

BC, OC is the size of the borrowed and owner's capital of the enterprise;

PTR is the profit tax rate.

The economic profitability is calculated by the formula:

$$EP = \frac{P}{OC + BC}, \tag{7.8}$$

where *P* is the profit of the enterprise.

In the formula for the effect of financial leverage, one can distinguish the following components (factors):

(*EP - AWLC*) is the differential of financial leverage;

BC/OC is the shoulder of financial leverage;

(*1 - PTR*) is the tax corrector.

The tax corrector shows how exactly the EFL manifests itself in connection with the different levels of taxation of profits. In spite of the fact that this indicator is practically independent of the activity of the enterprise (since the profit tax rate is established by law), it can be used to increase the efficiency of using the borrowed capital in cases where enterprises have cases of differentiated taxation. In such cases, it is expedient to direct loans where they can bring a greater effect because of lower taxation.

The differential of financial leverage characterizes the difference between the coefficient of gross return on assets and the average interest rate for a loan. It is this component that shows whether the attracted loans bring profit or loss on equity.

- *Minimization of financial risk*. For this purpose, all assets of the company are divided into:

non-current assets;

a constant part of the current assets that cannot be reduced to ensure the functioning of the enterprise;

a variable part of the current assets which is associated with seasonal fluctuations.

- *Minimization of the cost of capital*. This optimization is based on the comparison of alternative options for raising capital by calculating several variants of the weighted average cost of capital.

The question of the possibility and appropriateness of managing the structure of capital has been studied by many scientists. There are two main approaches to this problem:

traditional, according to which the value of capital depends on its structure; and optimal capital structure is considered to be the one in which the weighted average cost of capital is minimal, and therefore the market value of the enterprise is maximal (discussed above);

Modigliani and Miller approach [4; 7]. The founders of this approach argue that under certain conditions the market value of the firm and the cost of capital do not depend on its structure, and, therefore, they cannot be optimized and the firm's market value is increased by changing the capital structure. The last statement is sometimes called the "principle of the pie": you can differently divide the pie, but its value does not change (Fig. 7.2).

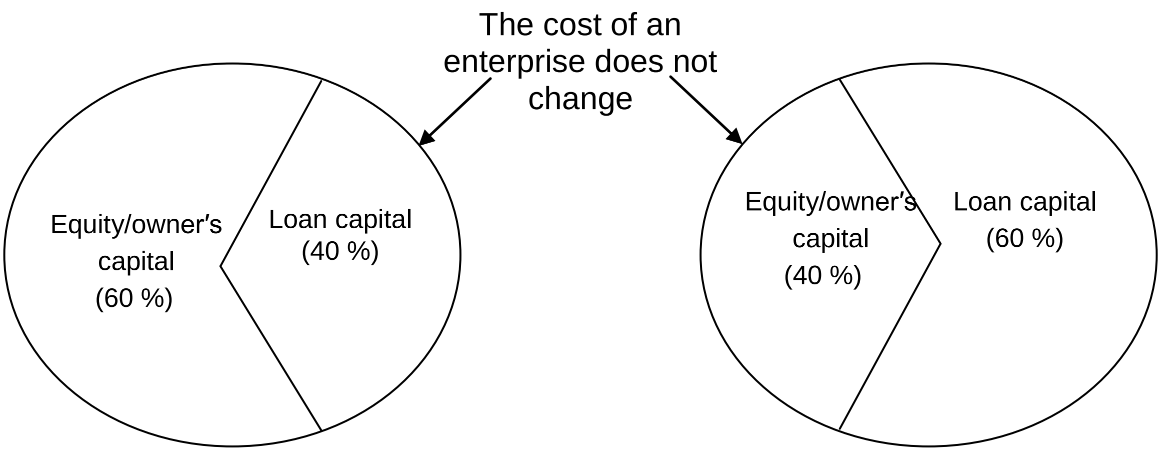

Fig. 7.2. **The principle of the pie concerning the value of the enterprise**

The basis of the Modigliani – Miller approach is the following assumptions:

all enterprises have the same degree of risk;

investors have the same expectations regarding the future returns and risky incomes;

stocks and bonds are sold in perfect capital markets;

the loan interest rate is risk-free;

cash flows have an indefinite duration in nature.

The Modigliani – Miller model is based on the absence of taxes.

Thus, the Modigliani – Miller approach argues that the value of a firm and the cost of capital do not depend on its structure, and therefore, they cannot be optimized, nor can the market value of a firm be increased by changing the capital structure.

7.2. The owner's capital of an enterprise

✍ **The owner's capital of the enterprise** is the result of the first section of the liability balance sheet, i.e., the excess of the balance value of the assets of the enterprise over its liabilities

Owner's capital is the funds embodied in non-current and current assets for the establishment and continuation of economic activity.

The owner's capital of the enterprise consists of:

the statutory fund which is the initial invested amount to start the business of the enterprise. The size of the statutory fund is determined by the Statute of the enterprise, but it should not be less than the level established by the legislation;

reserve capital which is the reserved part of the equity capital of the enterprise to insure the activity of the enterprise. It is formed at the expense of the profit of the enterprise. The size of the reserve capital is established by the statutory documents, but it should not be less than that established by the legislation;

special (targeted) funds which are purposeful funds of the owner's funds for the next intended purpose. These include: a depreciation fund, a repair fund, a labor protection fund, a special program fund, a production development fund, etc. These funds are regulated by statutory and other internal documents of the enterprise;

retained profit which is part of the profit of the enterprise, received in the previous period and not used by the owners and personnel. It is intended for reinvestment in the development of production;

other forms of equity/owner's capital (settlements for the property when it is leased, settlements with participants in payment in the form of interest and dividends).

Equity (owner's capital) of the enterprise is formed at the expense of different sources:

internal – profit and depreciation;

external – authorized capital and issue of shares.

The policy of forming its own financial resources is part of the overall financial strategy of the enterprise, which contains the provision of the necessary level of self-financing its production development [3].

Formation of the enterprise's owned financial resources is carried out in such basic stages as:

1. Analysis of the formation of the owner's financial resources of the enterprise in the previous period. The purpose of this analysis is to identify the potential for the formation of its own financial resources and its relevance to the pace of the enterprise development.

At the first stage of the analysis, the total volume of the formation of the owner's financial resources, the compliance of the rates of growth of the owner's capital with the growth rates of assets and the volume of realized products of the enterprise, the dynamics of the share of the owner's resources in the total amount of financial resources in the pre-planning period are studied.

At the second stage of the analysis the sources of formation of the owner's financial resources are considered. First of all, the ratio of the external and internal sources of the formation of the owner's financial resources, as well as the cost of attracting the equity capital from different sources is studied.

At the third stage of the analysis, the adequacy of its own financial resources, formed at the enterprise in the pre-planning period, is estimated.

- The total need for the owner's financial resources (N_{ofr}) is determined by the formula

$$N_{ofr} = \frac{N \cdot P_{oc}}{100} - OC_b + P, \tag{7.9}$$

where N is the total need for capital at the end of the planning period;

P_{oc} is the planned specific weight of the owner's capital in its total amount;

OC_b is the owner's capital at the beginning of the planning period;

P is the amount of profit, aimed at the consumption in the planned period.

The calculated total need covers the required amount of the owner's financial resources formed both at the expense of both internal and external sources.

- Estimation of the cost of attracting equity capital from different sources. Such an assessment is made in the context of the main elements of the equity capital formed at the expense of internal and external sources. The results of such an assessment are the basis for the development of managerial decisions on the choice of alternative sources of formation of the owner's financial resources that provide an increase in the enterprise's owned capital.

Consider the methodology for assessing the value of capital raising by some elements:

1) *estimation of the cost of raising capital by issuing shares* (CC_{sh}):

$$CC_{sh} = \frac{(PV_d + Exp.)}{priceSh} \cdot 100\,\%, \tag{7.10}$$

where PV_d is the present value of the dividend payable;

Exp. is expenses related to the issue of shares;

priceSh is par value shares.

Calculations can be carried out on both the entire issue volume and one share:

$$PV_d = \frac{D}{(1+i)^n}, \tag{7.11}$$

where *i* is the discount rate, which is accepted at the level of the nominal efficiency of a loan transaction minus the inflation component (0.1 – 0.15);

2) *the cost of capital drawn from the capitalized profit* (CC_p):

$$CC_P = \frac{Pcapitalized}{P} \quad 100\ \%. \tag{7.12}$$

4. Ensuring the maximum amount of attraction of the owner's financial resources at the expense of internal sources. Before resorting to external sources of formation of the owner's financial resources, all possibilities of their formation due to internal sources must be realized. Since the sum of net profit and depreciation is equal to the planned internal sources of the formation of the owner's financial resources of the enterprise, then in the process of planning these indicators the possibility of their growth is predicted at the expense of different reserves.

The method of accelerated depreciation of the active part of fixed assets increases the possibility of forming its own financial resources at the expense of this source. However, keep in mind that the increase in the amount of depreciation in the process of accelerated depreciation of certain types of fixed assets leads to a certain reduction of net profit. Therefore, when looking for reserves of growth of the owner's financial resources at the expense of internal sources it is necessary to proceed from the necessity to maximize their aggregate amount.

5. Ensuring the required amount of attraction of the owner's financial resources from external sources. The volume of attraction of the owner's financial resources from external sources is called to provide that part which could not be formed at the expense of internal sources of financing. If the sum of the owner's financial resources borrowed from internal sources fully provides the general need for them in the planned period, it is not necessary to attract these resources at the expense of external sources.

6. Optimization of the ratio of internal and external sources of the formation of the owner's financial resources. The process of this optimization is based on the following criteria:

ensuring the minimum aggregate cost of attracting the owner's financial resources. If the cost of attracting its own financial resources at the expense of external sources significantly exceeds the planned cost of borrowing funds, then this formation of the owner's resources should be abandoned;

ensuring the preservation of enterprise management by its original founders. The growth of additional equity or equity capital at the expense of third-party investors may result in loss of such controllability.

The effectiveness of the developed policy of forming its own financial resources is estimated using the coefficient of self-financing the enterprise development in the future period. This level must meet the goal.

Effectiveness of the developed policy of formation of the owner's financial resources is estimated using the coefficient of self-financing the enterprise development (C_{sf}):

$$C_{sf} = \frac{OFR}{\Delta A + CP}, \tag{7.13}$$

where *OFR* is the planned volume of the formation of the owner's financial resources;

ΔA is the planned growth of assets of the enterprise;

CP is the planned consumption of net profit.

Thus, management of the owner's capital is achieved by maximizing profits, increasing depreciation and developing an effective dividend policy.

7.3. The borrowed capital of an enterprise

✍ **The loan capital** of an enterprise characterizes the totality of its financial liabilities (total debt)

The borrowed capital (the loan capital) is the assets of the enterprise in the form of debt obligations which are attracted from outside in the form of loans, financial assistance, amounts received on bail, and other external sources for a specific period, under certain conditions, under any guarantees.

The company's loan capital can be divided into two groups: long-term (shown in the third section of the liability balance) and short-term (shown in the fourth section of the liability balance) funds.

Long-term financial liabilities (with the term of use more than one year). These include long-term bank loans, tax arrears, issued bonds, financial assistance (on a reverse basis), whose maturity has not come yet or which have not been repaid in due time.

Short-term financial liabilities (with the term of use less than one year). They include short-term bank loans, various forms of payables (by goods, works and services; on issued bills; on received advances; on settlements with the budget and extrabudgetary funds; on labor remuneration; with subsidiaries; with other creditors); and others short-term financial liabilities.

The need to attract borrowed funds as a source of financing of enterprises is determined by the nature of the circulation of fixed and working capital. As a rule, at the expense of their current assets, enterprises create the minimum inventory.

The process of managing the borrowed capital includes the following main stages:

1. Analysis of attraction of the borrowed funds in the previous period. At this stage, the dynamics of the total attraction of loan capital is studied; the main forms of borrowing the funds is determined; the ratio of the loan capital to the period of their involvement is determined; the composition of creditors and the conditions for granting loans is studied; the efficiency of the use of the borrowed funds in general and their individual forms at the enterprise is analyzed.

2. Determination of the purpose of borrowing the funds in the future period.

3. Determination of the maximum amount of attraction of borrowed funds.

4. Estimation of the cost of borrowing capital from different sources. Such an assessment is made in the context of various forms of borrowing capital, which is attracted by the enterprise from external and internal sources. The results of this assessment are the basis for the development of managerial decisions on the selection of alternative sources of borrowing, which meet the needs of the enterprise for debt capital.

5. Determination of the ratio of the volume of the borrowed funds that are attracted on a short- and long-term basis. The purpose of this phase is to identify the timing of the borrowed funds. There is full- and medium-term use of capital.

6. Determination of the forms of attraction of the borrowed funds. These forms are differentiated in the context of a financial loan, commodity loan, other forms. The choice of the forms of borrowing is made by the enterprise on the basis of the goals and specifics of its economic activity.

7. Definition of the main creditors.

8. Formation of effective conditions for attracting loans: the term of the loan; interest rates on the loan; conditions for repayment of the amount of interest; conditions for repayment of the principal amount; other conditions associated with obtaining a loan.

9. Ensuring the effective use of the borrowed loans. The criterion of such efficiency are indicators of turnover and profitability of the debt capital.

10. Providing timely payments for loans received. For this purpose, a special pivotal fund may be reserved in advance for large loans. Payments for servicing credits are included in the payment calendar and monitored in the process of monitoring the current financial activity.

At enterprises that attract a large amount of the borrowed funds in the form of financial and commodity loans, the general policy of attracting the borrowed funds can be detailed in the context of these forms of credit.

11. Analysis of the attraction and use of the borrowed funds in the previous period.

The purpose of this analysis is to identify the volume, composition and forms of borrowing by the enterprise, as well as assess the effectiveness of the use of these borrowings.

Questions for self-assessment

1. Describe the stages of capital formation.
2. Identify the nature and purpose of the financial leverage effect.
3. Describe the essence of the Modigliani – Miller approach.
4. Describe the methodology for evaluating the value of the owner's capital.
5. Describe the methodology for assessing the cost of the borrowed capital.
6. Describe the main stages of managing the borrowed (loan) capital.

8. Financial analysis and planning of an enterprise's activity

The purpose of the theme is to get knowledge and skills in analyzing the financial statements of the enterprise and draw conclusions.

The main competence: the ability to identify the main financial opportunities of the enterprise and threats to its activity for the future financial planning.

Agenda

8.1. Financial statements and financial statement analysis: vertical and horizontal.

8.2. Liquidity and solvency of the enterprise.

8.3. Financial planning at the enterprise.

8.1. Financial statements and financial statement analysis: vertical and horizontal

Financial analysis is an important tool used to assess the past performance of the enterprise as well as its prospects for the future. A modern, comprehensive assessment of the financial state of the enterprise is necessary for making almost all managerial decisions. Knowledge of a method for analysis of the financial condition of an enterprise and the ability to make adequate analytical findings are essential skills for modern management specialists.

✍ **Financial analysis** is a method of estimating and forecasting the financial condition of the enterprise on the basis of its financial statements

The objectives of the financial analysis are:

assessment of the current and prospective financial condition of the enterprise;

estimation of the possible and expedient development of the enterprise from the standpoint of financial support;

identification of the possible sources of financial resources of the enterprise.

✍ **The financial condition of an enterprise** is a complex concept characterized by a system of indicators that show the presence, allocation and use of financial resources of an enterprise, fulfillment of its obligations to the state and other economic entities

The type of analysis varies according to the specific interest of the parties involved. The main of them are creditors, investors, government, unions and management.

Typically, financial analysis involves evaluation of the enterprise's financial statements and its flows of funds.

✍ **Financial statement analysis** involves the calculation of various indexes and ratios using the financial statements data in order to determine a meaningful assessment of the enterprise's performance

✍ **Funds flow analysis** is an evaluation of the enterprise's statement of changes in the financial position in order to determine the impact that its sources and uses of funds have on the enterprise's operations and financial conditions

Financial analysis involves the use of financial statements, the primary source of financial information concerning the enterprise.

Financial information is the basis for making decisions by the financial manager on all issues of the company's activities. This includes [12]:

the results of the entrepreneurial activity;

the current legislative and regulatory framework;

the strategic targets and plan tasks;

the financial condition of supplier companies;

the state of the market for the corresponding goods and services and consumer demand.

The main source of financial information (especially for external analysis) is the financial statements of the enterprise:

- the balance sheet of the enterprise – Form No. 1;
- the income statement – Form No. 2.

According to the Regulation (Standard) on Accounting of Ukraine No. 1 (R/S) AU 1 "The General Requirements to Financial Statements", the balance sheet is a statement of the financial position of an enterprise that contains a certain date on its assets, liabilities and equity.

The balance sheet consists of two main parts: assets and liabilities.

The income statement (standard R(S) AU 2) shows the results of the enterprise during the year and contains three main sections:

the financial results, which are grouped based on the type of activity;

the elements of operating expenses, which are grouped based on the functions;

calculation of profitability of shares.

The assets of the enterprise are the resources of the enterprise, the use of which leads to economic benefits in the future. The composition of the company assets is shown in Fig. 8.1.

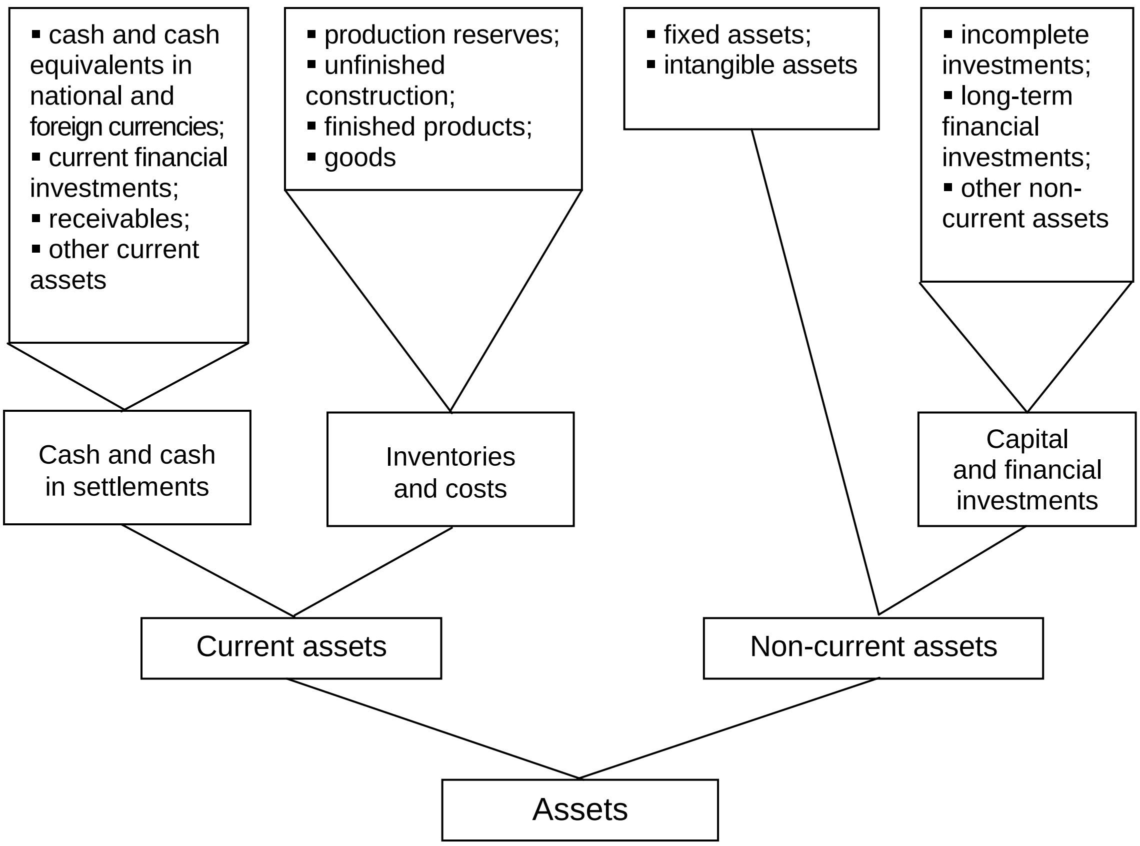

Fig. 8.1. **The composition of the enterprise assets**

The liabilities of the enterprise are the sources of financing (commitment) of the enterprise (Fig. 8.2).

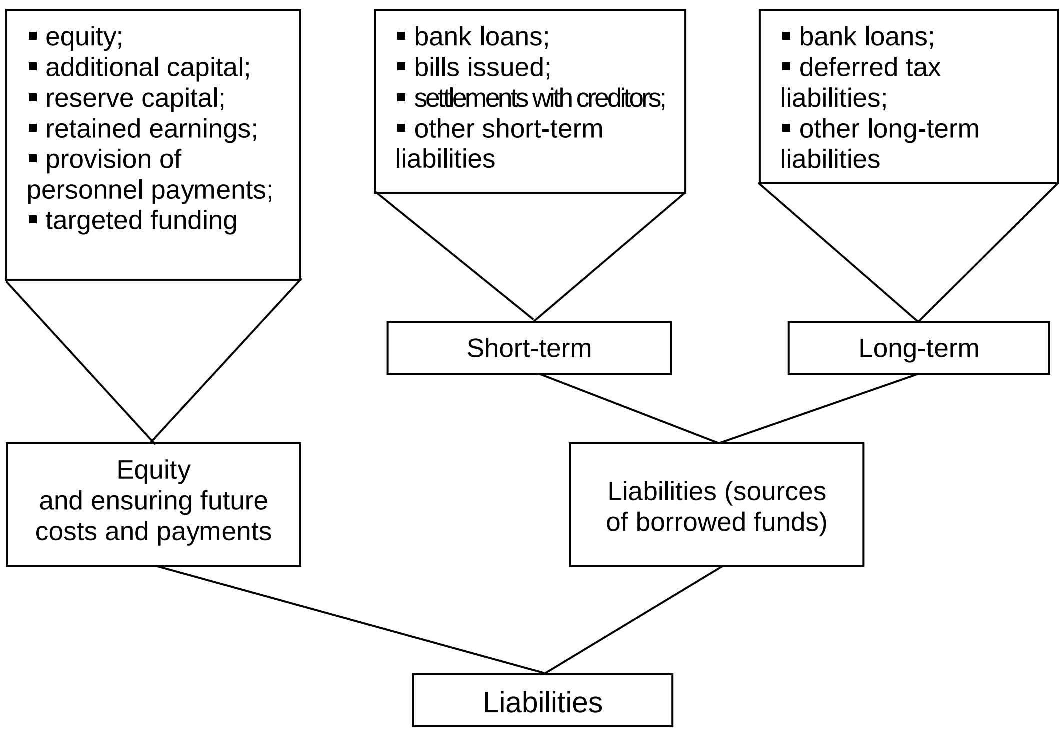

Fig. 8.2. **The composition of the enterprise liabilities**

The practice of financial analysis involves seven main methods [22]:

horizontal analysis – comparison of each position of reporting with the previous period;

vertical (structural) analysis – the definition of the structure of the final financial indicators with the identification of the impact of each position of reporting on the overall result;

trend analysis – comparing each reporting position with certain prior periods and determining the trend, that is, the main trend of the dynamics of the indicator, cleared of random influences and individual characteristics of individual periods. With the help of a trend perspective the prospective analysis is carried out;

ratio analysis of indicators (coefficients) – calculation of relations between individual positions of the report or positions of different forms of reporting, determination of the relationship of indicators;

comparative analysis – analysis of consolidated reporting indicators, as well as an inter-economic analysis of the indicators of a certain form of reporting compared with the indicators of competitors, with medium-sized and average economic data;

factor analysis – analysis of the influence of individual factors (causes) on the performance indicator of the enterprise;

correlation analysis – analysis which is used when there is such a connection between the indicators in which one of them is included in the factors that determine the other, if there are no common factors that affect both performance indicators.

Let's consider some methods of analysis in more detail.

The various accounts of the financial statements can be expressed as a percentage.

When the various items are expressed as a percentage of the total assets or total net sales, we have **vertical analysis** (or common size analysis).

In vertical analysis, a significant item on a financial statement is used as a base value, and all other items on the financial statement are compared to it. In performing vertical analysis for the balance sheet, total assets are assigned 100 percent. Each asset and each liability is expressed as a percentage of total assets.

In the income statement, net sales are given the value of 100 percent and all other accounts are evaluated in comparison to sales.

Vertical analysis is used to disclose the internal structure of an enterprise. It indicates the existing relationship between each income statement account and revenues. On the balance sheet side, it indicates the mix of assets that produces the income and the mix of sources of capital. The method of vertical analysis of the balance is given in Table 8.1.

Table 8.1

Vertical analysis of the enterprise balance sheet

Balance items	Values		Share in the balance sheet (section)		Changes in items
	to the beginning	to the end	to the beginning, %	to the end, %	
1	2	3	4	5	6
					(col. 5 – 4)

There are the following types of vertical analysis [3]:

1. Structural analysis of assets designed to determine the proportion of negotiable and non-current assets, the elemental composition of negotiable and non-current assets, the composition of the assets of the enterprise based on the level of liquidity; the composition of the investment portfolio according to the types of securities.

2. Structural analysis of capital aiming to determine the proportion of the owner's and loan capital, the composition of the loan capital for the periods of provision (short-term and long-term), the composition of the loan capital depending on the type (bank, financial, commodity loans, etc.).

3. Structural analysis of cash flows intended to determine the structure of cash flows for all types of the enterprise activities.

Horizontal analysis is used to evaluate the trend in the accounts over the year. In this type of analysis, the various items of the financial statements are expressed as an index relative to a base year.

The form of horizontal analysis is shown in Table 8.2.

Table 8.2

Horizontal analysis of the enterprise balance sheet

Balance items	Values		Changes	
	to the beginning	to the end	thousand UAH	%
1	2	3	4	5
			(col. 3* – 2)	(col. 3 / col. 2) × 100

* The value of the column of the table under the corresponding number.

The types of horizontal financial analysis [2]:

1. Investigation of the dynamics of the indicators of the reporting period in conjunction with the indicators of the previous period (month, quarter, year).

2. Investigation of the dynamics of the indicators of the reporting period in relation to the indicators of the same period of the previous year (for example, indicators of the first quarter of the current year with indicators of the first quarter of the previous year).

3. Study of the dynamics of indicators for a number of previous periods. This type of analysis is the trend.

Horizontal and vertical analyses compare one figure to another within the same category. It is also essential to compare figures from different categories.

This is accomplished through **ratio analysis** that determines the relationship between different items of the financial statement.

8.2. Liquidity and solvency of the enterprise

The concepts of solvency and liquidity of the enterprise are very close.

Liquidity is the ability to quickly transfer an asset to cash without a significant loss of its value (with minimal cost) [23].

For enterprises engaged in foreign economic activity solvency is of particular importance. **The solvency** of an enterprise indicates the availability of cash during a sufficient period of time for timely fulfillment of financial obligations. This is an opportunity for the enterprise to repay its fixed-term obligations in a timely manner by the available cash resources [6].

Liquidity is the ability of an enterprise to settle its current obligations to foreign counterparties by converting assets into money.

> ✍ **Liquidity of the enterprise** is the property of the enterprise in the shortest time to be calculated according to its obligations

The analysis of liquidity of the enterprise contains an analysis of liquidity of the balance sheet and analysis of relative indicators (coefficients) of liquidity.

✍ **The liquidity of the balance sheet** is the degree of coverage of the liabilities of assets of the appropriate degree of liquidity and the maturity of liabilities

The analysis of the liquidity of the balance is designed to compare the articles of the asset with the articles of the liability. In the balance sheet, the assets of the enterprise are grouped according to the degree of growth of their liquidity, in liabilities they are placed with the reduction of maturity.

✍ **Liquidity of assets** is the ability of assets to be converted into money in the minimum terms

Based on the degree of liquidity, the assets of the enterprise are grouped as follows:

A1 – the most liquid assets. These include cash in national and foreign currencies, as well as current financial investments (line 1160 + line 1165 in the Balance Sheet);

A2 – rapidly deployable assets. These include receivables and other current assets (lines (1120 + … + 1155)* in the Balance Sheet, where * means except for lines that are not included in the total balance);

A3 – assets that are slowly being sold – stocks of the enterprise (lines (1100 + 1110 + 1170 + 1190 + 1200) in the Balance Sheet);

A4 – hard-to-realize assets (least liquid assets). These include non-current assets of the enterprise (summary of section 1 of the asset (line 1095) in the Balance Sheet).

The liabilities of the enterprise in terms of maturity are grouped as follows:

L1 – most urgent obligations. These include payables and loans that were not repaid in due time (lines (1605 + … + 1650) in the Balance Sheet);

L2 – short-term liabilities of the enterprise – short-term loans (lines (1600 + 1660 + 1665 + 1690 + 1700) in the Balance Sheet);

L3 – long-term liabilities of the enterprise. These include long-term loans (summary of the 3rd section of the liability (line 1595 + line 1800) in the Balance Sheet);

L4 – stable liabilities (real equity of the enterprise – line 1495 in the Balance Sheet).

The balance sheet of an enterprise is completely liquid due to the following conditions:

$$A1 \geq L1;\ A2 \geq L2;\ A3 \geq L3;\ A4 < L4.$$

If at least one of the following requirements is not met, then the balance sheet cannot be considered liquid. In this case, it is necessary to identify the reasons for the non-compliance of one or another condition and to implement certain measures to eliminate this discrepancy.

The analysis of the liquidity balance is expedient to be carried out using Table 8.3.

Table 8.3

Analysis of the balance sheet liquidity

The degree of liquidity	Assets			Liabilities			Excess or lack of funds	
	marking	at the beginning (A)	at the end (A)	marking	at the beginning (L)	at the end (L)	at the beginning (A – L)	at the end (A – L)
1	A1			L1				
2	A2			L2				
3	A3			L3				
4	A4			L4				

Along with the analysis of the liquidity balance, for a more detailed analysis of the enterprise's liquidity it is necessary to calculate the relative indicators of liquidity. These include:

1. *The ratio of absolute liquidity (solvency)* (*RAL*) which is an indicator that characterizes the part of the short-term financial liabilities of an enterprise that can be paid by first-class liquid assets (cash and cash equivalents), that is, the enterprise's ability to repay immediately its short-term payables [9]. The theoretical optimal value of this indicator is about 0.2 – 0.25:

$$RAL = \frac{A1}{L1 + L2}. \tag{8.1}$$

2. *The current coverage ratio* (*CCR*) which shows how many monetary units of current assets account for each monetary unit of short-term liabilities. That is, it characterizes the sufficiency of the working capital of the enterprise to repay its debts during the year. The critical value of the coverage ratio is 1, and the value of the coverage ratio within the range of 1 – 1.5 indicates that the enterprise timely liquidates the debt:

$$CCR = \frac{A1 + A2}{L1 + L2}. \tag{8.2}$$

3. *The coefficient of general coverage* (*CGC*) which characterizes how much current liabilities under loans and calculations of the enterprise can be paid off at the expense of all mobilized working assets. The normative value of this indicator is 1.0 – 2.0, and according to the definition of separate economists – not less than 2.0 – 2.5. The lowest limit provides coverage of current assets of the enterprise's short-term liabilities. Significant excess of current assets of the size of short-term liabilities is not desirable either and indicates the ineffective use of the enterprise's property:

$$CGC = \frac{A1 + A3}{L1 + L2}. \tag{8.3}$$

4. *The ratio of payables and receivables* (*RPR*). The value of the coefficient should be less than 1.0. If the payables exceed the receivables, it is necessary to find out the reasons for such a situation (which may be due to difficulties in the sale of products, etc.):

$$RPR = \frac{AP}{AR}, \tag{8.4}$$

where *AP* is the accounts payable;
AR is the account receivables.

All coefficients need to be calculated at the beginning and end of the period to get the results in dynamics.

If the analysis of such coefficients reveals deviations from the recommended values, then it is necessary to find out the reasons for this.

When conducting research on the enterprise's liquidity based on these indicators, it should not be limited to their calculations and comparisons in the dynamics or with similar enterprises, because the analysis will be incomplete.

The given coefficients are relative values and may be unchanged over time or change slightly, while changes in the components of the numerator and denominator may be significant. Therefore, such a study should be complemented by factor analysis.

The main causes of insolvency can be:

flows in the study of international market products that are offered now;

non-fulfillment of foreign economic contracts as to the terms of supply of products, violation of their structure and assortment, lower quality;

increase of production cost;

loss of sales channels and constant buyers, customers under the conditions of international competition;

insolvency of buyers and customers themselves for different reasons;

non-fulfillment of the profit plan and lack of the owner's sources of financing of the enterprise;

failure to take into account the processes of globalization and, as a consequence, the pressure of competitors, changes in demand and inflation processes;

failure to take into account changes in tax policy;

significant distraction of funds into accounts receivable and surplus production reserves;

low turnover of the working capital, which will be discussed further.

8.3. Financial planning at the enterprise

In a world characterized by scarce resources, fierce competition and a continuously evolving scenario, the enterprise must make sure that its resources are used in the most efficient way in order to achieve its goals.

Financial planning is the tool that is used to assess the financial impact of the forecasted scenario on the enterprise's performance. It leads to the development of financial plans, a set of actions designed to respond to the future requirement over the planning horizon. Thus, the main purpose of financial analysis is to enable the top management to judge which plan is best for the enterprise indicating the expected consequences of alternative courses of action, help to evaluate the anticipated returns and risks and determine a reasonable set of strategic and operating decisions.

✍ **Financial planning** is the process of balancing the volume of financial resources and their distribution within the enterprise, its subdivision or a separate project

The process of financial planning can be divided into the following stages [2]:

1. Development of a system of forecasting the variants of financial reports based on the influence of changes in the external and internal environment.

2. Determination of the needs of the enterprise for financial resources necessary to ensure the implementation of its plan.

3. Forecasting the structure of sources of funding to be used in future activities.

4. Creation and maintenance of a workable state of the subsystem management responsible for the placement and use of funds within the enterprise.

5. Development of procedures for adjusting the plan in case the real economic conditions differ from those forecasts on which the current plan was based.

The main objects of financial planning include [6]:

profit (income) from all types of activity of the enterprise;

fixed and circulating assets;

capital investments;

financial investments;

equity;

money funds;

loans and other loan funds;

cash receipts and expenses.

The purpose of financial planning is to ensure the reproduction process, both in terms of volume and structure, financial resources.

Methods of financial planning are the specific methods of scheduled calculations. Planning of financial indicators is carried out by means of several methods. They include [1]:

1. The equity method which consists in balancing not only the total income and expense figures, but also the specific sources of coverage for each item of expenditure. It applies to the forecast of revenues and payments of their funds, the quarterly revenue and expenditure plan, the payment calendar, etc.

2. The normative method which implies that based on the established norms and technical and economic standards (tax rates, rates of tariffs, fees and contributions, depreciation rates, working capital norms), the need of an economic entity for financial resources is calculated and the sources of these resources are determined.

3. The calculation-analytical method. Planned indicators are calculated on the basis of analysis of the actual financial indicators which are taken for the base, and the indexes of their changes in the planned period.

4. The method of optimizing planned decisions which consists in determining several possible options for planned calculations and choosing the optimal option using a certain optimization criterion. The optimization criterion may be: the minimum cost; the maximum profit; the minimum period of capital inversion; the maximum return on the invested capital; the minimal financial risk; a minimum of financial costs to attract funding sources.

5. The method of economic and mathematical modeling which allows you to find quantitative expressions of interconnections between the financial indicators and the factors that determine them. The economic-mathematical model is an exact mathematical description of factors that characterize the structure and patterns of change in this economic phenomenon and are carried out with the help of mathematical techniques.

Financial planning at the enterprise (intra-firm planning) is based on the use of its three main systems [3]:

1. Financial forecasting.
2. Current planning of financial activity.
3. Operational planning of financial activity.

Let's consider each of these elements in more detail.

✍ **Financial forecasting** is a prediction of a possible financial state of the state, industry, enterprise, justification of financial plan indicators

The purpose of financial forecasting is to determine the real possible amount of financial resources, the sources of their formation, the directions of their use for the predicted period. Financial forecasts allow the financial system authorities to outline various options for developing and improving the financial system, forms and methods for implementing the financial policy. Projections can be medium-term (5 – 10 years) and long-term (more than 10 years).

The system of financial forecasting aims, first of all, to develop the financial strategy of the enterprise.

✍ **The strategic financial plan** is the most important indicators, proportions and rates of the expanded production, which is the main form of the implementation of the target plants, the investment strategy and the expected savings

Strategic plans are general business development plans. In the financial aspect, these plans determine the most important financial indicators and proportions of reproduction, characterizing investment strategies and the possibilities of reinvestment and accumulation. Strategic plans determine the volume and structure of the financial resources necessary for the operation of the enterprise.

Current plans are developed on the basis of strategic plans by means of detailed elaboration. If the strategic plan provides an approximate list of financial resources, their volume and directions of use, then within the framework of current planning, mutual coordination of each type of investment with the sources of their financing is conducted, the efficiency of each possible source of financing is studied, and a financial evaluation of the main directions of the enterprise's activities and ways of obtaining income is conducted.

The purpose of compiling the financial plan is to reconcile the income and expenses. The current financial plan is a quarterly breakdown, since over the course of the year, the need for cash flows varies considerably, and there may be a shortage or a surplus of financial resources.

In foreign practice, intra-firm current plans are called budgets, and the process of compiling them is known as budgeting.

✍ **Budget** is the current financial plan, which indicates input and output cash flows for all types of activities

The main requirement of budgeting is an individual approach to each planning object. When budgeting it is necessary to consider the specifics of the industry, as the finances of enterprises in one industry are different from the finances of enterprises in another industry [10].

Operational financial planning is preparation of operational plans to provide detailed management of the financial activity of the enterprise in accordance with the chosen strategy.

Operational financial planning is based on the compilation and execution of the budget and the statement of cash flows that allow the financial manager to provide operational financing, execution of settlement and payment obligations, record changes taking place in the solvency of the enterprise and its liquidity [12].

✍ **Operational plans** are short-term tactical plans that directly relate to the achievement of the enterprise's goals (production plan, procurement plan for raw materials and materials, etc.)

Operational financial plan is developed in two main stages:

1. A preliminary financial plan, which is formed on the basis of orders submitted in the base period and which are in processing.
2. An adjusted financial plan which is used for more precise forecast. The enterprise needs to work with this type of plan. However, this plan should be flexible enough to make certain changes, if necessary.

The financial manager manages the implementation of the operational financial plan. With the help of plans and reports, you can identify the trends and problems that the enterprise faces in its activities. Such an analysis allows us to develop more accurate plans for the future.

Questions for self-assessment

1. What is the essence of the financial analysis of the enterprise?
2. What is the essence of the analysis of the balance sheet of the enterprise?
3. List the main advantages and disadvantages of conducting vertical and horizontal analysis of the enterprise's balance sheet.
4. What is the essence of the analysis of liquidity of the enterprise? Provide a description of the indicators for its analysis.
5. How can you determine the level of liquidity of the enterprise balance sheet?
6. What is the essence of intra-firm financial forecasting?
7. Identify and describe the main elements of strategic financial planning at the enterprise.
8. Describe the main stages of operational financial planning.

Practical tasks for content module 2

Tests (single answer)

1. The financial resources of the enterprise aimed at the formation of its assets are:

a) equity (owner's capital);

b) borrowed capital;

c) invested capital;

d) share capital.

2. Financial resources of an entity that are owned by it and used to form part of its assets are:

a) investment capital;

b) owner's capital;

c) statutory capital;

d) borrowed capital.

3. Financial resources attracted by enterprises to form a certain part of assets with obligations to return them to the owner within a specified timeframe are:

a) investment capital;

b) owner's capital;

c) statutory capital;

d) borrowed capital.

4. The initial amount of the enterprise's own capital which is formed for the beginning of economic activity is:

a) fixed capital;

b) statutory capital;

c) working capital;

d) reserve capital.

5. The enterprise owned capital cannot be presented in the form of:

a) statutory capital;

b) long-term bank loans;

c) reserve capital;

d) share capital.

6. The following are not included in the borrowed (loan) capital:

a) current liabilities for payroll calculations;

b) accounts payable for goods, works, services;

c) share capital;

d) long-term bank loans.

7. The financial structure of capital is characterized by the ratio of:

a) owner's and borrowed capital;

b) fixed and working capital;

c) long-term and short-term obligations;

d) capital invested in assets in tangible and intangible form.

8. The cost of capital represents the … price that the enterprise pays for its involvement from various sources.

a) minimal;

b) maximum;

c) average.

9. To determine the cost of attracting the owner's capital at the expense of profits remaining at the disposal of the enterprise, one should use:

a) the total amount of net profit;

b) the amount of net profit with the exception of the part intended for consumption;

c) the amount of net profit, except for the part directed to the reserve fund;

d) the amount of net profit, except for the part intended for consumption and in the reserve fund.

10. The owner's capital has such a positive feature as:

a) ease of engagement;

b) a wide opportunity to raise funds;

c) an arising risk of loss of financial stability;

d) the limited pace of development of the economic entity.

Task 1

Based on the balance sheet and the financial statement of PF "Brigantina" (Tables 1 and 2), carry out a vertical and horizontal analysis of the enterprise's balance sheet.

Draw a conclusion.

Table 1

Assets of the balance sheet of PF "Brigantina" as of December 31, 2017, thou UAH

Assets	Line code	At the beginning of the reporting period	At the end of the reporting period
I. Non-current assets	-	-	-
Non-current assets	1000	23	20
initial value	1001	33	33
accumulated depreciation	1002	10	13
Incomplete capital investment	1005	-	-
Fixed assets	1010	69	35
initial value	1011	250	264
wear and tear	1012	181	229
Investment property	1015	-	-
initial value	1016	-	-
Deferred tax assets	1045	-	-
Other non-current assets	1090	-	-
Total per section I	**1095**	**92**	**55**
II. Current assets	-	-	-
Stocks	1100	1 358	1 598
Inventories	1101	5	8
Unfinished production	1102	-	-
Finished products	1103	-	-
Goods	1104	1 353	1 590
Current biological assets	1110	-	-
Accounts receivable for products, goods, works, services	1125	134	53
Accounts receivable by settlement:	-	-	-
for advance payments	1130	-	-
with budget	1135	13	-
including income tax	1136	3	-
from accrued income	1140	-	-
from internal settlements	1145	-	-
Other current accounts receivable	1155	42	1
Current financial investments	1160	-	-
Money and their equivalents	1165	101	259
Banks' accounts	1167	101	259
Costs of future periods	1170	3	3
Other current assets	1190	21	21
Total per section II	**1195**	**1 672**	**1 919**
III. Non-current assets held for sale and disposal groups	**1200**	-	-
Balance	**1300**	**1 764**	**1 972**

Table 2

Equity and liabilities of the balance sheet of PF "Brigantina" as of December 31, 2017, thou UAH

Liabilities	Line code	At the beginning of the reporting period	At the end of the reporting period
I. Equity	-	-	-
Registered capital	1400	250	250
Capital in revaluations	1405	-	-
Additional capital	1410	-	-
Reserve capital	1415	-	-
Retained earnings (uncovered loss)	1420	414	684
Unpaid capital	1425	-	-
Withdrawn capital	1430	-	-
Total per section I	**1495**	**664**	**934**
II. Long-term liabilities and collaterals	-	-	-
Deferred tax liabilities	1500	-	-
Long-term bank loans	1510	-	-
Other long-term liabilities	1515	-	-
Long-term collaterals	1520	-	-
Long-term maintenance of staff costs	1521	-	-
Targeted financing	1525	-	-
Total per section II	**1595**	-	-
III. Current liabilities and collaterals	-	-	-
Short-term bank loans	1600	-	-
Promissory notes issued	1605	-	-
Current payables for:	-	-	-
long-term liabilities	1610	-	-
goods, work, services	1615	1 007	836
settlements with the budget	1620	11	139
including income tax	1621	-	57
Insurance settlements	1625	-	10
settlements of wages	1630	38	32
on receipt of advances	1635	-	-
with the participants	1640	-	-
from internal settlements	1645	-	-
Current collaterals	1660	-	-
Future income	1665	-	-
Other current liabilities	1690	44	21
Total per section III	**1695**	**1 100**	**1 038**
IV. Liabilities related to non-current assets held for sale and disposal groups	**1700**	-	-
Balance	**1900**	**1 764**	**1 972**

Task 2

Based on the financial statements of PF "Brigantina" (Tables 1 – 3), calculate the indicators of liquidity, financial stability and profitability at the beginning and end of the period. Draw a conclusion.

Table 3

Financial statement of PF "Brigantina" for 2017

Article	Line code	For the reporting period	For the same period of the previous year
Net income from sales of products (goods, works, services)	2000	16 560	6 219
Cost of sold products (goods, works, services)	2050	(15 596)	(8 136)
Gross	-	-	-
profit	2090	964	-
loss	2095	(-)	(1 917)
Other operating income	2120	10 126	1159,00
Administrative expenses	2130	(6 218)	(4 561)
Selling expenses	2150	(2 696)	(1 250)
Other operating expenses	2180	(150 874)	(2 475)
Financial result from operating activities	-	-	-
profit	2190	-	-
loss	2195	(148 698)	(9 044)
Income from equity participation	2200	-	-
Other financial income	2220	-	-
Other income	2240	-	-
Financial expenses	2250	(-)	(-)
Losses from equity participation	2255	(-)	(-)
Other expenses	2270	(-)	(-)
Financial results before tax	-	-	-
profit	2290	-	-
loss	2295	(148 698)	(9 044)
Expenses (income) from income tax	2300	-	-
Profit (loss) from discontinued operations after tax	2305	-	-
Net financial result	-	-	-
profit	2350	-	-
loss	2355	(148 698)	(9 044)

Task 3

Using trend analysis, determine the operating profit of the company for 2018 – 2020 according to Table 4.

Table 4

Output data

Indicators, mln UAH	Years								
	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sales	128.6	141.3	136.4	139.1	156.8	162.5	174.4	171.6	169.2
Other operating income	17.2	14.1	11.9	12.4	15.8	8.6	11.2	16.3	14.5
Operating expenses	90.1	113.2	116.9	104.6	119	124.9	140.7	127.3	119.9
including: material expenses	35.6	45.8	50.9	46.4	48.4	60.2	67.3	62.8	64.2
depreciation	16.4	22.8	24.5	17.2	24.1	17.2	18.1	14.5	20.1
labor costs and deductions for social measures	27	36.4	31	28.9	28.5	38.4	50.5	36.3	24.4
other operating expenses	11.1	8.2	10.5	12.1	18	9.1	4.8	13.7	11.2
Operating profit									

Task 4

Determine the amount of the enterprise's own capital if it is known that the amount of non-current assets of the enterprise is 1,005,553 thou UAH, the amount of long-term liabilities is 108,826 thou UAH, short-term liabilities make 1,040,136 thou UAH, and the current assets amount to 1,015,034 thou UAH.

Task 5

The capital of a joint-stock company in the amount of 5 000 000 USD is formed at the expense of several sources:

2 000 000 UAH due to the issue of shares of face value of 5 000 UAH, dividends on which are expected to be 500 UAH;

1 200 000 UAH received on a loan at 10 % per annum;

1 800 000 UAH received on a loan at 15 % per annum;

discount rate of 15 %.

Calculate the cost of raising the capital.

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НАВЧАЛЬНЕ ВИДАННЯ

Лепейко Тетяна Іванівна
Близнюк Тетяна Павлівна
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ФІНАНСИ

Навчальний посібник

(англ. мовою)

Самостійне електронне текстове мережеве видання

Відповідальний за видання *Т. І. Лепейко*

Відповідальний редактор *М. М. Оленич*

Редактор *З. В. Зобова*

Коректор *З. В. Зобова*

Навчальний посібник присвячено питанням вивчення основ теорії фінансів на макро- та мікрорівні. Наведено принципи формування та розподілу фінансів на рівні держави, особливості кредитного механізму, методики фінансового планування на підприємстві. До кожної теми подано практичні вправи та запитання для самоконтролю.

Рекомендовано для студентів економічних спеціальностей закладів вищої освіти всіх форм навчання, які опановують дисципліну "Фінанси", а також керівників, спеціалістів різних галузей, підприємців, бізнесменів.

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