

**MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE**

**SIMON KUZNETS KHARKIV NATIONAL  
UNIVERSITY OF ECONOMICS**

## **FINANCE**

**Guidelines to practical tasks for Bachelor's (first)  
degree students of speciality 051 "Economy"  
of the educational program "International Economics"**

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The main issues of the topics which are studied according to the plan of lectures on the academic discipline, practical tasks and guidelines to them are provided. A list of educational and methodological and scientific literature, information resources of state authorities, necessary for the work is provided.

For Bachelor's (first) degree students of speciality 051 "Economy" of the educational program "International Economics".

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## Introduction

Finance is an integral part of almost every type of activity, an integral part of the activities of state and local management bodies, business entities of the real sector of the economy – legal entities and individuals, financial corporations, the population, etc. Finances are present in any economic process from the beginning of its introduction to the receipt and use of financial resources. Knowledge in the financial sphere is necessary for making effective, balanced and well-founded decisions by both ordinary citizens and managers and specialists of enterprises and organizations, state managers.

The study of the academic discipline "Finance" becomes especially relevant in the context of economic transformations in Ukraine, associated with the introduction of best practices and European business experience, the spread of integration and globalization processes in the world economic system. It is necessary to deeply understand the nature of financial relations, to know the principles of construction and mechanisms of their functioning for the successful implementation of economic activities and reduce the effects of crises in the economy of Ukraine. The formation and development of market relations in Ukraine requires specialists to have a wide range of basic theoretical knowledge and relevant competences in the field of finance, which are necessary in practice at the macro, meso and micro levels to solve problems related to the formation, distribution and using cash income and financial resources.

The object of study of the academic discipline is the system of economic relations in the process of distribution and redistribution of state GDP.

The subject of the academic discipline is the interaction of the financial system of the state in the process of forming centralized and decentralized funds.

The purpose of the academic discipline is the formation of students' system of competences for practical application in the process of their professional activity and daily life, acquisition of knowledge of the laws of finance at the meso- macro and micro levels as a theoretical basis of financial policy and development of financial system.

The tasks of studying the academic discipline are: application of the basic issues of the theory of finance to substantiate the directions of solving modern financial problems; mastering the theoretical bases of formation and

functioning of the financial system; understanding of the principles of the budget system and the principles of building a budget system; acquisition of theoretical knowledge of methods and sources of budget revenues and directions and forms of financing budget expenditures; acquiring knowledge of the functioning of public credit and public debt management; understanding the content of financial relations in enterprises and households; generation of theoretical knowledge of functioning of financial market and financial system components.

A special place in the course of studying the academic discipline belongs to practical classes, during which the theoretical knowledge obtained at lectures and in the process of independent work on the academic discipline is consolidated. A practical class is a form of educational class in which the teacher organizes a detailed study of individual theoretical issues of the academic discipline by students and develops the skills and abilities of practical application of this knowledge through the student's individual performance of the correspondingly formulated tasks.

The practical tasks and guidelines to them will contribute to the proper mastering of the basic issues of the academic discipline, the acquisition of skills in the practical use of the acquired knowledge, the formation of a system of general and special competencies and learning outcomes.

# **Content module 1. Theory of finance and basics of public finance**

## **Topic 1. The subject of financial science. The essence and functions of finance**

1.1. Definition of the economic category "financial science". Subject, methods and components of financial science.

1.2. The essence of finance as an economic, value, distributive, historical category.

1.3. Funds of financial resources.

1.4. Finance functions.

1.5. Financial support of the reproductive process.

### **Practical tasks**

#### **Task 1.1**

Study the dynamics of Ukraine's GDP (as the main object of financial relations) in the period since 2010 year until the last reporting year for which the State Statistics Service published information on the actual value of this indicator on its official website. To provide comparability of indicators in dynamics, as well as in relation to other countries, the value of GDP must be presented not only in the national monetary unit – UAH, but also in Euro.

Draw conclusions based on the results of the task.

#### **Task 1.2**

Compare the level of development of Ukraine and European countries, based on GDP per capita. Make calculations for the three last reporting years, for which information is simultaneously available from the State Statistics Service of Ukraine (for Ukraine) and Eurostat, the statistical service of the European Union (for the countries of this union). Each student chooses one country for research.

Present the results in Table 1. Draw conclusions.

### Indicators of GDP per capita in European countries

Country	GDP per capita, euro		
	20.. year	20.. year	20.. year
1. Ukraine			
2. Selected European country			

#### ***Guidelines to tasks 1.1 – 1.2***

The information necessary to perform the tasks should be found on the website of the State Statistics Service of Ukraine [25], website of the National Bank of Ukraine [22].

The path to the information about the value of Ukraine's GDP in hryvnia equivalent at actual prices of the corresponding year is: Main page of the site / Statistical information / Economic information / National accounts / Gross domestic product at actual prices.

To determine the GDP of Ukraine in euro equivalent, it is necessary to take information on the official average annual exchange rates of the UAH to the euro from the website of the National Bank of Ukraine (the path to the information is: Main page of the site / Financial markets / Official exchange rate of the UAH in relation to foreign currencies / Official exchange rate of the UAH to foreign currencies (average for the period) and make appropriate calculations.

To calculate the GDP of Ukraine per capita, you need to find information about the population on the website of the State Statistics Service of Ukraine (the path to the information is: Main page of the site / Statistical information / Demographic and social statistics / Population and migration / Annual data / Population) and make appropriate calculations.

The path to the information about the value of the GDP of the selected country in actual prices in euros is: Eurostat Home / Data / Statistics A – Z / Gross domestic product (GDP). Applying the appropriate settings, it is possible to find GDP per capita.

It is appropriate to present the results of research under task 1.2 to the audience in order to be able to compare the level of development of different European countries.

## Topic 2. Financial system and financial policy of the state

2.1. The essence and structure of the financial system.

2.2. Financial policy and its components. Tasks and principles of financial policy.

2.3. Financial planning and forecasting.

2.4. Financial control.

2.5. Financial mechanism.

### Practical tasks

#### Task 2.1

Determine the size of the main state social guarantees and record their values in Table 2.

Table 2

#### The size of basic social guarantees

Indicators	UAH		Source of information
	as of January 1	as of the current date	
Minimum monthly wage			
Monthly cost of living (subsistence level) for: able-bodied people			
disabled people			
children under 6 years			
children (6–18 years)			
general value			
Minimum aged pension			
Salary (tariff rate) of the 1st grade employee of the unified tariff grid			

#### **Guidelines to task 2.1**

When doing the task, the norms of the following documents should be used: The law of Ukraine "On State Budget of Ukraine for ... year", the law of Ukraine "On obligatory state pension insurance", Resolution of the Cabinet of

Ministers of Ukraine "On the remuneration of employees based on the Unified tariff grid of grades and coefficients for the remuneration of employees of institutions, establishments and organizations of certain branches of the budget sphere".

### **Task 2.2**

Based on official sources of information, find the planned indicators of:

- a) revenues of the state budget of Ukraine;
- b) revenues of the Pension Fund of Ukraine;
- c) revenues of the Unemployment Social Insurance Fund.

Information should be presented for the last reporting year, for which the relevant indicators were published on official websites or approved by regulatory documents.

#### ***Guidelines to task 2.2***

When performing the task, the norms of the following documents should be used: The law of Ukraine "On State Budget of Ukraine for ... year", the Resolution of the Cabinet of Ministers of Ukraine "On approving the budget of the Pension Fund of Ukraine on ... year", the Resolution of the Cabinet of Ministers of Ukraine "On approving the budget of the mandatory state social insurance fund in case of unemployment".

### **Task 2.3**

Determine the amount of total general government revenue of some European countries. Provide information for the three last reporting years. Give the obtained values in general by country and per capita.

Each student chooses one country for research.

Present the results in Table 3. Draw conclusions.

Table 3

#### **The total general government revenue in ...**

Indicator	20.. year	20.. year	20.. year
Total general government revenue, million euro			
Total general government revenue per capita, euro			



## Task 2.4

Present the information about the total general government revenue of some European countries as a percentage of GDP. Provide information for the three last reporting years.

Each student chooses one country for research.

Determine the model of financial relations to which the country belongs.

Present the results in Table 4. Draw conclusions.

Table 4

### The total general government revenue (% of GDP) in ...

Indicator	20.. year	20.. year	20.. year
Total general government revenue, million euro			
Total general government revenue (% of GDP)			

### **Guidelines to tasks 2.3 – 2.4**

The information necessary to perform the tasks should be found on the website of the Statistical organization of the European Commission [28].

The path to the information about the general government revenue of the selected country in actual prices in euros is: Eurostat Home / Data / Statistics A – Z / Government Finance Statistics. Applying the appropriate settings, it is possible to find general government revenue per capita and as a percent of GDP.

## **Topic 3. Taxes. The tax system**

3.1. The essence and types of taxes. Functions of taxes. Principles of taxation.

3.2. The tax system.

3.3. Tax policy.

3.4. State taxes and the procedure for collection of state taxes.

3.5. Local taxes and fees and the procedure for collection of local taxes.

3.6. Simplified taxation systems.

## Practical tasks

### Task 3.1

Information on the activities of an enterprise:

gross sales (including VAT) make 7 440 000 UAH;

cost of sales is 3 950 000 UAH;

selling and operating expenses are 914 140 UAH;

general and administrative expenses are 480 315 UAH.

Calculate:

- 1) the amount of net sales, if the tax rate of VAT is 20 %;
- 2) the amount of gross profit;
- 3) the amount of operating income;
- 4) the amount of income before taxes;
- 5) the amount of the corporate income tax, if the tax rate is 18 %;
- 6) the amount of net income.

### Task 3.2

In the reporting month a company:

1) sells goods in the amount of 120 000 UAH (including VAT);

2) purchases materials for use in economic activities in the amount of 96,000 UAH (including VAT);

3) pays supplier's bill in the amount of 24 000 UAH (including VAT);

4) gets money from the buyer in the amount of 72 000 UAH (including VAT).

Calculate the amount of VAT payable to the budget.

### Task 3.3

Total sales price is 428 UAH;

Calculate the amount of VAT and the price before the VAT if the tax rate of VAT is 7 %.

### Task 3.4

A company is going to sell 200 packs of filter cigarettes. The maximum retail price is 82 UAH per pack. Calculate the amount of excise tax to be paid to the budget.

The specific tax rate is 1 306.37 per 1 000 pcs of cigarettes.

The ad valorem tax rate is 12 %.

Minimum excise tax liability is 1 746.60 per 1 000 pcs of cigarettes.

### **Task 3.5**

Determine the minimum amount of excise tax paid by a buyer of cigarettes, if the content of 1 pack is 20 pcs.

### **Task 3.6**

3 employees work at an enterprise. Their salaries amount to 12 000, 14 000 and 16 500 UAH per month.

Determine the amount of take-home salary of each employee, the total amount of PIT and the military fee to be paid to the budget.

### **Task 3.7**

An employee received 17 710 UAH from the employer. What amount of PIT and military fee did the employer have to pay to the budget as a tax agent of the employee?

### **Task 3.8**

On May 18, 2023, a citizen purchased a car worth 3 200 000 UAH. Determine the amount of transport tax he has to pay to the budget.

### ***Guidelines to tasks 3.1 – 3.8***

When performing the tasks, it is necessary to take into account the norms of the Tax Code of Ukraine.

The principles on which the tax legislation of Ukraine is based are defined in Article 4 of the Tax Code of Ukraine.

Below a general description of the main mandatory payments is presented.

#### **Corporate income tax.**

##### *Taxpayers.*

Corporate Income Tax (CIT) is paid by the resident companies, which receive income in Ukraine as well as abroad. CIT is also paid by the non-resident companies, which receive income from Ukrainian sources.

CIT payers are legal entities that operate in Ukraine and abroad, except for:

- 1) legal entities using the simplified tax regime;
- 2) organizations financed by the State and local authorities;
- 3) charity funds, non-governmental organizations, political parties, pension funds and other non-profit organizations.

*Rate.*

Currently, a flat rate of 18 % is established for all CIT taxpayers. However, for some activities a separate rate is applicable.

*Tax base.*

The CIT base is the income derived from Ukrainian sources of origin and abroad. The amount of tax is determined by adjustment of financial result (profit or loss) before tax, as calculated in accordance with the Ukrainian accounting standards or IFRS.

**Value-added tax.**

*Taxpayers.*

The taxpayer is obliged to register as a VAT payer if the aggregate value of supplied goods or services exceeds 1 million UAH for the last 12 months. However, if the value of taxable transactions does not exceed 1 million UAH, the voluntary registration as a VAT payer is available.

*Rate.*

The VAT rate is 20 %. For pharmaceutical products, the VAT rate is 7 %. It should be noted that 0 % VAT rate is applied to export of goods in the customs regime from the territory of Ukraine.

*Tax base.*

VAT is applied to transactions on supply of goods and services in the customs territory of Ukraine, as well as to transactions related to import and export of goods in Ukraine. In addition, services of passengers and luggage transportation by sea, river and air transport are also subject to VAT.

The amount of VAT payable to the budget is calculated as the difference between the amount of tax liability and tax credit. In accordance with the general rules, tax liabilities arise on sale, the right to a tax credit arises upon purchase.

**Personal income tax (PIT).**

*Taxpayers.*

The personal income tax (PIT) is paid by resident and non-resident individuals.

*Taxation object.*

Incomes that are object to personal income tax are:

income in the form of salary;

income from renting out movable and immovable property;

income from the sale of movable and immovable property;

gifts, prizes;

passive income (% on deposits, savings certificates, etc.);  
inheritance income.

*Rate.*

Currently, a flat rate of 18 % is established for PIT taxpayers. However, for some kinds of income a separate rate is applicable (9 %, 5%, 0%, etc.).

*Tax base.*

The monthly (annual) taxable income of taxpayer does not include:

- the interest accrued on certain state securities issued by the NBU;
- the alimony received in accordance with the court ruling or voluntary arrangement of the parties as provided by the Family Code of Ukraine;
- body of the deposit at a bank or a non-bank financial institution;
- the income of a private entrepreneur, which is subject to single tax;
- insurance payments, pension payments, etc. received under the long-term life insurance agreement;
- amounts forgiven (annulled) by the lender;
- the income from financial (including international) organizations under the framework of implementation of energy efficiency and energy saving projects;
- the amount of property and non-property contribution to the charter capital of a legal entity;
- the charity aid amounts.

*PIT on salaries.*

Employers paying employment-related income to their employees, as well as legal entities paying compensation to individuals based on the civil law contracts qualify as tax agents in respect of such income.

Tax agents are obliged to withhold and pay PIT to the state budget on behalf of the individuals, to maintain tax records, to submit income reports and are responsible for the violation of these obligations.

**Military fee (MF).**

*Taxpayers.*

Nationwide MF payment for strengthening the defence capability of Ukraine applies to:

- individuals – residents who receive income from Ukrainian sources as well as foreign income;
- individuals – non-residents who receive income from Ukrainian sources;
- tax agents.

The MF has been extended indefinitely, until its abolishment by the respective legislative act.

*Tax base.*

The tax base of MF is the same amount of income that is subject to PIT.

*Rate.*

The tax rate of MF is 1.5 % of the individuals taxable income.

If MF payer is a tax agent, he/she maintains and pays MF in order and within the time frames provided for PIT.

**Excise tax.**

*Taxpayers.*

Excise tax is paid by individuals and legal entities, who:

- manufacture excise goods in the customs territory of Ukraine, including those from tolling raw materials;
- import excise goods to the customs territory of Ukraine;
- distribute excise goods or transfer them for ownership or use.

*Rate.*

Excise tax rates are specified in the Tax Code of Ukraine for each type of excise goods.

*Tax base.*

The excise tax is levied upon excise goods, which include:

- ethyl alcohol and other distillates, alcoholic drinks, beer;
- tobacco products, tobacco and manufactured tobacco substitutes;
- fuel;
- cars, trailers and semi-trailers, bodies thereto, motorcycles, vehicles for transportation of 10 persons or more, vehicles for transportation of goods;
- electricity, except for the distribution of electricity generated by qualified cogeneration units and/or renewable energy sources.

**The transport tax.**

*Taxpayers.*

The transport tax is paid by individuals and legal entities, including nonresidents, who own vehicles that are registered in Ukraine.

*Rate.*

The rate of the transport tax is established in the amount of 25,000 UAH per year per each vehicle.

*Tax base.*

The transport tax is paid per each vehicle, which has been used for up to five years from the date of manufacture with the average market price of more than 375 minimal wages.

### **Task 3.9**

An entrepreneur who operates in the 1st group of single tax payers during the reporting month received income in the amount of 74 500 UAH. The amount of expenses incurred amounted to 51 300 UAH. Determine the amount of the single tax and single social contribution to be paid to the budget and trust funds.

### **Task 3.10**

An entrepreneur who operates in the 2nd group of single tax payers during the reporting quarter received income in the amount of 297 614 UAH. The entrepreneur has no employees. The amount of expenses incurred amounted to 216 398 UAH. Determine the amount of the single tax and single social contribution to be paid to the budget and trust funds.

### **Task 3.11**

An entrepreneur who operates in the 3rd group of single tax payers, during the reporting quarter received income in the amount of 423 570 UAH. The amount of expenses incurred amounted to 289 1500 UAH. Determine the amount of the single tax to be paid to the budget. Do calculations for two situations:

- 1) the entrepreneur is registered as a VAT-payer;
- 2) the entrepreneur isn't registered as a VAT-payer.

### ***Guidelines to tasks 3.9 – 3.11***

When performing the tasks, it is necessary to take into account the norms of the Tax Code of Ukraine, concerning the taxation of income obtained by a sole proprietor from carrying out their business activity, except for the persons, who have chosen simplified tax system.

According to Article 177 of the Tax Code of Ukraine income of natural persons – entrepreneurs, obtained during the calendar year from carrying out their business activity, is taxable at the rate of 18 %.

The taxable item is the net taxable income, that is the difference between the total taxable income (revenue in specie or in kind) and documented expenses, associated with the business activity of such sole proprietor.

### **A simplified tax regime for entrepreneurs.**

To facilitate and ease small and medium business accounting, Ukraine introduced special taxation terms for such businesses.

The taxpayers, as private entrepreneurs, may choose to apply for a simplified taxation system in one of the following categories (Table 5).

Table 5

### **The nuances of the simplified tax regime for entrepreneurs**

Indicators	1st group	2nd group	3rd group
Permitted activities	Retail sale of goods on markets; domestic services	Services rendered to single tax payers and/or to individuals; production and/or sale of goods; restaurant industry	Without limits
Maximum annual income	167 minimum salaries	834 minimum salaries	1167 minimum salaries
Maximum number of employees	0	10	Without limits
VAT	Does not apply	Does not apply	May register as a VAT payer
Rates	Up to 10 % of the monthly cost of living	Up to 20 % of the minimum salary	3 % of income + VAT or 5 % of income (excl. VAT)

## **Topic 4. Budget. Budgetary system**

- 4.1. The essence, purpose and role of the state budget.
- 4.2. Budget deficit and sources of financing.
- 4.3. Budget structure and construction of the budget system of Ukraine.
- 4.4. The system of budget revenues and expenditures.
- 4.5. Interbudgetary transfers as part of the budget.
- 4.6. State, structure and dynamics of state and state-guaranteed debt.



## Practical tasks

### Task 4.1

The planned amount of local budget revenues is 2.36 billion UAH, expenditures are 2.51 billion UAH, budget lending is 0.23 billion UAH, and credit refund to the budget is 0.17 billion UAH. Determine the absolute and relative indicators of the budget deficit (surplus).

### Guidelines to task 4.1

According to the interpretations given in Art. 2 of the Budget Code of Ukraine, the budget deficit (surplus) is defined as the difference between budget revenues and expenditures (taking into account the balance of lending operations). Excess of budget expenditures over its revenues (taking into account the difference between budget lending and credit refund to the budget) characterizes the budget deficit; excess of budget revenues over its expenditures (taking into account the difference between budget lending and credit refund to the budget) is budget surplus.

Main relative indicators of the budget deficit (surplus) can be calculated as the ratio of the absolute indicator of the budget deficit (surplus) to budget revenues, budget expenditures, GDP. These indicators are displayed as percentages.

### Task 4.2

Based on the information given in Table 6, determine:

- a) the amount of budget revenues;
- b) the amount of budget receipts;
- c) the amount of budget expenses;
- d) the amount of budget deficit (surplus);
- e) the amount of budget financing.

Table 6

### Initial data

Indicators	Billion UAH
1	2
Credit refund to the budget	6.5
Tax revenues	320.6

Table 6 (the end)

1	2
Reimbursement (return) of internal liabilities (= internal debt repayment)	21.7
Revenues from capital transactions	1.2
Placement of budget funds on deposits	6.2
Reimbursement (return) of external liabilities (= external debt repayment)	25.3
Special funds	0.9
Purchase of securities	3.5
Non-tax revenues	45.9
Return of budget funds from deposits	3.2
Internal borrowings	65.7
Receipt of funds from other budgets	1.3
Receipts due to the sale of securities	6.2
Budget lending	10.3
Budget expenditures	384.5

### ***Guidelines to task 4.2***

When doing the task, it should be taken into account that budget revenues include tax revenues, non-tax revenues, revenues from capital transactions, special funds, inter-budgetary transfers.

Budget receipts include budget revenues, credit refund to the budget, borrowings, return of budget funds from deposits, receipts due to the sale of securities, proceeds from privatization of state property (regarding the state budget).

Budget receipts include budget expenditures, budget lending, placement of budget funds on deposits, purchase of securities, reimbursement (return) of liabilities.

The formula for calculating the budget deficit (surplus) is provided in guidelines to task 4.1.

Budget financing is budget receipts and expenses related to changes in the debt volumes, deposits and securities, proceeds from privatization of state property (regarding the state budget), changes in budget funds residuals used to cover budget deficit or define budget surplus.

### Task 4.3

Help to recover lost information (Table 7).

Table 7

#### State budget of Ukraine financing

Code	Indicators	Million UAH
	Total financing	?
400000	Financing by debt operation	?
401000	Borrowing	?
401100	Internal borrowings	105 300
401200	External borrowings	210 700
402000	Reimbursement of liabilities	-260 400
402100	Internal liabilities	-145 265
402200	External liabilities	?
500000	Financing from state property privatization	?
501000	Financing from state property according to State program of privatization 2020	8 000
600000	Financing from active transactions	?
601000	Changes in deposits and securities used for liquidity management	?
601200	Placement of budget funds on deposits, purchase of securities	?
601220	Purchase of securities	-35 450
602000	Changes in budget funds	?
602100	At the beginning of the period	120
602200	At the end of the period	30

#### **Guidelines to task 4.3**

When doing the task, it is necessary to take into account the Classification of debt by type of creditor according to the Order of the Ministry of Finance of Ukraine dated January 14, 2011 No. 1 "On budget classification".

Students are also recommended to consider Appendix 2 to the Law of Ukraine "On the State Budget of Ukraine for the Current Year".

Students should be able to explain the calculations made.

### Task 4.4

Based on the data given in Table 8 distribute the revenues from the tax-payers of the city territorial community between the relevant budgets.

Table 8

### Initial data

Revenues	Million UAH
1. Corporate income tax from private businesses	22.0
2. Value-added tax	17.0
3. Individual (personal) income tax	9.0
4. Tourism duty	1.2
5. Import duty	4.2
6. Corporate income tax from state-owned businesses	6.0
7. Excise tax	3.5
8. Military fee (charge)	1.0
9. Land fee (tax)	3.6
10. Unified (single) tax from entrepreneurs	7.0

### Guidelines to task 4.4

When doing the task, it is necessary to take into account the norms of the current Budget Code of Ukraine (Articles 29, 64, 66, 69).

Present the results of the calculations in Table 9.

Table 9

### Distribution of taxes and fees between budgets

Tax/duty	Directed to								Total	
	The state budget		The budget of the region (oblast)		The budget of the district (rayon)		The budget of the city			
	%	mln UAH	%	mln UAH	%	mln UAH	%	mln UAH	%	mln UAH
1. Corporate income tax from private businesses									100	22.0
...										
Total	x		x		x		x		x	

## **Topic 5. Trust funds**

5.1. General characteristics of trust funds.

5.2. Pension Fund of Ukraine.

5.3. Social insurance fund.

5.4. Social insurance fund in case of unemployment.

5.5. Other funds.

5.6. A single contribution to mandatory state social insurance as the main source of income for targeted social funds.

### **Practical tasks**

#### **Task 5.1**

An individual registers the right to a pension in March of the 2023 year.

Determine the amount of the pension, if : insurance experience is 36 years 6 months, salary ratio is 0.9.

#### ***Guidelines to task 5.1***

When doing the task, it is necessary to take into account the norms of the law of Ukraine "On mandatory state pension insurance" No. 1058-IV dated July 9, 2003.

The amount of pension can be calculated by multiplying the average salary for the last 3 years in Ukraine by the individual salary ratio and by the coefficient of insurance experience.

The average salary for the last 3 years for pension purposes is provided by the Pension Fund of Ukraine and can be found at [23].

The coefficient of insurance experience can be calculated according to provisions of Article 25 of the Law of Ukraine "On mandatory state pension insurance" No. 1058-IV dated July 9, 2003.

#### **Task 5.2**

An employee was ill from 06.09.2023 year till 28.09.2023 year.

The income of the employee in the period of Jan. 2022 – Jun. 2022 was 9 000 UAH;

Jul. 2022 – Dec. 2022 it made 9 500 UAH;

Jan. 2022 – Aug. 2022 it amounted to 10 300 UAH.

Insurance experience is 4 years.

Calculate the amount of temporary disability benefits paid at the expense of the enterprise and the Pension Fund.

Determine the amount of take-home benefit.

### ***Guidelines to task 5.2***

When doing the task, it is necessary to take into account the norms of the law of Ukraine "On mandatory state social insurance" No. 1105-XIV dated September 23, 1999.

The amount of temporary disability benefits can be calculated by multiplying the number of days of incapacity for work by the average daily salary and by percent of income depending on the coefficient of insurance experience.

The percentage of income that should be taken into account for the calculation of temporary disability benefits is determined by Article 17 of the Law of Ukraine "On mandatory state social insurance" No. 1105-XIV dated September 23, 1999.

It is necessary to take into account that the company pays for the first 5 days of the employee's illness, the Pension Fund – starting from the 6th day.

When calculating the amount of take-home benefit, students should take into account taxes that are deducted from the income of an individual – individual income tax and military fee.

### **Task 5.3**

A company has 5 employees.

Accrued salary for October of the current year is:

- 1) a person with a disability gets 12 400 UAH;
- 2) other employees receive 14 000 UAH per employee.

Calculate the amount of single social contribution.

Calculate how much each of the trust funds will receive.

### ***Guidelines to task 5.3***

When doing the task, it is necessary to take into account the norms of the law of Ukraine "On the collection and accounting of a single contribution to mandatory state social insurance" No. 2464-VI dated July 8, 2010.

The proportions of the distribution of a single contribution to mandatory state social insurance between the funds are determined by the Resolution of the Cabinet of Ministers of Ukraine No. 675 dated November 26, 2014.

#### **Task 5.4**

An individual applies to the employment center.

Income for the previous 12 months amounts to 139 400 UAH.

Insurance experience is 4 years.

The expected duration of unemployment is 190 calendar days.

Determine the amount of unemployment benefits.

#### ***Guidelines to task 5.4***

When doing the task, it is necessary to take into account the norms of the law of Ukraine "On mandatory state social insurance in case of unemployment" No. 1533-III dated March 2, 2000.

Factors that are taken into account when calculating unemployment benefits are: income for the previous 12 months, insurance experience.

The duration of the unemployment benefit payment depends on the length of insurance and is determined by Article 22 of the law of Ukraine "On mandatory state social insurance in case of unemployment" No. 1533-III dated March 2, 2000.

#### **Task 5.5**

On October 18, 2022, the company's accountant transferred 76,200 UAH of salary to the employees' card accounts, including the salary of an employee with a disability in the amount of 9,980 UAH.

What taxes and other mandatory payments must be paid and in what amounts?

#### ***Guidelines to task 5.5***

When doing the task, it is necessary to take into account the norms of the Tax Code of Ukraine and the law of Ukraine "On the collection and accounting of a single contribution to mandatory state social insurance" No. 2464-VI dated July 8, 2010.

The students should take into account that taxes and other mandatory payments are calculated on the gross amounts of income of individuals.

#### **Task 5.6**

The amount of accrued salary is 20 000 UAH.

Determine the amount of taxes and other mandatory payments.

Determine the ratio between the net salary (in-hand or take-home salary) and the amount of taxes and mandatory payments.

Enter the results of the calculations in Table 10.

Table 10

**Initial data**

Indicators	Thousand UAH
1. Accrued salary (gross salary)	20 000
2. PIT	
3. Military fee	
4. In-hand salary	
5. Single social contribution	
6. Total taxes and other mandatory payments	
7. Total expenses (line 1 + line 5)	
8. In-hand salary, %	
9. Total taxes and other mandatory payments, %	

**Guidelines to task 5.6**

When doing the task, it is necessary to take into account the rates of taxes and other mandatory payments from the income of individuals which are determined by the Tax Code of Ukraine and the law of Ukraine "On the collection and accounting of a single contribution to mandatory state social insurance" No. 2464-VI dated July 8, 2010.

**Task 5.7**

The number of employees of an enterprise is 120 people.

The number of employees with disabilities in the current year is 3 people. What will the fine for violation of the standard of employment of people with disabilities be if the average salary at the enterprise is 14 820 UAH?

**Guidelines to task 5.7**

When doing the task, it is necessary to take into account the requirements for employers for employment of people with disabilities and sanctions for non-employment of the disabled people. The specified issues are regulated by the norms of the law of Ukraine "The basics of social security for people with disabilities in Ukraine" No. 875-XII dated March 21, 1991.



## **Content module 2. Finance of economic entities, financial market and institutions of international finance**

### **Topic 6. Finances of business entities**

6.1. The essence of the finances of economic entities and the principles of their organization.

6.2. Cash settlements of enterprises.

6.3. Cash receipts of enterprises. Formation and distribution of profit.

6.4. The relationship between business structures and the budget and state trust funds.

6.5. Current assets and their organization at an enterprise.

6.6. Enterprise lending.

6.7. Financial support for the reproduction of non-current assets.

6.8. Assessment of the financial condition of an enterprise.

#### **Practical tasks**

##### **Task 6.1**

A VAT-paying company purchased a car worth 180,000 UAH (including VAT). The useful life is 8 years. Calculate annual depreciation amounts using the straight-line and sum-of-years-digits methods.

Calculate the amount of tax savings (additional costs) on corporate income tax.

##### ***Guidelines to task 6.1***

When doing the task, it is necessary to take into account the norms of the National regulation (standard) of accounting 7 "Fixed assets" and section III of the Tax Code of Ukraine.

The amount of tax savings (additional costs) on corporate income tax can be calculated by multiplying the difference between the depreciation amounts by the tax rate of corporate income tax.

The results of the calculations should be presented in Tables 11, 12, 13.

Table 11

**Calculation of depreciation on the fixed asset  
(straight-line depreciation method), UAH**

Year	Book value at the beginning of the year	Depreciation	Book value at the end of the year
1			
2			
...			
Total			

Table 12

**Calculation of depreciation on the fixed asset  
(sum-of-years-digits method), UAH**

Year	Book value at the beginning of the year	Depreciation	Book value at the end of the year
1			
2			
...			
Total			

Table 13

**Comparison of the depreciation calculation methods, UAH**

Year	The amount of straight-line depreciation, UAH	The amount of the sum-of-years-digits method	Tax savings (additional costs) on CIT
1			
2			
...			
Total			

**Task 6.2**

Based on the information given in Table 14,

a) name the components of:

current assets;

non-current assets;

non-current liabilities and provisions;  
equity;  
current liabilities and provisions.  
b) fill in the cells that have a question mark.

Table 14

**Balance Sheet (Statement of Financial Position) of PJSC "Omega",  
thousand UAH**

Indicators	Line code	As of 31.12.2021	As of 31.12.2022
1	2	3	4
<b>Assets</b>			
<b>I. Non-current assets</b>			
Intangible assets:	1000	?	?
cost	1001	129 468	203 665
accumulated amortisation and impairment	1002	(91 961)	(100 307)
Construction in progress	1005	600 904	574 895
Property, plant and equipment:	1010	317 020	282 433
cost	1011	749 757	756 124
accumulated depreciation and impairment	1012	?	?
Long-term financial investments: accounted under equity method	1030	242 695 041	269 457 025
Long-term accounts receivable	1040	1 503 416	1 131 422
Deferred tax assets	1045	221 416	468 919
Other non-current assets	1090	49 719 185	54 116 370
<b>Total Section I</b>	1095	?	?
<b>II. Current assets</b>			
Inventories	1100	31 726 765	22 089 849
Trade accounts receivable	1125	25 583 035	60 417 229
Accounts receivable:			
prepayments made	1130	5 154 203	8 083 766
due from budget	1135	2 722 043	8 953 004
Other current accounts receivable	1155	2 363 043	2 325 564
Current financial investments	1160	11 483 320	
Cash and cash equivalents	1165	33 985 932	20 561 938
Prepaid expense	1170	40 686	34 696
Other current assets	1190	701 265	4 930 381
<b>Total Section II</b>	1195	?	?

Table 14 (the end)

1	2	3	4
<b>III. Non-current assets classified as held for sale and disposal groups</b>	1200	0	0
<b>Total Section III</b>		?	?
<b>Total Assets</b>	1300	?	?
<b>Equity and liabilities</b>			
<b>I. Equity</b>			
Share capital	1400	190 150 481	190 150 481
Revaluation reserve	1405	43 513 572	106 216 615
Additional paid-in capital	1410	2 655 860	2 655 267
Legal reserve	1415	7 930 755	7 930 755
Retained earnings (accumulated deficit)	1420	70 275 683	48 343 023
<b>Total Section I</b>	1495	?	?
<b>II. Non-current liabilities and provisions</b>			
Non-current bank borrowings	1510	9 735 726	7 869 779
Other non-current liabilities	1515	44 391 593	32 752 446
Non-current provisions	1520	259 375	184 314
<b>Total Section II</b>	1595	?	?
<b>III. Current Liabilities and provisions</b>			
Current bank borrowings	1600	?	?
Accounts payable:			
current portion of long-term liabilities	1610	5 857 112	12 075 299
trade accounts payable	1615	22 630 160	5 501 716
due to budget	1620	14 002	18 595
social charges payable	1625	266	1 087
salary payable	1630	6 826	7 167
Advances received	1635	5 054 652	2 856 954
Current accounts payable by settlements with participants	1640		3 915 453
Current provisions	1660	1 816 608	1 721 145
Deferred income	1665	198 521	186 212
Other current liabilities	1690	4 242 443	28 442 466
<b>Total Section III</b>	1695	?	?
<b>IV. Liabilities related to non-current assets held for sale and disposal groups</b>	1700	0	0
<b>Total Section IV</b>		?	?
<b>Total equity and liabilities</b>	1900	?	?

### Task 6.3

Based on the information given in Table 15, fill in the cells that have a question mark.

Table 15

#### Statement of Profit or Loss, thousand UAH

Item	Line code	2022 year	2021 year
Revenue	2 000	170 462 230	121 058 717
Cost of sales	2 050	(150 313 093)	?
Gross: profit	2 090	?	
loss	2 095	?	(827 014)
Other operating income	2 120	583 115	39 242 377
General administrative expense	2 130	(3 066 429)	(3 180 396)
Selling and distribution expense	2 150	(1 232 524)	?
Other operating expense	2 180	(16 288 454)	(26 032 188)
Operating: profit	2 190	?	6 049 500
loss	2 195	?	
Income on equity investments	2 200	15 557 237	234 514
Other finance income	2 220	3 146 297	1 364 196
Other income	2 240	1 315 166	1 764 767
Finance costs	2 250	(4 451 368)	?
Loss on equity investments	2 255		
Other expense	2 270		(16 240 709)
Profit or loss before income tax: profit	2 290	?	
loss	2 295	?	(12 619 320)
Corporate income tax expense	2 300	(2 660 668)	?
Net profit or loss: profit	2 350	?	
loss	2 355	?	(18 001 701)

### Task 6.4

Based on the information given in Table 16 prepare a statement of financial position (balance sheet).

Table 16

## Initial data

Balance sheet items	Thousand UAH
Intangible assets	124 029
Non-current bank borrowings	9 443 734
Share capital	228 180 577
Cash and cash equivalents	24 674 325
Construction in progress	689 874
Legal reserve	9 516 906
Property, plant and equipment	202 855 876
Current provisions	2 065 374
Long-term accounts receivable	1 357 706
Current bank borrowings	3 242 490
Other non-current liabilities	39 302 935
Trade accounts payable	6 602 059
Retained earnings (accumulated deficit)	58 011 627
Other non-current assets	64 939 644
Salary payable	8 600
Inventories	26 507 818
Trade accounts receivable	72 500 674
Prepaid expense	41 635
Other current liabilities	34 130 959
Additional paid-in capital	3 186 320

Present the results of the work in the form of Table 17.

Table 17

## Balance Sheet (Statement of Financial Position)

Balance sheet items	Thousand UAH
1	2
<b>Assets</b>	
I. Non-current assets	
...	
II. Current assets	
...	
III. Non-current assets classified as held for sale and disposal groups	
...	
<b>Total assets</b>	
<b>Equity and liabilities</b>	

Table 17 (the end)

1	2
I. Equity	
...	
II. Non-current liabilities and provisions	
...	
III. Current liabilities and provisions	
...	
IV. Liabilities related to non-current assets held for sale and disposal groups	
...	
<b>Total equity and liabilities</b>	

### **Guidelines to tasks 6.2 – 6.4**

When doing the tasks, it is necessary to take into account the norms of the National Regulation (standard) of accounting 1 "General requirements for financial reporting", as well as Methodological recommendations for checking the comparability of financial reporting indicators, approved by the Order of the Ministry of Finance of Ukraine No. 476 dated 11.04. 2013.

## **Topic 7. Financial management**

7.1. Theoretical foundations of financial management.

7.2. Cash flow management.

7.3. Asset management.

7.4. Capital management.

7.5. Investment management.

7.6. Anti-crisis financial management at the enterprise.

### **Practical tasks**

#### **Task 7.1**

Calculate the weighted average cost of capital according to the data (Table 18).

Table 18

#### **Initial data**

Sources of funds	Relevant weight in the total amount of capital	Cost of capital, %
Bank loans	10	22
Common stocks	60	18
Preferred stocks	?	14

### **Guidelines to task 7.1**

Weighted Average Cost of Capital (WACC) can be calculated by the formula:

$$WACC = \sum W_i \times C_i, \quad (1)$$

where  $W_i$  is the relevant weight in the total amount of capital;  
 $C_i$  is the cost of the source of capital.

### **Task 7.2**

Information on an investment project is presented in Table 19.

Table 19

#### **Initial data**

Indicators	1st year	2nd year	3rd year	4th year
Investment, thousand UAH	4 000	2 000	–	–
Revenues, thousand UAH	–	–	3 000	6 000

Should this project be accepted if the the target rate of return is 0.1?

### **Guidelines to task 7.2**

To perform the task, students should use the following formulas.

The main indicators that testify to the effectiveness of real investments are:

net present value;

profitability ratio of the investment project;

discounted payback period;

internal rate of return.

Net present value can be calculated by the formula:

$$NPV = \sum_{k=0}^n \frac{P_k}{(1+r)^k} - \sum_{k=0}^n \frac{IC_k}{(1+r)^k}, \quad (2)$$

where  $\sum_{k=0}^n \frac{P_k}{(1+r)^k}$  is the accumulated amount of discounted income;

$\sum_{k=0}^n \frac{IC_k}{(1+r)^k}$  is the accumulated amount of discounted costs.



If NPV > 0, the project can be accepted;  
if NPV < 0, the project should be rejected.

The profitability ratio of the investment project is an additional (to the above ratio) criterion for evaluating the efficiency of the investment project, determined by the formula:

$$PI = \sum_{k=0}^n \frac{P_k}{(1+r)^k} \div \sum_{k=0}^n \frac{IC_k}{(1+r)^k}. \quad (3)$$

If PI > 1, the project can be accepted;  
if PI < 1, the project should be rejected.

The discounted payback period is the time required for full reimbursement of the costs of the investment project. We will consider the procedure for determining this indicator on a specific example.

The internal rate of return (IRR) characterizes such a value of the discount factor, at which the zero value of the net reduced income is ensured. To calculate the IRR, you need to solve the equation:

$$\sum_{k=0}^n \frac{P_k}{(1+IRR)^k} - \sum_{k=0}^n \frac{IC_k}{(1+IRR)^k} = 0. \quad (4)$$

The decision-making scheme based on the method of the internal rate of return looks like this:

if the IRR value is higher than or equal to the cost of capital, the project is accepted;

if the value of IRR is less than the cost of capital, the project is rejected.

### **Task 7.3**

A company has the opportunity to expand the volumes of its activities by attracting additional financial resources in the form of a bank loan. Based on the data below, determine the optimal amount of bank capital to be raised. Compare the following alternatives by calculating the financial leverage effect (Table 20).

### Results of calculations

Indicators	Var 1	Var 2	Var 3	Var 4	Var 5
1. Equity, thousand UAH	5 000	5 000	5 000	5 000	5 000
2. Liabilities (debt), thousand UAH	0	2 000	3 000	5 000	10 000
3. Total capital amount, thousand UAH					
4. Debt-to-equity ratio					
5. Return on total assets ratio, %	15	15	15	15	15
6. The interest on debt excluding risk, %	14	14	14	14	14
7. Risk premium, %	0	0,3	0,6	1	1,5
8. The interest on debt including risk, %					
9. Earnings before interest and taxes, thousand UAH					
10. Interest expense, thousand UAH					
11. Pre-tax income, thousand UAH					
12. CIT tax, thousand UAH					
13. Net income, thousand UAH					
14. Return on equity (ROE), %					
15. Leverage effect, %					

### Guidelines to task 7.3

Students should calculate the indicators given in Table 20. In addition, it is necessary to determine the effect of financial leverage (EFL). For this, it is necessary to apply the formula:

$$EFL = (ROA - IR) \times (1 - T) \times \text{Total debt} / \text{Total equity}, \quad (5)$$

where ROA is return on the total assets ratio;

IR is the interest rate (the interest rate on debt);

T is the rate of the corporate income tax expressed as a coefficient.

### Task 7.4

An enterprise is engaged in the production and sale of electrical products. Initial data for the task is provided in Table 21.

### Initial data

Indicators	The value of indicators
Volume of product sales, thousand pcs	20
Revenue from the sale of goods, thousand UAH	6 000
Costs for sold goods, thousand UAH:	
wages of production personnel	500
cost of materials	3 500
rental payments	200
amount of interest for the loan	100
depreciation deductions	600

Based on the information given in Table 21 it is necessary to calculate:  
the profitability threshold (the volume of product sales that ensures break-even), thousand units;

the volume of sales of goods, thousand units, which ensures the receipt of profit in the amount of 2 million UAH;

margin of safety, thousand pcs (calculate based on the planned profit of 2 million UAH).

#### **Guidelines to task 7.4**

To do the task, students should use the following formulas.

The volume of sales of goods that ensures break-even operating activity ( $V_1$ ) is calculated according to the formula:

$$V_1 = \frac{FC}{P - VC/Q}, \quad (6)$$

where FC is fixed costs;

P is the sale price of a product unit;

VC / Q is variable costs per unit of product.

The necessary volume of sales, which ensures the achievement of the planned amount of profit ( $V_p$ ), is calculated according to the formula:

$$V_p = \frac{P_m + FC}{P - VC/Q}, \quad (7)$$

where  $P_m$  is the planned amount of profit.

The amount of marginal safety ("safety margin"), that is, the amount of possible reduction in the volume of sales in the event of an unfavorable market situation, is calculated according to the formula:

$$V = V_{pl} - V_1, \quad (8)$$

where  $V_{pl}$  is the volume of sales that provides the available or planned amount of profit;

$V_1$  is the volume of sales that ensures the break-even point is reached.

### Task 7.5

A production enterprise offers mini-installations for the production of fertilizers. The price of one unit of equipment is 6,000 UAH, the monthly sales plan is 500 units, fixed costs are 700,000 UAH, variable costs per unit of production are 4,000 UAH. Consider the following options for changes independently of each other.

A. Change in fixed costs and volume of product sales. The company plans to increase advertising expenses by 160,000 UAH, anticipating an increase in net sales revenue by 600,000 UAH at unchanged prices. Is it worth doing?

B. Change in variable costs and volume of product sales. The company plans to improve product quality by increasing variable costs by 250 UAH per product unit. The improvement of quality will allow the company to increase the volume of sales at the same price up to 600 units per month. Is it worth doing?

### Guidelines to task 7.5

To do the task, the students should use the template of Table 22.

Table 22

### Results of calculations, thousand UAH

Indicators	Basic option		An alternative option	
	total	per unit	total	per unit
Net profit				
Variable costs				
Fixed costs				
Operating profit				

The presented table should be formed according to both (A and B options). Based on the results of the calculations, draw conclusions.

## **Topic 8. Insurance. Insurance market**

8.1. The essence and purpose of insurance. Objects and subjects of insurance.

8.2. Forms, industries and types of insurance.

8.3. Organization of insurance.

8.4. Insurance market.

8.5. State supervision of insurance activities in Ukraine.

8.6. Indicators and performance results of insurance companies.

### **Practical tasks**

#### **Task 8.1**

The company's property is insured for 450,000 UAH. Conditional deductible is 8 %. Determine the amount of insurance compensation if the losses amounted to:

- a) 25,000 UAH;
- b) 43,000 UAH.

#### **Task 8.2**

The property of an individual is insured for 180,000 UAH. Unconditional deductible is 5 %. Determine the amount of insurance compensation if the losses amounted to:

- a) 7,000 UAH;
- b) 19,000 UAH.

#### **Task 8.3**

The object with the actual cost of 180,000 UAH is insured under the proportional liability system for the amount of 108,000 UAH. Damages amounted to 65,000 UAH.

Determine the insurance amount and the amount of insurance compensation.

### **Task 8.4**

A facility is insured for 150,000 UAH under the first risk system. The losses amounted to:

- a) 90,000 UAH;
- b) 170,000 UAH.

Determine the insurance amount and the amount of insurance compensation for each option.

### **Task 8.5**

The insured sum under the residential building insurance contract against fire is 1,200,000 UAH. Determine the amount of the insurance premium if the annual insurance rate is 0.28 %, provided that the contract is concluded for 1 year. Correction coefficients to the insurance tariff applied by the insurance company are:

- the structures are mainly made of combustible materials – 2;
- there is an automatic fire alarm system – 0.9;
- the distance to the nearest fire station is more than 10 km – 1.1.

### ***Guidelines to tasks***

When doing the task the students should take into account the interpretation of the terms used in insurance.

Insurance risk is a certain event for which insurance is provided and which has signs of probability and randomness of occurrence.

An insured event is an event provided for by an insurance contract or legislation, which has occurred and upon the occurrence of which the insurer is obligated to pay the insured sum (insurance indemnity) to the insured or another third party.

The sum insured is the amount of money within which the insurer, in accordance with the terms of the insurance, is obliged to make a payment in the event of an insured event.

Insurance payment is a sum of money paid by the insurer in accordance with the terms of the insurance contract upon the occurrence of an insured event.

Deductible is a part of losses that is not compensated by the insurer in accordance with the insurance contract.

Insurance payment (insurance premium) is the payment that the insured is obliged to pay to the insurer in accordance with the insurance contract.

Insurance tariff is insurance premium rate per unit of the sum insured for a specified period of insurance.

## **Topic 9. Financial market**

9.1. The economic essence and functions of the financial market. The need and prerequisites for creation of the financial market.

9.2. The structure of the financial market.

9.3. Classification and characteristics of the main instruments of the financial market.

9.4. State regulation of financial services markets.

### **Practical tasks**

#### **Task 9.1**

Determine the income from the deposit operation, if the deposit amount is 500 UAH, the duration of the deposit is 5 months.

Variant 1. Funds are deposited at a simple interest rate of 15 % per annum.

Variant 2. Funds are deposited at the interest rate of 15 % per annum. Interest is calculated monthly and added to the principal sum of the deposit.

#### **Task 9.2**

During what period will the deposit amounting to 60 UAH increase to 200 UAH at a rate of 12 % per annum if funds are invested at simple interest?

#### **Task 9.3**

An enterprise borrows from a bank 48 000 UAH for 6 months at an interest rate of 15 %. Make a loan repayment schedule if:

- a) the principal amount of the loan is repaid in equal amounts;
- b) the loan is repaid according to the scheme of annuity payments (in equal).

The loan repayment schedule should be formed in the form of Table 23.

### The loan repayment schedule, UAH

Payment number	Amount outstanding	Payable		
		Principal component	Interest component	Repayment
1				
2				
...				
Total				

#### Guidelines to tasks 9.1 – 9.3

Estimation of the value of money by simple interest is carried out using the following formulas:

$$I = P \times i \times n, \quad (9)$$

where I is investor's income;

P is the principal (the loan/deposit) amount;

i is the interest rate;

n is the number of periods (duration of the loan/deposit).

$$\text{Future value (FV)} = P + I = P + P \times i \times n = P \times (1 + i \times n). \quad (10)$$

Estimation of the value of money based on the compound interest is carried out using the following formulas:

$$I = PV \times [(1 + i)^n - 1]; \quad (11)$$

$$FV = PV \times (1 + i)^n. \quad (12)$$

The present value of the postnumerando annuity is determined by the formula:

$$PA_{\text{post}} = R \times \frac{1 - (1 + i)^{-n}}{i}, \quad (13)$$

where R is the annuity member.



### Task 9.4

Determine the current value of a bond with a nominal value of 1,000 UAH, a coupon rate of 9 % per annum and a maturity date of three years, if the market rate of return is 7 %.

#### **Guidelines to task 9.4**

The value of bonds with periodic interest payments is determined by the formula:

$$V_b = \sum_{k=1}^N \frac{INT/m}{(1+i/m)^k} + \frac{M}{(1+i/m)^{m \times N}}, \quad (14)$$

where INT is the amount of periodically paid interest on the bond;

M is the nominal value of the bond;

i is the interest rate (the necessary minimum, according to the investor, the rate of profit that can be got from other investments);

k is the period number;

N is the bond maturity date;

m is the periodicity of interest payments.

### Task 9.5

You purchased a zero-coupon government bond with a nominal value of 2,000 UAH, which matures in 25 years. What is its current value if the bank interest rate is 15 %?

#### **Guidelines to task 9.5**

The value of zero-coupon (discount) bonds is determined by the formula:

$$V_b = \frac{M}{(1+i)^N}. \quad (15)$$

### Task 9.6

The share was purchased for 50 UAH, the forecasted dividend for the current year is 2 UAH. It is expected that this dividend will grow at a rate of 10 % in the following years. What is an acceptable rate of return used by an investor when deciding to buy a stock?

### **Guidelines to task 9.6**

Students should take into account that the evaluation of the value of shares when using them for an indefinite period is determined by the formula:

$$V_s = \sum_{k=1}^{\infty} \frac{D_k}{(1+i)^k}, \quad (16)$$

where  $D_k$  is the amount of dividends paid in year  $k$ ;

$i$  is the interest rate (the necessary minimum, according to the investor, the rate of profit that he can get from other investments);

$k$  is the period number.

To forecast the amount of dividends, all of them are divided into two groups:

1 – dividends during the review period;

2 – an infinite sequence of remaining dividends, which are replaced by the so-called terminal value ( $T$ ).

Then formula (16) takes the form:

$$V_s = \frac{D_1}{(1+i_n)^1} + \frac{D_2}{(1+i_n)^2} + \dots + \frac{D_N}{(1+i_n)^N} + \frac{T}{(1+i_n)^N}. \quad (17)$$

Dividends are forecasted for each year separately within the review period. For the second group of dividends, assumptions are made regarding their growth rates:

zero growth rate ( $g = 0$ );

some positive dividend growth rate ( $g > 0$ ).

The calculation of the terminal value is carried out with one of the options:

$$\text{if } g = 0, \text{ then } T = \frac{D'_1}{i_n},$$

$$\text{if } g > 0, \text{ then } T = \frac{D'_1}{i_n - g}.$$

In these formulas, the first amount of the planned dividend to be paid after the end of the review period is used as a dividend. For example, if the last of the individually planned dividends is 50 UAH, and the dividend growth rate is expected to be 5 %, then  $50 \times 1.05 = 52.50$  UAH should be entered in the formula.

## Topic 10. International finance

10.1. The concept, purpose and functions of international finance.

10.2. International financial flows and international settlements.

10.3. General characteristics of the world financial market and its structure.

10.4. International financial institutions.

### Practical tasks

#### Task 10.1

Find out the essence and purpose of the balance of payments. Help restore the information in the balance of payments presented in Table 24.

Table 24

#### Balance of payments

<b>A. Current account</b>	?
<b>Balance of goods and services</b>	?
Balance of goods	-14 261
Balance of services	1750
<b>Balance of primary income</b>	?
Salary (balance sheet)	12 754
Income from investments (balance sheet)	-10 830
<b>Balance of secondary income</b>	6 463
<b>B. Capital transactions account</b>	38
Net lending (+)/ net borrowing (-) (= A + B)	?
<b>C. Financial account</b>	?
Direct investment (balance)	-5 212
Portfolio investments (balance)	-5 134
Other investments (balance)	1 474
Errors and omissions	1 194
<b>D. Combined balance (= A + B - C = E)</b>	?
<b>E. Reserves and related articles (= E.1 - E.2 - E.3 = D)</b>	?
E.1. Reserve assets	4 386
E.2. IMF loans	-1 594
E.3. Distribution of special drawing rights	0

### ***Guidelines to task 10.1***

The task is performed by each student individually. To fulfill this task, it should be taken into account that the balance of payments is the ratio between the amount of money received by the country from abroad and the amount of payments made by it abroad during a certain period. The balance of payments is a valuable expression of the scale, structure and nature of a country's foreign economic operations and its participation in the world economy.

The main components of the balance of payments are grouped into two accounts: the account of current operations, the account of capital operations and financial operations.

The account of current transactions includes all transactions with real values that take place between residents and non-residents, as well as transactions related to the free provision or receipt of values that are intended for current use. In the structure of the current account, four main components are distinguished: goods, services, income and current transfers.

The account of transactions with capital covers all transactions that include the receipt or payment of capital transfers (transfers for investment purposes, debt forgiveness, migrant transfers, etc.), as well as the acquisition or sale of non-financial assets and property rights, such as, for example, trade brands, patents, copyrights, mining rights and others.

The balance of payments consists of two parts – receipts and payments. If cash receipts exceed payments, the balance of payments is active (surplus), and if the amount of payments is greater than receipts, the balance of payments is passive (deficit).

Based on the results of the calculations, draw a conclusion about the state of the balance of payments.

### **Task 10.2**

Determine the cross exchange rate during the exchange of euros for US dollars, if on the day of the transaction the exchange rates (purchase-sale) were as follows:

UAH / EUR – 33.20 / 33.45;

hryvnias / dollar USA – 28.10 / 28.24.

### ***Guidelines to task 10.2***

Students should take into account that the cross rate is the relationship between two currencies, which is determined based on the exchange rate of

these currencies against a third currency. The methods of calculating cross-rates depend on the type of currency quotation: direct or indirect. If dealing with two direct quotations, to obtain the bid side of the cross rate, you should divide the bid side of the currency rate, which is the quotation currency in the cross rate, into the offer side of the currency rate, which serves as the quotation base in the cross rate.

To obtain the offer side of the cross rate, you should divide the offer side of the currency rate, which acts as the quotation currency in the cross rate, into the bid side of the currency rate, which serves as the quotation base in the cross rate. It should be taken into account that the bid rate is the rate at which you can sell the base currency and buy the quote currency. The Offer rate is the rate at which the bank sells foreign currency and buys national currency.

## Recommended reading

1. Луніна І. О. Еволюція теорії та наукова концепція публічних фінансів / І. О. Луніна, Т. Г. Бондарук // Фінанси України. – 2019. – № 8. – С. 26–44.

2. Лютий І. О. Зовнішні державні запозичення як інструмент фінансової політики уряду / І. О. Лютий, А. П. Софієнко // Фінанси України. – 2019. – № 5. – С. 64–78.

3. Податкова система : навчальний посібник / І. С. Волохова, О. Ю. Дубовик, М. О. Слатвінська та ін. ; за заг. ред. І. С. Волохової, О. Ю. Дубовик. – Харків : Видавництво "Діса плюс", 2019. – 402 с.

4. Ярошевич Н. Б. Фінанси : навчальний посібник / Н. Б. Ярошевич, І. Ю. Кондрат, М. В. Ливдар. – Львів : Видавництво "Простір-М", 2018. – 298 с.

5. Бюджетна система [Електронний ресурс] : підручник / С. В. Юшко. – Харків : ХНЕУ ім. С. Кузнеця, 2018. – 383 с. – Режим доступу : <http://www.repository.hneu.edu.ua/handle/123456789/23042>.

6. Бюджетний кодекс України : Закон України № 2456-VI від 08.07.2010 р. [Електронний ресурс]. – Режим доступу : <http://zakon4.rada.gov.ua/laws/show/2456-17>.

7. Журавльова І. В. Фінансовий менеджмент і контролінг у сфері бізнесу [Електронний ресурс] : навч. посіб. / І. В. Журавльова, Н. В. Сабліна. – Харків : ХНЕУ ім. С. Кузнеця, 2018. – 173 с. – Режим доступу : <http://repository.hneu.edu.ua/handle/123456789/23720>.

8. Загальні вимоги до фінансової звітності : національне положення (стандарт) бухгалтерського обліку 1, затверджене Наказом Міністерства фінансів України від 07.02.2013 р. № 73 [Електронний ресурс]. – Режим доступу : <https://zakon.rada.gov.ua/laws/show/z0336-13#Text>.

9. Основні засоби : національне положення (стандарт) бухгалтерського обліку 7, затверджене Наказом Міністерства фінансів України від 27.04.2000 р. № 92 [Електронний ресурс]. – Режим доступу : <https://zakon.rada.gov.ua/laws/show/z0288-00#Text>.

10. Податковий кодекс України : Закон України № 2755-VI від 02.12.2010 р. [Електронний ресурс]. – Режим доступу : <http://zakon4.rada.gov.ua/laws/show/2755-17>.

11. Про бюджетну класифікацію : Наказ Міністерства фінансів України від 14.01.2011 р. № 11 [Електронний ресурс]. – Режим доступу : <https://zakon.rada.gov.ua/rada/show/v0011201-11>.

12. Про загальнообов'язкове державне соціальне страхування : Закон України № 1105-XIV від 23.09.1999 р. [Електронний ресурс]. – Режим доступу : <http://zakon5.rada.gov.ua/laws/show/1105-14>.

13. Про затвердження пропорцій розподілу єдиного внеску на загальнообов'язкове державне соціальне страхування : постанова Кабінету Міністрів України від 26 листопада 2014 р. № 675 [Електронний ресурс]. – Режим доступу : <https://zakon.rada.gov.ua/laws/show/675-2014-%D0%BF#Text>.

14. Про збір та облік єдиного внеску на загальнообов'язкове державне соціальне страхування : Закон України № 2464-VI від 8 липня 2010 р. [Електронний ресурс]. – Режим доступу : <https://zakon.rada.gov.ua/laws/show/2464-17#Text>.

15. Про оплату праці працівників на основі Єдиної тарифної сітки розрядів і коефіцієнтів з оплати праці працівників установ, закладів та організацій окремих галузей бюджетної сфери : постанова Кабінету Міністрів України від 30.08.2002 р. № 1298 [Електронний ресурс]. – Режим доступу : <http://zakon2.rada.gov.ua/laws/show/1298-2002-п>.

16. Резнікова Т. О. Міжнародні фінанси [Електронний ресурс] : навч. посіб. / Т. О. Резнікова, А. О. Мельник. – Харків : ХНЕУ імені С. Кузнеця, 2018. – 247 с. – Режим доступу : <http://www.repository.hneu.edu.ua/handle/123456789/24094>.

17. Фінанси [Електронний ресурс] : навчально-методичний посібник / О. П. Полтініна, С. В. Юшко, Є. О. Малишко [та ін.] ; за заг. ред. І. В. Жу-

равльової. – Харків : ХНЕУ ім. С. Кузнеця, 2021. – 215 с. – Режим доступу : <http://www.repository.hneu.edu.ua/handle/123456789/29052>.

18. Fabozzi Frank J. The basics of finance : an introduction to financial markets, business finance, and portfolio management / Frank J. Fabozzi, Pamela Peterson Drake. – Hoboken : John Wiley & Sons, Incp, 2010. – 192 p.

19. Emergence of public development: financial and legal aspects [Electronic resource] / Yu. Pasichnyk et al. [Ed. by Doctor of Economic Sciences, Prof. Pasichnyk Yu.] : collective monograph. – Agenda Publishing House, Coventry, United Kingdom, 2019. – 737 p. – Access mode : [http://ir.nusta.edu.ua/jspui/bitstream/doc/3836/1/4042\\_IR.pdf](http://ir.nusta.edu.ua/jspui/bitstream/doc/3836/1/4042_IR.pdf).

20. Lebid O. International Finance. Guidelines to practical tasks and individual work of Bachelor's (first) degree students of speciality 291 "International Relations, Public Communications and Regional Studios" [Electronic resource] / O. Lebid. – Kharkiv : S. Kuznets KhNUE, 2021. – 45 p. – Access mode : <http://www.repository.hneu.edu.ua/handle/123456789/25164>.

21. Official site of the Ministry of Finance of Ukraine. – Access mode : <http://www.minfin.gov.ua>.

22. Official site of the National Bank of Ukraine. – Access mode : <https://bank.gov.ua/>.

23. Official site of the Pension Fund of Ukraine. – Access mode : <https://www.pfu.gov.ua/>.

24. Official site of the State Audit Service of Ukraine. – Access mode : <http://www.dkrs.gov.ua>.

25. Official site of the State Statistics Service of Ukraine. – Access mode : [www.ukrstat.gov.ua](http://www.ukrstat.gov.ua).

26. Official site of the State Tax Service of Ukraine. – Access mode : <http://www.sfs.gov.ua>.

27. Official site of the State Treasury Service of Ukraine. – Access mode : <http://www.treasury.gov.ua>.

28. Official site of the Statistical Organization of the European Comission. – Access mode : <https://ec.europa.eu/eurostat>.

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НАВЧАЛЬНЕ ВИДАННЯ

# ФІНАНСИ

**Методичні рекомендації до практичних завдань  
для студентів спеціальності 051 "Економіка"  
освітньої програми "Міжнародна економіка"  
першого (бакалаврського) рівня**

**(англ. мовою)**

*Самостійне електронне текстове мережеве видання*

Укладач **Юшко** Сергій Васильович

Відповідальний за видання *І. В. Журавльова*

Редактор *З. В. Зобова*

Коректор *З. В. Зобова*

Наведено основні питання тем, які вивчаються згідно з планом лекцій з навчальної дисципліни, практичні завдання та методичні рекомендації до них. Подано перелік необхідної для роботи навчально-методичної та наукової літератури, інформаційних ресурсів органів державної влади.

Рекомендовано для студентів спеціальності 051 "Економіка" освітньої програми "Міжнародна економіка" першого (бакалаврського) рівня.

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