

МІНІСТЕРСТВО ОСВІТИ І НАУКИ УКРАЇНИ
НАЦІОНАЛЬНИЙ АВІАЦІЙНИЙ УНІВЕРСИТЕТ

Кафедра менеджменту зовнішньоекономічної
діяльності підприємств

ДОПУСТИТИ ДО ЗАХИСТУ
Завідувач кафедри

Кириленко О.М.
« » 20 р.

ДИПЛОМНА РОБОТА
(ПОЯСНЮВАЛЬНА ЗАПИСКА)

ВИПУСКНИЦІ ОСВІТНЬОГО СТУПЕНЯ МАГІСТР
спеціальності 073 «Менеджмент»,
ОПП «Менеджмент зовнішньоекономічної діяльності»

Тема: Антикризове управління ТОВ «МАСТЕР-АВІА» з урахуванням
міжнародного досвіду

Виконала: Орлик Олександра Володимирівна

Керівник: к.е.н., доцент Передерій Віктор Васильович

Нормоконтролер з ЄСКД (ЄСПД): _____

Київ – 2020

MINISTRY OF EDUCATION AND SCIENCE OF UKRAINE
NATIONAL AVIATION UNIVERSITY

Department of management of foreign economic activity
of enterprises

ALLOW TO THE DEFENSE
Head of the Department
Kyrylenko O.M.
« » 20 p.

MASTER THESIS
(EXPLANATORY NOTE)

specialty 073 "Management",
direction "Management of Foreign Economic Activity"

Topic: Anticrisis management of LLC "MASTER AVIA" taking into account the world experience

Performed by: Orlyk Oleksandra Volodymyrivna

Scientific adviser: Ph.D. in Economics, assoc. prof. Perederii Viktor Vasyljovych

Norm-controller of USCD (USPD): _____

Kyiv – 2020

НАЦІОНАЛЬНИЙ АВІАЦІЙНИЙ УНІВЕРСИТЕТ

Факультет ТМЛ Кафедра менеджменту зовнішньоекономічної діяльності підприємств

Освітній ступінь магістр

Спеціальність 073 «Менеджмент»

ОПП «Менеджмент зовнішньоекономічної діяльності»

ЗАТВЕРДЖУЮ

Завідувач кафедри

Кириленко О.М.

«___» _____ 20__ р.

ЗАВДАННЯ

на виконання дипломної роботи студентки

Орлик Олександра Володимирівна

(прізвище, ім'я, по батькові)

1. Тема роботи: Антикризовий менеджмент ТОВ «МАСТЕР АВІА» з урахуванням міжнародного досвіду

затверджена наказом ректора від "02" жовтня 2019р., № 2263/ст

2. Термін виконання проекту (роботи): з 14.10.2019 р. до 09.02.2020 р.

3. Вихідні дані до проекту (роботи): наукові праці вітчизняних та зарубіжних фахівців, бухгалтерська та статистична звітність ТОВ «МАСТЕР АВІА», нормативно-правова та законодавча база України, Інтернет-ресурси

4. Зміст пояснювальної записки (перелік питань, що підлягають розробці):

Необхідно: дослідити теоретико-методичні основи антикризового управління підприємством; провести аналіз фінансово-економічного стану ТОВ «МАСТЕР АВІА» та дослідити ймовірність банкрутства підприємства; розробити пропозиції щодо удосконалення антикризового управління на підприємстві ТОВ «МАСТЕР АВІА»

5. Перелік обов'язкового графічного матеріалу:

Теоретичний розділ: (рис. – 4, табл. – 2, формули -0);

Аналітико-дослідницький розділ: (рис.– 12, табл. – 13, формули – 65);

Проектно-рекомендаційний розділ: (рис. – 10, табл. – 16, формули – 0).

КАЛЕНДАРНИЙ ПЛАН

| № п/п | Етапи виконання дипломної роботи | Термін виконання етапів | Примітка |
|-------|---|---------------------------|----------|
| 1. | Збір необхідної інформації за темою дипломної роботи | 14.10.2019- 18.10.2019 | виконано |
| 2. | Проведення аналізу бухгалтерської та статистичної звітності ТОВ «МАСТЕР АВІА» | 19.10.2019- 26.10.2019 | виконано |
| 3. | Оформлення списку літературних джерел, використаних під час дослідження | 28.10.2019- 01.11.2019 | виконано |
| 4. | Підготовка та оформлення аналітичного розділу дипломної роботи | 02.11.2019- 18.11.2019 | виконано |
| 5. | Підготовка та оформлення теоретичного розділу | 18.11.2019- 29.11.2019 | виконано |
| 6. | Розробка шляхів антикризового менеджменту ТОВ «МАСТЕР АВІА» (наукове обґрунтування запропонованих заходів у проектному розділі та розрахунки основних економічних показників) | 30.11.2019- 15.12.2019 | виконано |
| 7. | Оформлення рекомендаційного розділу дипломної роботи | 15.12.2019- 25.12.2019 | виконано |
| 8. | Остаточне оформлення дипломної роботи (зміст, вступ, висновки, додатки тощо) | 03.01.2020- 10.01.2020 | виконано |
| 9. | Підготовка доповіді та презентації ДР | 11.01.2020- 13.01.2020 | виконано |
| 10. | Підписання необхідних документів у встановленому порядку, підготовка до захисту дипломної роботи та попередній захист дипломної роботи на випусковій кафедрі | до 09.02.2020 | виконано |

Студент _____ (Орлик О.В.)

Керівник дипломної роботи _____ (Передерій В.В.)

ABSTRACT

Abstract for the thesis "Crisis Management LLC" Master Avia "taking into account international experience" consists of 124 pages and 124 links.

The purpose of the first section of this work is theoretical and methodological approaches to the definition of crisis management, taking into account international experience.

The object of the research was the crisis management of the enterprises.

The subject of the diploma work was the organization of crisis management at Limited Liability Company "Master Avia".

The purpose of the work is to study the theoretical and practical foundations of crisis management and develop the practical proposals and recommendations for optimization of the financial situation of the enterprise and improvement of crisis prediction tools at Master Avia LLC.

In the thesis, measures are proposed for overcoming MASTER AVIA LLC from the crisis state, namely: ways to manage crisis management, as well as recommendations for organizational support for the implementation of anti-crisis measures at LLC MASTER AVIA.

During the study, both general scientific and special research methods were used: analysis and synthesis, a systematic approach, computer data processing methods, system-situational, statistical, comparative, graphical and other methods.

АННОТАЦИЯ

Аннотация к дипломной работе "Антикризисный менеджмент ООО "Мастер Авиа" с учетом мирового опыта" состоит из 124 страниц и 124 ссылок.

Целью первого раздела данной работы является теоретико-методологические подходы к определению антикризисного менеджмента с учетом международного опыта.

Объектом исследования является антикризисный менеджмент предприятия.

Предметом исследования стала организация антикризисного менеджмента на ООО "Мастер Авиа".

Цель исследования - изучить теоретические и практические основы антикризисного менеджмента и разработать практические рекомендации и предложения для оптимизации финансовой ситуации на предприятии и улучшить инструменты кризисного предвидения на ООО "Мастер Авиа".

В дипломной работе предложены меры по выходу ООО «МАСТЕР АВИА» из кризисного состояния, а именно: разработаны пути антикризисного управления, а также рекомендации по организационному обеспечению реализации антикризисных мер на ООО «МАСТЕР АВИА».

В ходе исследования использовались как общенаучные, так и специальные методы исследования: анализ и синтез, системный подход, методы компьютерной обработки данных, системно-ситуационный, статистический, сравнительный, графический и другие методы.

АНОТАЦІЯ

Анотація до дипломної роботи "Антикризовий менеджмент ТОВ "Майстер Авіа" з урахованими світового досвіду" складається з 124 сторінок і 124 посилань.

Метою першого розділу даної роботи є теоретико-методологічні підходи до визначення антикризового менеджменту з урахуванням міжнародного досвіду.

Об'єтом дослідження є антикризовий менеджмент підприємства.

Предметом дослідження стала організація антикризового менеджменту на ТОВ "Майстер Авіа".

Мета дослідження - вивчити теоретичні та практичні основи антикризового менеджменту та розробити практичні рекомендації та пропозиції для оптимізації фінансової ситуації на підприємстві і поліпшити інструменти кризового передбачення на ТОВ "Майстер Авіа".

У дипломній роботі запропоновані заходи щодо виходу ТОВ «МАЙСТЕР АВІА» з кризового стану, а саме: розроблено шляхи антикризового управління, а також рекомендації щодо організаційного забезпечення реалізації антикризових заходів на ТОВ «МАЙСТЕР АВІА».

В ході дослідження використовувалися як загальнонаукові, так і спеціальні методи дослідження: аналіз і синтез, системний підхід, методи комп'ютерної обробки даних, системно-ситуаційний, статистичний, порівняльний, графічний та інші методи.

LIST OF SYMBOLS

LTD – Limited responsibility company

fig. – figure

tab. – table

mln. grn. – millions hryvnas

ths. grn. – thousands hryvnas

EU – European Union

BCG – Boston consult grup

CONTENT

| | |
|--|-----|
| INTRODUCTION..... | 11 |
| CHAPTER 1. THEORETICAL-METHODICAL BASIS OF ANTI-CRISIS MANAGEMENT ENTERPRISE | 14 |
| 1.1 The essence, principles and functions of crisis management enterprise | 14 |
| 1.2 The influence of the external and internal environment on the formation of the enterprise crisis..... | 31 |
| 1.3 Methods and tools of enterprise crisis management..... | 43 |
| CHAPTER 2. STATUS ANALYSIS AND BANKRUPTCY ASSESSMENT AT LLC “MASTER-AVIA” | 55 |
| 2.1 General characteristics of LLC “Master Avia”..... | 55 |
| 2.2 Financial-economic analysis of LLC “Master-Avia” | 63 |
| 2.3 Bankruptcy Probability Analysis of LLC “Master Avia”..... | 74 |
| CHAPTER 3. DEVELOPMENT OF ANTI-CRISIS MEASURES OF MANAGEMENT OF LLC “MASTER AVIA” | 95 |
| 3.1 Development of ways of crisis management of LLC “Master Avia”..... | 95 |
| 3.2 Organizational support for the implementation of anti-crisis measures at LLC “Master-Avia” | 103 |
| 3.3 Evaluation of the results of the proposed crisis management measures of Master-Avia LLC..... | 109 |
| CONCLUSIONS..... | 115 |
| REFERENCES..... | 118 |

INTRODUCTION

Any enterprise that operates in a market environment operates under certain risks and uncertainties. In the unstable economic environment, the levels of risk and uncertainty factors increase and the activity of the enterprise may prove ineffective and cause an enterprise crisis.

But the crisis of the enterprise is not the finale of the enterprise. Even when an enterprise is in crisis, there is an opportunity to use a set of measures, models and methods that can help an enterprise overcome a crisis and resume effective operations. This complex is the basis of crisis management.

Unfortunately, the enormous potential underlying anti-crisis management has not been sufficiently used to date in management practice, even large enterprises are now in crisis, on the verge of bankruptcy. Thus, during 2018, the economic courts of Ukraine examined 17 958 bankruptcy cases, which is 113% compared to 2017 (respectively 15 851 cases). At the same time, 8 102 bankruptcy cases were initiated (in 2017 this number amounted to 7 424 cases) and 7 904 cases were closed (5 698 cases in 2017 respectively). Due to anti-crisis procedures, only 20 cases were dismissed (22 in 2017, respectively). This tendency indicates that there is insufficient attention to the problems of crisis management today; the successful experience of enterprises that have managed to overcome the crisis and resume effective activities is not extended and remains unattended by managers and managers of enterprises.

In this regard, there is a need to research, systematize and solve one of the most pressing problems that is new to our society - the problem of crisis management of the enterprise.

Given the scientific and practical need to address issues of crisis management, it is possible to determine the *relevance* of consideration of this topic. The urgency of the topic of the work is due to the fact that despite the optimistic dynamics of economic growth, the positive impact of reforms on the

country's economy is still not sufficient, the potential for economic growth in Ukraine has not yet been fully realized. The current state of development of many economic entities and a number of industries continues to be defined by experts as a crisis. Therefore, the volume of tasks that need to be solved in the crisis management system will constantly grow.

The inevitability of crises in market conditions is based on the very nature of market relations and competition between producers, which are the main driving force for entrepreneurship. Due to the fact that the crisis does not occur immediately but emerges within the organization and develops in the absence of adequate actions, it is quite important to develop the basics of the crisis management system, which will allow to identify crisis situations in time and make appropriate management decisions.

In the course of writing the diploma thesis, the best experience of foreign and domestic scientific and practical thought was taken into account. During the research, scientific and practical manuals, analytical materials of round tables, seminars, conferences on crisis management, scientific articles and publications and other sources, both domestic and foreign, were used. This scientific work will be useful for modern managers, business leaders, analysts.

The *object* of the research was the crisis management of the enterprises.

The *subject* of the diploma work was the organization of crisis management at Limited Liability Company "Master Avia".

The *purpose* of the work is to study the theoretical and practical foundations of crisis management and develop the practical proposals and recommendations for optimization of the financial situation of the enterprise and improvement of crisis prediction tools at Master Avia LLC.

The following *tasks* were defined for the completion of the thesis:

1. Systematize the theoretical foundations of crisis management;
2. Investigate methods and tools of crisis management enterprise;
3. Conduct financial and economic analysis of the studied enterprise;

4. Develop ways of crisis management for the company;
5. Evaluate the results of the proposed anti-crisis management measures.

During the research, both general scientific and special research methods were used: analysis and synthesis, system approach, methods of computer data processing, system-situational, statistical, comparative, graphical and other methods.

CHAPTER 1. THEORETICAL-METHODICAL BASIS OF ANTI-CRISIS MANAGEMENT ENTERPRISE

1.1 The essence, principles and functions of crisis management enterprise

Almost any crisis arises due to unsatisfactory business management. That is why the problem of the formation of anti-crisis measures and their optimization in modern conditions comes to the fore.

In domestic economic literature, the term "crisis management" appeared in the mid 90's of XX century and in recent years it has become one of the most popular and used in modern business life. The emergence of the term was caused by problems that arose during the unsuccessful process of reforming the economy of Ukraine and other CIS countries during the transition to market-based economic management. In general, anti-crisis management is recognized as a component of the overall economic mechanism of the enterprise and as an independent type of professional activity aimed at preventing and overcoming the crisis.

The current understanding of crisis management is rather heterogeneous and ambiguous.

In one case, it refers to the management of the enterprise in the context of the general economic crisis, in the second, the management of the enterprise in crisis as a result of poor management, in the third, the management of the enterprise on the verge of bankruptcy, in the fourth - in the period of bankruptcy. Different interpretation of the same concept leads to theoretical uncertainty and unreasonableness of practical recommendations for the development and implementation of crisis management.

Foreign studies of crisis management have gained considerable success in developing the concept of crisis management, which should be used in domestic science in the field of crisis management at the enterprise. Ukraine faces a great number of problems, for which undoubtedly the experience of the crisis management of the Western countries is of great importance, but it is the

experience of managing in fundamentally different conditions. Anti-crisis management in developed countries has a stable socio-political situation, where bankruptcy is seen as a positive phenomenon, which cleans the market from weak competitors and competition laws operate in a well-formed market economy. In the developed countries of the West, privatization was carried out with the aim of finding better forms of ownership, solving budget problems to increase the competitiveness and efficiency of enterprises [26, p. 120-137].

Let us define the crisis as aggravation of contradictions in the socio-economic system (in our case, the socio-economic system is an enterprise), which threatens its existence in the environment.

The factors of crisis occurrence at the enterprise may be different. Therefore, you need to see the symptoms and highlight their causes of crises in order to be able to use crisis management programs in a timely manner.

To effectively overcome a crisis, it is necessary to distinguish its symptoms, causes and factors.

Symptoms are the first, external manifestation of crisis phenomena that does not always characterize the true causes of the crisis, but on the basis of which some causes can be established.

Causes are phenomena or events that cause symptoms and factors of crisis. The causes of the crisis are diverse. According to the peculiarities of the cause of crises can be divided into [78, p.210-215]:

- objective related to the cyclical needs for modernization and restructuring;
- subjective, reflecting the mistakes and voluntarism of management;
- natural, characterizing changes in the environment.

From the point of view of the enterprise as a subject of economic activity, the causes of crises can be divided into:

- external, related to the tendencies and strategy of economic development, competition, political situation in the country, development of the world economy;

- internal, related to the imperfection of marketing strategy management, defects in production organization, innovation and investment policy of the enterprise, internal conflicts.

Factors - events, or trends that indicate a crisis.

Symptoms of crisis in the enterprise may be the growth of financial problems, business conflicts, that is, the appearance of the first signs of negative tendencies and their resilience. The factors of the crisis are the decrease in the quality of products, violation of technological discipline, aging of technical means, large debt on credits. The causes of the crisis may be financial and economic miscalculations, the general state of the economy, low staff skills, and the shortcomings of the planning system.

Not only the causes but also the consequences of the crisis phenomena are of great importance in understanding the crisis. We define the consequence of the crisis of the enterprise as the end result of the impact of the crisis on the state of the enterprise. The consequences can be both positive and negative. Crises are also to blame as a chain reaction, meaning a transition to a new, deeper, longer-lasting crisis is possible. The effects of a crisis can lead to dramatic changes or can be mitigated or neutralized by anti-crisis management.

Problems of emergence of crises in the enterprise can be considered and each of the systemological positions. Any enterprise is a system, which is made up of interconnected elements and is a whole. In this case, the development of the enterprise does not change the general characteristics of the integrity of the system, if there is no destruction of the enterprise.

The enterprise system in the course of its life can find itself in a stable and unstable state. Define the stable state of the enterprise system, as such, when the financial and economic activity of the enterprise is efficient and ensures the stable development of the enterprise system, maintaining its essence and despite external and internal influences; the unstable state of the enterprise system, as such, when the function of the enterprise is not efficient, and external and internal influences

on the enterprise system are crucial and may change its structure. Factors affecting the sustainability of the enterprise system can be external and internal [108, p.110-115].

Under the conditions of the planned economic system, the sustainability of economic and production systems was achieved at the expense of external factors, that is, any destabilization processes were managed externally through additional economic support, adjustment of plans, administrative reorganization of production, etc. In this case, the problem of sustainability was solved at the top level (state, regional, sectoral) and almost did not affect the regulation of sustainability of economic and production systems at the level of enterprise.

A market economy requires, first and foremost, the involvement of internal mechanisms to ensure the sustainability of the functioning and development of the enterprise. In this case, the management of the enterprise is based on the analysis of own actions in the environment, first of all, economically.

The notion of sustainability is not straightforward. Distinguish between stable and quasi-stable state of the system. By stable state we mean that when no structural component is in a transitional period, that is, all structural components function in a stable manner. A quasi-stable state will be understood to mean a state where at least one of its structural constituents is in transition, but is practically not reflected in the general state of the system. A transition period is a boom demo to mean a period when the system or any significant indicator of it changes qualitatively. The transition is unstable and can affect the system both positively and negatively.

In Ukraine, the emergence of a bankruptcy institute is linked to privatization processes - the state has transferred the capital it previously owned. After the first wave of privatization fails, scientists begin to summarize these processes, develop theories and analyze the practice of crisis management.

The works of foreign and domestic scientists provide definitions of crisis management, which have both similar features and differences. Thus, according to

the developments of some scientists, crisis management is characterized as a set of measures to [56, p.21-36]:

- analysis of the state of macro- and microenvironment;
- selection of appropriate missions of the enterprise;
- study of the economic mechanism of emergence of crisis situations, creation of system of scanning of external and internal environment of the enterprise for timely determination of "weak signals" about threat of a possible crisis.

In our opinion, crisis management is a continuous process of identifying signs of crisis phenomena in the development of a crisis exit program, which is implemented throughout the life of the business entity.

Accordingly, crisis management provides:

- management of the enterprise in order to avoid crisis situations; the withdrawal of the enterprise from the crisis situation in which it was.

The main purpose of crisis management is to ensure a strong market position and stable financial stability of the enterprise in any economic, political, social disasters.

Relationships in crisis management, which are drawn up at the level of the enterprise at its recovery or liquidation, related to the implementation of a set of measures that are divided into strategic - consist in the analysis and evaluation of the situation of the enterprise, the development of production programs, revenue policies, innovations, strategies, etc. and tactical -in determining the current state of the enterprise, its profits, losses, identification of internal reserves, attracting credit, strengthening discipline, etc.

Crisis management - a specially organized management system that has a complex, systematic nature, aimed at the most prompt detection of signs of crisis and creating appropriate prerequisites for their timely overcoming in order to ensure the restoration of the viability of a business entity, prevent the emergence of its bankruptcy situation, prevent them occurrence in the future.

The concept of "crisis management" is widely and narrowly understood.

Crisis management in the broad sense is the preservation and strengthening of competitiveness of the enterprise. This is management under uncertainty, risk. In this case, crisis management is applied to enterprises, regardless of their financial position and life cycle stage.

Crisis management in the narrow sense is the prevention of bankruptcy and liquidation of the enterprise, restoration of its solvency. It is management in the context of a specific crisis situation, it is aimed at withdrawing an enterprise from a given crisis situation and restoring its competitiveness.

The essence of crisis management is expressed in the following provisions [21, p.75-78]:

- crises can be anticipated, expected and triggered;
- crises can be accelerated, anticipated, eliminated to a certain extent;
- crisis can and should be prepared;
- crises can be mitigated;
- crisis management requires specific approaches, specialist knowledge, experience and art;
- crisis processes can be managed to a certain extent;
- crisis management processes are able to accelerate these processes and minimize their consequences.

The main differences inherent in crisis management are as follows:

- specificity of the purpose of realization - preservation of the enterprise and restoration of its viability with minimal losses;
- prompt and timely response to crisis symptoms and application of the necessary methods to prevent further deployment of crisis processes;
- Significant time constraints to overcome the crisis caused by the further unfolding of the crisis and the threat of bankruptcy and liquidation of the enterprise;

- application of a systematic approach to crisis management of the enterprise (coverage of all spheres of activity of the enterprise);

- use of specific principles, functions and methods of enterprise management in a crisis;

Subjects of anti-crisis management are specialists who have the appropriate professional training, knowledge and skills in the field of anti-crisis management;

- significant resource constraints related to the inability or difficulty of obtaining additional resources;

- managerial decisions are made under uncertainty and are risky;

- use of innovative approaches, analytical-calculation and forecasting procedures before making management decisions;

- focus on minimizing the losses of all stakeholders (owners, staff, creditors, investors).

The purpose of crisis management is to ensure a stable financial position of the enterprise by identifying internal and external signs of the crisis, and prevent further deepening of them, as well as in restoring the ability of the enterprise as a microeconomic system for self-organization.

The object of anti-crisis management is the process of developing the crisis of the enterprise to eliminate and prevent it.

Subjects of crisis management - a certain number of people who realize its goals and objectives. There are internal and external entities of crisis management. Internal include: business owner; Chief Financial Officer; anti-crisis manager - an employee of an enterprise that specializes in anti-crisis management and has appropriate professional training. External entities of anti-crisis management include: anti-crisis manager - an employee of a consulting firm that engages in an enterprise on a paid basis for the implementation of anti-crisis management tasks; representatives of state and departmental bodies on bankruptcy, reorganization, restructuring and others.

Depending on the availability of observation and the degree of investigation of crisis-forming factors, the following types of crisis management are distinguished.

In the economic literature are considered different types of crisis management, which we summarized and presented in table. 1.1.

Depending on the stage of crisis, crisis management can be differentiated into the following subspecies [101, p.21-23]:

- pre-crisis management, which is carried out for timely diagnosis of crisis phenomena in order to prevent the crisis;
- crisis management aimed at restoring the viability of the socio-economic system;
- management of crisis management processes, which is carried out in order to minimize costs and lost opportunities during the withdrawal of a company from a crisis;
- post-crisis enterprise management - enterprise development management.

In the early 2000s, anti-crisis financial management began to be explored, which was considered in two aspects [64, p.72-78]:

first, as a set of preventive measures aimed at preventing the financial crisis by systematically analyzing the strengths and weaknesses of the enterprise, assessing the likelihood of bankruptcy, identifying, assessing and mitigating risks, developing a system of preventive measures;

second, as a system of financial management aimed at removing the enterprise from the crisis, including the rehabilitation or restructuring of the entity.

It should be noted that the state of the economy of Ukraine, the state of a particular industry, a particular economic entity is largely characterized by the impact of the effects of the crisis. The positive trends are clearly growing, but for a long enough time every enterprise in determining its development strategy will take into account the impact of crisis phenomena on the economy, counteract them. Development of theoretical and methodological base and accumulation of

experience of practical application of crisis management at the enterprise should be one of strategic directions of development of national economic thought.

Of particular importance is crisis management in the management of the enterprise's finances, which should understand the system of methods and principles of development and management decisions related to the formation, distribution and use of financial resources of the enterprise and the organization of turnover of its funds.

Taking into account the peculiarities of financial management at the current stage of development of market relations in Ukraine, the following definition can be formulated: anti-crisis financial management is a system of principles and methods of developing and adopting a set of special governmental decisions aimed at preventing and neutralizing financial crises and their consequences in order to achieve financial the balance of the enterprise.

Thus, crisis management of the enterprise is necessary for a number of reasons [42, p.105-110]:

- crisis phenomena can be anticipated, accelerated, eliminated, mitigated;
- crisis can and should be prepared;
- crisis management requires basic approaches, specialist knowledge, experience and art;
- crisis processes can be managed at some point.

The object of anti-crisis financial management is the restoration of financial equilibrium. The most complete essence of the crisis management of the company's finances is revealed through its functions. General and specific functions of financial management should be distinguished. Common functions include: planning, organization, accounting, control, analysis, regulation and incentives.

Planning determines the direction and content of financial management of the enterprise in times of crisis, develops goals and specifies them in methods and means of achievement.

It should be noted that part of the planning function is forecasting, through which it is possible to identify different variants of possible changes in the financial condition of the enterprise and modification of the main directions of management of its financial activities in crisis conditions.

Organization - the essence of this management function is to create the bodies of financial management of the enterprise, to build the structure of the management apparatus, to establish permanent or temporary relationships between them, functions and powers, that is, to create real conditions to achieve the planned anti-crisis goals.

Table 1.1

Types of crisis management and their characteristics

| Type of crisis management | Characteristic |
|---------------------------|--|
| Passive | aimed at eliminating the crisis phenomena that already exist in the system |
| Reactive | aimed at identifying weaknesses in the activity of the enterprise, localization and control over their condition and is the basis for implementation of corrective measures |
| Preventive | focused on finding and forecasting such trends in the external and internal environment, which may adversely affect the activity of the enterprise, as well as the formation of preventive, adaptation measures |
| Active | is oriented, as in the previous case, on crisis forecasting, but provides for the development of measures not only for the adaptation of the enterprise to the environment, but also the environment to its requirements |
| Adventurous | involves “on a whim” action without analysis, diagnosis and prognosis; in this case, the struggle is usually not the causes |

| | |
|--|--------------------------------|
| | of the crisis but the symptoms |
|--|--------------------------------|

The accounting function is aimed at ensuring the continuous collection, systematization and synthesis of the data necessary for further control of management.

Control as a general function of financial management of the enterprise, aimed at quantitative and qualitative assessment of the results of functioning of the enterprise in order to establish deviations from the set parameters. In the process of management, control acts as a feedback element, because according to its data, adjustments are made to previously adopted decisions, plans, organization of financial work, adopted standards and standards.

The analysis determines the economic efficiency of financial management of the enterprise and the possible directions of its development for the current and future periods in terms of providing the necessary resources (financial, material, labor). Understanding and understanding information is achieved through analysis.

Regulation of the system of crisis management of the company's finances in case of deviations from the set parameters and achievement of the required state of stability of the enterprise is carried out on the basis of realization of the analysis function

Incentive is the final function, the essence of which is the interest of staff in the results of their work, through which the distribution of material and labor values, depending on the amount and quality of labor expended.

The specific functions of the crisis management of the enterprise's finances include [53, p.98-102]:

- pre-crisis state of financial management;
- financial crisis management;
- managing the financial crisis recovery processes;
- stabilization of unstable situations;
- minimizing costs and lost opportunities;

- timely decision making.

Thus, anti-crisis financial management is an important component of the system of operational, tactical and strategic management. Its essence is to create a mechanism for identifying and eliminating destabilizing problems in managing the finances of domestic enterprises before these problems have taken on an irreversible character.

Crisis financial management of the enterprise masses its features, namely [81, p.78-82]:

1. Mobility and dynamism in the use of financial resources, implementation of changes, implementation of innovative financial programs;
2. Implementation of program-targeted approaches in technologies of development and implementation of management financial decisions;
3. Increased sensitivity to the time factor in the processes of crisis management of the enterprise finances, to timely action on the dynamics of situations;
4. Increasing attention to previous and subsequent evaluations of managerial financial decisions and choosing alternatives to behavior and financial activities;
5. The use of anti-crisis criterion for the quality of financial solutions in their development and implementation.

An important role in anti-crisis financial management belongs to the principles. The principle (from Latin - beginning, basis) - the basic position of any theory, doctrine, science, outlook. Principles of anti-crisis financial management are certain features of its construction, which are divided into systemic and specific. The system defines the general requirements for conducting anti-crisis financial management and includes the following principles:

objectivity - involves taking into account the essence and mechanisms of emergence and deepening of crisis phenomena;

comprehensiveness - determines the need for the development of anti-crisis solutions in all areas of the enterprise;

conformity — the essence is to study and typify the conditions of operation of a particular enterprise - object of crisis management;

control - involves the implementation of continuous review of the implementation of management measures to adapt to the conditions of internal and external environment of the enterprise;

optimality - involves optimization of the methodological toolkit for researching problems of the enterprise and diagnostics of the threat of its bankruptcy;

the main link - focuses on finding and prioritizing the main problem, increasing attention to the area that causes the emergence and spread of the crisis;

legality - involves the use in the interests of the enterprise of legal principles that determine the possibility of its financial rehabilitation and rehabilitation;

efficiency - maximizing the use of the potential of the facility and the entity to develop an anti-crisis program, minimizing the costs associated with the crisis.

Specific principles are differentiated in terms of mechanism, process and management system. Specific principles in crisis management include:

- early diagnosis of crisis phenomena in the activity of the enterprise;
- timely response to certain crisis phenomena in the financial development of the business entity;
- application of restructuring tools, reengineering potential; the use of remediation of the enterprise to avoid bankruptcy: - ensuring control over the results of the developed measures for removing the enterprise from the financial crisis.

All principles, both systemic and specific, are aimed at preventing and avoiding bankruptcy of the enterprise.

In the course of anti-crisis financial management, a large number of different methods, techniques, approaches are used, which allow us to summarize, effectively organize the execution of functions, stages, procedures, operations necessary for decision-making. Together they act as management methods. Prof.

I.A. The form, as an element of the structure of the mechanism of anti-crisis financial management, distinguishes the system of financial methods of the enterprise: method of technical and economic calculations, balance sheet, economic-statistical, economic-mathematical, expert, methods of discounting and increase of value, methods of diversification, hedging, other financial methods. They are characterized by diversity and reflect the complexity and composition of management tasks that management solves [91, p.24-28]:.

So, Anti-crisis management is a comprehensive management system aimed at preventing and eliminating the financial crisis of an organization and eliminating its negative consequences.

The main goal of making anti-crisis management decisions is to restore the activities of an enterprise that has suffered from adverse economic circumstances.

On the way to achieving this goal, anti-crisis management performs a set of such tasks [78, p.210-215]:

Timely diagnosis and identification of weaknesses in the enterprise economy;

Preparing for a crisis (capital accumulation, saving resources, reducing purchases and freezing reserves);

Crisis prevention;

Repayment of debts and solving the problem of insolvency to employees, shareholders and creditors;

Restore economic stability and establish strong market positions;

Taking preventive measures to avoid declaring bankruptcy or liquidation of the company;

Remediation and redress;

Organization of the post-crisis activity of the company, which should be tailored to the factors and circumstances, which led to negative consequences.

The essence of anti-crisis measures is expressed in the following provisions:

Crisis situations can be prevented, accelerated or caused artificially;

A crisis can be paused, rescheduled or accelerated;

The financial impact on the company can be minimized;

Company destruction processes can be managed by management;

The company must be prepared for any unforeseen adverse situations.

Crisis management facilities - companies, organizations and enterprises affected by financial problems. Also, anti-crisis measures are provided for by law in relation to regional, municipal and regional structures.

The subjects of crisis management are owners and specialists who develop and implement a set of measures.

The financial crisis of the enterprise is a local threat to the economic stability of the enterprise, during which internal and external debt grows, solvency decreases and the threat of bankruptcy and liquidation of the company increases.

Measures to eliminate financial problems depend on the stage of development of the crisis.

At the first stage, there is a drop in profitability and sales volumes, which entail financial losses.

Solution: improving the quality of labor and reducing production costs, and related services.

In the second stage, production crosses a critical point and goes into minus.

Solution: reorganization and strategic decision making.

At the third stage, the company loses its own resources, and reserve funds are at zero, because all the earnings go to paying off external debts to creditors.

Solution: debt restructuring. At the fourth stage of development of the financial crisis, the only way out is to declare bankruptcy.

Consider an example of overcoming the crisis at Ford.

In 2009, the company faced a number of difficulties:

- conflicts within the company;
- drop in customer confidence
- rising oil and component prices;

- high growth in competition;
- economic crisis;
- selling part of the shares to competitors.

The difficult situation at the enterprise led to a wave of strikes demanding a 30% increase in wages. The company decided to partially satisfy this requirement by raising rates by 15%, however even such an increase in expenses was beyond the means of management, and the following year 1,200 employees were reduced.

To stabilize the situation, management took the following measures:

Reduction of bonuses and incentive payments to employees, as well as a significant reduction in the interest rate for auctioneers;

Solving problems with trade unions, which helped to establish a climate within the enterprise;

Reducing retirement age.

To reduce production costs, it was decided to reduce the lineup, focusing on the 4 most requested models, reduce the working day and cut production. In order not to lose the quality of products, the company optimized the production process. Ford not only tried to strengthen its position in the domestic market, but also found new markets - in particular, in the CIS countries, where the dealer network was significantly expanded.

The peculiarity of this complex of anti-crisis measures was that the management, despite the difficult economic period, managed to maintain a reputation as a responsible employer that takes care of its subordinates. This was achieved thanks to a competent personnel policy and cooperation with trade unions, which helped to avoid undermining production from the inside.

Eldorado, a popular European home appliance retailer, faced an economic crisis in 2008 when tax authorities announced a debt of UAH 15 billion. As a result, the organization's reputation was shaken, banks demanded immediate repayment of debts of \$ 400 million, and regular suppliers interrupted cooperation.

Despite the difficulties, Eldorado did not shake financially - it helped in this loan of \$ 500 million from an international investment group, which subsequently bought back a controlling stake from the owner of Eldorado and became a 100% owner, which remains to this day.

The new owner of PPF immediately began to apply anti-crisis actions, which were a great success - despite the difficulties, the organization lost only 1% of sales.

The anti-crisis plan consisted of the following actions [93, p.102-108]:

1. Change in commodity and transport logistics - the volumes of lots in warehouses were significantly reduced, and the delivery of goods began to take place in small batches, due to which it was possible to reduce transportation costs;

2. Introduction of the “sale by sample” system - the goods are delivered to the buyer from the manufacturer, the company acts as an intermediary, taking interest on the organization of the transaction - this reduces the cost of storing goods in warehouses, and the company has reduced the risks of unsold products;

3. Reducing staff costs - management links were cut - the number of subordinates of each manager doubled. Instead of a large staff of managers, it was decided to increase the number of consultants, which increased sales at local points of sale. In total, about 12 thousand employees were laid off.

These actions helped to keep the company afloat and maintain competitiveness in the market, but significant mistakes were made in making management decisions.

For example, the organization decided to tighten the conditions for employees, reducing their wages by several times and assign them additional functions that take time to perform direct duties. The incentive system was eliminated (now the amount of earnings did not depend on the level of sales of each individual employee, but was distributed among regional branches).

As a result - a large wave of layoffs of their own free will. Even experienced employees who worked for more than three years left. The drop in the

qualification level affected the company's service - sales fell, and the number of returns and complaints from customers increased significantly. The reason for this is unprofessional consultation, which even constant trainings and training programs for which Eldorado regularly spends money cannot correct.

As can be seen in this example, saving on personnel leads to undesirable consequences: Eldorado has a serious competitor in the market - M.video. At present, there is talk of a possible merger of the two organizations or the redemption of Eldorado M.video. As can be seen in this example, the crisis management system is individual in nature and must take into account the specifics of a particular enterprise.

1.2 The influence of the external and internal environment on the formation of the enterprise crisis

In general, there is a significant number of causes of crisis situations and the crisis situation of enterprises. In relation to the place of origin of the causes of crises distinguish [57, p.93-98]:

- 1) external to the enterprise, which it is not able to influence or has limited influence;
- 2) internal, resulting from the activity of the enterprise itself.

Domestic scientists recognize the crisis as one of the stages of enterprise development. In addition, there is a certain inconsistency in the allocation of the crisis, as a number of authors (Ligonenko L., Tereshchenko O., Telnova O.), who view the crisis as a separate stage in the cycle of enterprise development, note that the emergence of crisis situations occurs at all stages of life enterprise cycle.

The inevitable crisis in the process of enterprise development is debatable. After all, based on the essence of the cycle, no enterprise can start lifting without going through the crisis. At the same time, practice shows that, for a certain number of enterprises, the crisis stage is the last stage of their functioning as

socio-economic systems, after which they cease to exist. The problem is whether the crisis is inevitable in the development of the enterprise is connected with the dilemma of constructive-destructive nature in the nature of the crisis in the enterprise. It is worth noting the increased emphasis on the constituent components of the crisis in modern foreign economic science. Thus, the Russian crisis researcher Yakovtsev Yu identifies three important structural functions of the crisis [22, p.21-25]:

- weakening and eliminating obsolete elements of the dominant, but already exhausted, system potential;
- clearing the road for the approval of the initially weak elements of the new system, the future cycle;
- strength testing and inheritance of those elements of the system that accumulate and pass into the future.

British researchers J. Meyers (Meyers) and J. Holusha (Holusha), on the example of specific companies, highlight the following seven benefits of a crisis [12, p.210-215]:

1. The Birth of Heroes, new progressive leaders such as Leelacocca on the Chrysler crisis, for example.
2. Accelerate the process of organizational change (restructuring) that management is reluctant to go through in the ordinary course ("UnionCarbide").
3. Awareness and recognition of existing problems that were previously closed ("Procter & Gamble". "DalkonShield").
4. Optimal redistribution of human resources in the process of change ("UnitedTechnologies", "BamiffAirlines").
5. Implementation of new (revolutionary) strategies ("GeneralMotors", "Caterpillar").
6. Targeting Early Warning Systems in the Future ("BankofBoston").
7. New competitive advantages (abilities and opportunities) after the crisis ("Levies", "Coca-Cola").

English scientist Simon Booth (S. Booth) also considers the crisis not so much a problem as "opening up new opportunities and unleashing innovative ideas". Domestic researcher Zologina K.I. defines crisis as a point of bifurcation, which has the potential of both destructive and constructive character.

In this case, it should be emphasized that not the crisis itself has a constructive factor (in its essence it is destructive), but the crisis poses the potential for constructive management actions, which must restructure the activity of the enterprise, in order to overcome the crisis. This may require the mobilization of all the reserves of the enterprise, a radical breakdown and restructuring of its organizational and production sphere. Thus, the crisis poses the need for some constructive action by management, otherwise the enterprise may cease to exist, which means its destruction as a socio-economic system. However, such actions may not take place, which means termination of the enterprise.

The question of the cyclicity of crises in the enterprise and where the causes of the crisis are: outside or inside the enterprise can logically be solved within the framework of interaction between the enterprise and the higher level economic system. Both the first and second are inherently variable, their parameters are not static. The latter is the reason for the development of the enterprise in the sense of changing the parameters of its condition.

The factors that can cause a financial crisis in an enterprise are divided into external (independent of the enterprise) and internal (dependent on the enterprise) (Table 1.2 [52, p.210-215]:).

There are quite a few specific factors that cause an increase in the likelihood of an enterprise crisis. For each enterprise, such a set is individual, it depends on the internal capabilities of the enterprise to counteract the factors of potential threat. The system of such factors is not static, it changes over time, factors that in the past have contributed to the development of negative trends in a particular segment of the organizational and production sphere of the enterprise, and the

entry of its development trajectory in the "crisis" area may not be the same in the current or the future.

The enterprise in the course of its activity is exposed to the external and internal environment and what further influence depends on its further development.

The total set of external factors of occurrence and development of crisis in the enterprise is divided into the following groups: social, economic, political and scientific and technical factors. Processes such as: rising inflation, instability of the tax system, declining stock market activity, volatility in the foreign exchange market, declining real incomes - form a set of economic factors that provoke and support the crisis in the enterprise.

Enterprise environment is a multifaceted and complex concept that is a set of subjects, factors and forces of direct and indirect influence that affect all areas of activity and shape its market environment.

Factors affecting the emergence and development of crisis processes in any entity are divided into external (exogenous) and internal (endogenous). External (exogenous) factors include those that the company is not able to predict in advance, and therefore influence them.

Questions about the factors of development of crisis phenomena (hereinafter referred to as crisis factors) are one of the most developed both in foreign studies and in national publications devoted to this problem. Almost every researcher offered his list of crisis factors, came up with interesting hypotheses and tools of consideration that deserve attention.

Table 1.2

Factors of financial crisis in the enterprise

| External factors | Internal factors |
|---|--|
| - the downturn in the economy as a whole | - poor quality of management |
| - reduction of purchasing power of the population | - deficits in the organizational structure |
| - a significant level of inflation | - low level of staff qualification |
| - instability of economic and tax legislation | - shortcomings in the production area |
| - instability of financial markets | - miscalculations in the field of supply |
| - increased competition in the industry | - low level of marketing and loss of product markets |
| - the crisis of an individual industry | - miscalculations in the investment sphere |
| - seasonal variations | - lack of innovation and innovation |
| - strengthening of market monopoly | - financing deficits |
| - political instability in the country where the enterprise is located or in the countries of supply of raw materials (consumers of products) | - lack or poor performance of the controlling services (planning, analysis, information support, control |
| - conflicts between the founders (owners) | |

It is customary to use the following indications for the classification of crisis factors [110, p.175-182]:

- . 1. Depending on the location of crisis factors:

- internal (endogenous), the occurrence and intensity of which depends on the activity of the enterprise, provoked by certain decisions, events or internal state of the system;

- external (exogenous), the occurrence and intensity of which does not depend on the activity of the enterprise, is conditioned by the state of the external environment.

2. Depending on the consequences of the manifestation of individual factors:

- general crisis factors, the effect of which leads to a deterioration of the general conditions of business activity;

- specific crisis factors, the effect of which exacerbates the prospects of enterprises of a particular activity profile (industry, specialization);

- individual crisis factors that directly cause the bankruptcy of a particular enterprise

3. Depending on the degree of impact within each group, major and minor crisis factors may be identified. The criterion for division into these groups is the degree of influence on the emergence of crisis phenomena and the situation of bankruptcy.

4. Depending on the degree of interdependence, independent and derived crisis factors. Independent factors are determined by certain events or trends, derivatives are their consequence as a result of causation.

5. Depending on the time of action - permanent and temporary crisis factors. Permanent factors determine the overall level of threat of crisis, temporary - exacerbate this level due to certain events.

6. Depending on the approach to determination, potential and actual crisis factors. The list of potential crisis factors is determined by the nature of the phenomena and processes that determine the likelihood of the crisis and the insolvency of the enterprise, the actual - is the result of the study of the process of crisis development of a particular enterprise, identified in the course of a special study.

Of paramount importance in the process of research is the separation of groups of external and internal crisis factors, the allocation of various factorial subgroups within each of them.

In the study of external crisis factors are usually highlighted in Fig. 1.1.

The existence of the enterprise is a constant adaptation of it to the conditions of the environment, although the parameters of the enterprise, in turn, may have varied independently of the environment.

Therefore, in general, it is true to believe that the cause of the crisis in the activity of enterprises is hidden in the market economy, which is characterized by constant changes in market orientations of consumers, uncertainty in the economic behavior of contractors of the enterprise, which requires constant adjustment of the basic elements and functional subsystems of self-subsystems and the initial parameters of the development of the system as a whole. The mismatch of changes in the parameters of the external environment and production and organizational sphere of the enterprise and constitute the essence of the crisis in the enterprise, which is caused by factors external to the enterprise.

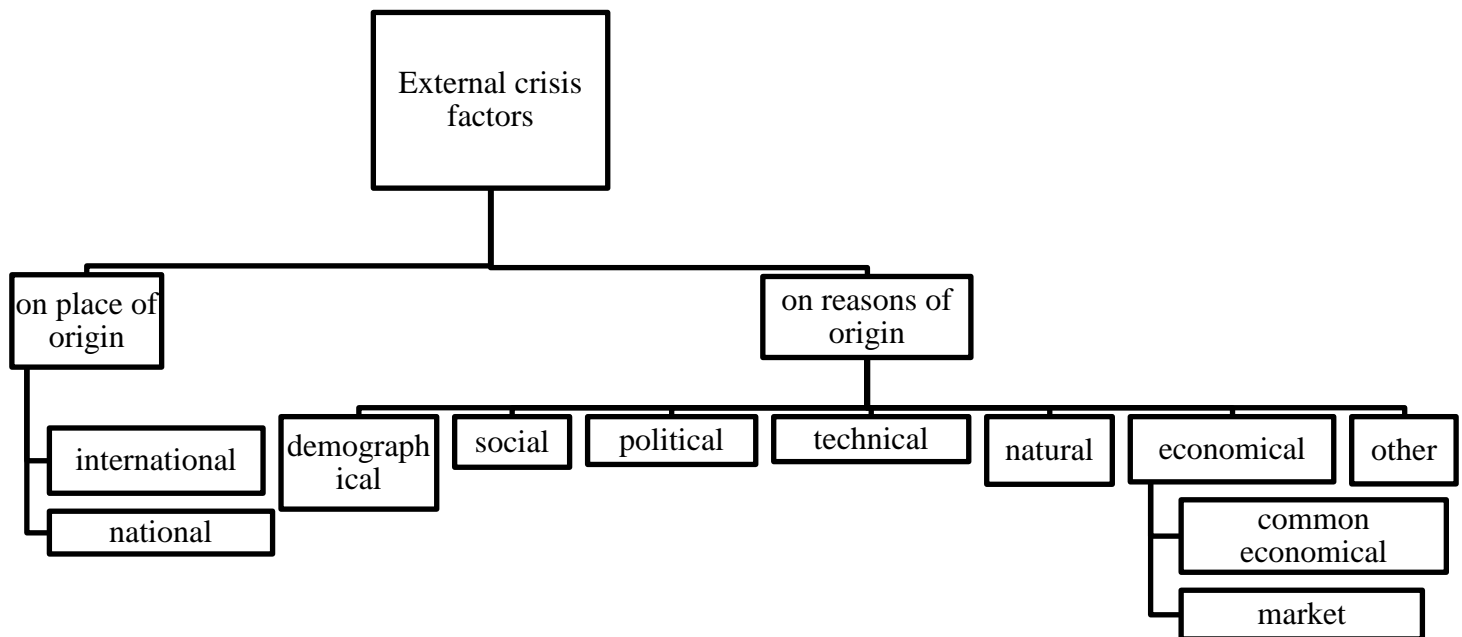


Fig. 1.1 Classification of external crisis factors

Thus, if the crisis proves to be insurmountable, the enterprise will either cease to exist or it may exist for a long time in times of crisis, for example, by providing government grants, attracting additional resources through non-payment of wages and non-payments to the budget or accounts with counterparties. Overcoming the crisis leads to the transition of the enterprise to a new state, which is more in line with the market situation, that is, the ability of the enterprise to self-sustain its development.

1. Depending on the place of origin - international and national crisis factors.

International crisis factors are conditioned by the situation outside the country, the state and tendencies of the world economy. The following factorial subgroups can be distinguished in their composition [100, p.78-92]:

1) political (attitude to socio-economic and political transformations in Ukraine, development of contacts at the interstate level and favorability of interstate agreements on economic cooperation, development of international scientific and technical relations, volumes and conditions of providing technical assistance in market reforms);

2) related to the activities of individual foreign partners (economic strategy and policy of activity in foreign markets, first of all - price and investment, the level of competitiveness of products (goods, services), technology, organization of international marketing, forms of competition, financial status of foreign partners, their possibilities and prices of access to financial resources, normal level of profitability, standards of cooperation, etc.).

International crisis factors are of paramount importance for enterprises engaged in foreign economic activity. The impact of this group of factors on their activities is direct, since these enterprises directly interact with foreign entities. At the same time, since Ukraine is actively involved in international trade and is an importer of many strategic mass consumption resources, all enterprises are indirectly influenced by these factors, as they determine the prices for the more important raw material resources (first of all - energy and fuel). In the conditions of deficiency of the State budget and considerable external debt, international factors largely determine the overall situation in the financial market of Ukraine, and consequently, the level of inflation, stability of the national currency, credit rates, etc., which is also essential for the activity of all enterprises of Ukraine. National factors of crisis development are formed within the country.

2. Depending on the causes, national factors can be aggregated into the following factorial subgroups:

1) demographic, the effect of which determines the size and structure of the needs of consumers (population), and in the well-known economic conditions - its solvent demand;

2) economic, which characterize the state of development of the economy, its sectoral and territorial structure, market saturation of individual goods; trends in changes in the real level of income of the population, determine the favorable development of business through the level of inflation, taxes, credit rates, the nature and stability of instruments of state regulation of business, especially regulatory and tax, the volume of government procurement and financing, investment climate, etc .;

3) political, determining the stability and orientation of domestic policy, the attitude of the state to entrepreneurial activity, the nature of state regulation of the economy, attitude to reforming property relations, measures to protect consumers, on the one hand, and the entrepreneur (protection of competition, restriction of monopoly, etc.) - from another;

4) social, manifested in the habits and norms of consumption, preference for one product and negative attitude to others;

5) scientific and technical, the action of which is related to the implementation of the achievements of science and technology, determines the competitiveness of individual products, the life cycle of individual productions (technologies), the likelihood of technological breakthroughs, etc .;

6) natural, which determine the market conditions for raw materials and agricultural resources, the volume of development of natural consumption of the population (products grown on their own plots), changes in consumer demand (consumption of certain types of goods and services related to climate change, etc.) ;

7) other factors (criminogenic situation, environmental factors, natural disasters, etc.).

Of course, the most negative effects on the deepening crisis are the economic factors that accumulate and reflect the impact of other groups of factors.

As a part of economic factors traditionally distinguish:

- general economic, which determine the general conditions of operation of enterprises, and therefore, the results of economic activity;
- market factors related to the negative trends for the development of particular markets with which the company interacts in the course of its activity.

An in-depth study of market factors requires the development of a disaggregated list of such features;

1) the types of markets with which the enterprise interacts (factors that determine the situation of the consumer market, the market of commodities and other material resources, the labor market, the capital market, including currency, credit, insurance, financial and other its segments);

2) factors that determine the situation of individual markets (factors of demand, supply, competition, government regulation).

The internal factors behind the emergence of crisis phenomena are also quite diverse.

Poor leadership is the primary internal factor (the root cause of the crisis). A well-managed team responds to adverse external circumstances and can take actions that promote recovery; poor leadership - crashes. The following deficiencies of the management are distinguished, which lead to the crisis type of management:

- lack of management knowledge;
- unbalanced administrative team;
- a poorly performing team;
- lack of strategic approach;
- weak discipline;
- immorality and lack of enthusiasm.

Poor leadership exacerbates such crisis and bankruptcy as insufficient control. This factor manifests itself in three major areas: lack of planning and unfounded decision-making; insufficient financial control; insufficient marketing efforts.

Insufficient control leads to the inclusion of a third factor in the process of bankruptcy development, which is called imbalance of actions. The external manifestation of this factor is:

1) lack of equity, due to the limited financial resources of the founders and (or) inability to self-finance;

2) excessive dependence on credit resources or excess credit as a source of capital and possible loss of control over part of the business;

3) "deep involvement", which means the high share of conditional fixed costs, first of all, for the payment of borrowed capital; under these conditions, enterprises are forced to make a large part of the gross to

to direct the financing of borrowed capital, which results in the company becoming vulnerable due to deterioration of trading conditions (decrease in the volume of trade);

4) a high level of cost per unit of turnover; if a high-cost enterprise sets prices close to those of its competitors, the profit margin will be lower, additional loans will be required;

5) inefficient cost structure (prevailing cost convention) due to high interest rates, low labor productivity or excessive investment in fixed assets (fixed assets), the negative effect of the operating leverage effect in reducing production volumes;

6) "business development", that is, a situation in which a business expands faster than its ability to finance itself; the cost of borrowing under conditions of a critical capital structure increases critically, which may lead to a loss of activity;

7) implementation of large investment projects, especially when in case of failure all the equity of the enterprise is affected;

8) receiving significant force majeure losses as a result of conducting separate economic and financial transactions, which cause simultaneous loss of large amount of equity capital, which cannot be quickly restored.

Thus, whatever the "obvious" reasons and external prerequisites for the deterioration of the enterprise, the root cause of any crisis is the activity or inactivity of the management and management of the enterprise, the inability to ensure the proper quality of management in the current economic conditions.

1.3 Methods and tools of enterprise crisis management

There are different approaches to crisis management in management theory. An analysis of the scientific literature on this issue makes it possible to conclude that a crisis situation is a turning point in the functioning of any system, in the process of which it is exposed from the outside or from the inside, which requires a qualitatively new response from this system. Based on the nature of the crisis, we note that they are characterized by risky development, which is manifested in the likelihood of a dangerous or crisis situation and their consequences. Thus, the crisis is a sharp fracture, a difficult transition state that involves the danger, the threat of destruction of the production system as a whole.

The crisis can be overcome by the following methods [63, p.154-155]:

Cost cutting - a necessary measure, which is to optimize the company's costs - the dismissal of staff; salary reduction; workforce optimization; reduction in product mix; replacement of raw materials with cheaper analogues, etc. ;

Raising funds - any property that is at the disposal of the company can be sold or leased for additional income. To bring money to the company is capable of selling securities, real estate; change in credit policy and optimization of sales;

Debt restructuring - a set of negotiations with creditors in order to obtain concessions and deferrals to reduce official obligations;

Drawing up a new strategic development plan - the company must adapt to new conditions and optimize its functionality as much as possible;

The reorganization of the company - cardinal changes in the structure and activities of the organization, which entail changes in all areas: sales, management and foreign policy.

Cutting costs is not the best way out of the situation, since a decrease in the quality of goods and services leads to a drop in sales and further ruin of the company. It is much more efficient to seek new sources of financing and carry out strategic improvement activities.

In the theory and practice of management, there are two approaches to the application of crisis management [92, p.110-115]::

1. Crisis management for the purpose of prevention;
2. Crisis management in a crisis.

Crisis management for the purpose of prevention is considered as a comprehensive system of enterprise management, aimed at preventing or eliminating unfavorable tendencies of development which in the future can lead to a crisis.

The essence of crisis management from the standpoint of this approach lies in the prevention and prevention of crisis situations.

Crisis management for prevention includes the following actions (Fig. 1.2)

- Crisis monitoring is an analysis of the internal and external environment, identification of weaknesses of the enterprise activity with the purpose of timely detection of a crisis situation in the early stages.

- Diagnosis (assessment) of an enterprise is a method and procedure for recognizing crisis situations in order to increase its efficiency and viability in an environment of unstable environment. It is advisable to carry out diagnostics in seven areas of activity of the enterprise.

- Development and implementation of a system of measures for prevention of crisis phenomena, early elimination of possible causes of crisis situation

- Preparation for action in the face of imminent crises or probable crises where their cause cannot be eliminated

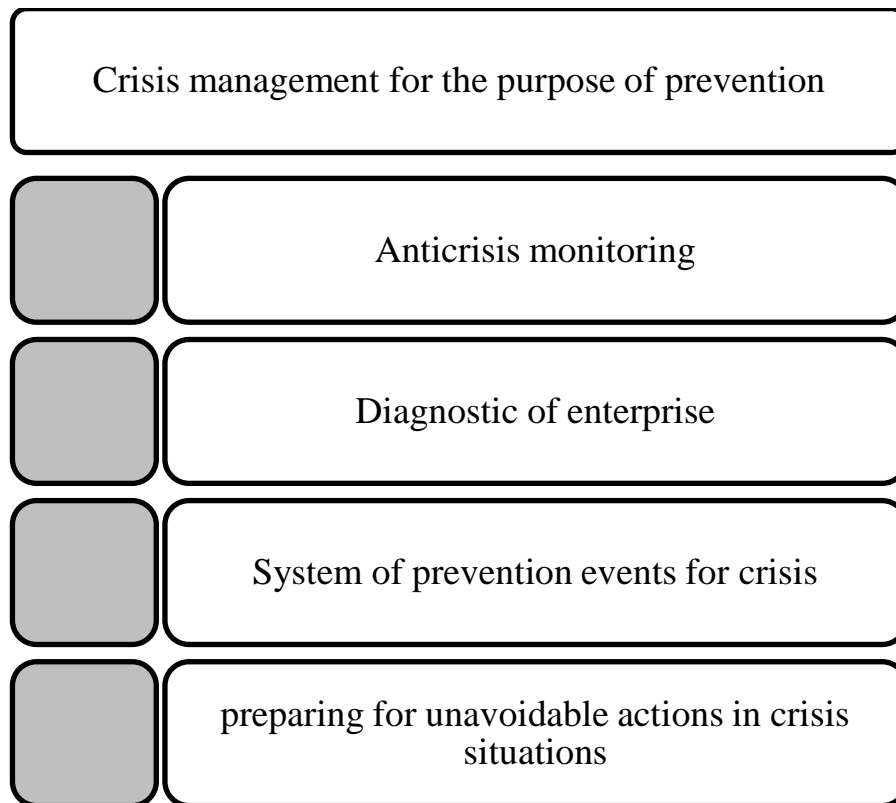


Fig. 1.2 Crisis management for prevention purposes

Crisis management in a crisis begins at the stage of approaching the insolvency of the enterprise, ie, crisis management is not in the diagnosis of crises and in the exit of the enterprise from the crisis with minimal losses. The key here is the onset or approach of insolvency. It is this situation that should be the object of crisis management.

Crisis management in crisis provides the following actions (Fig. 1.3):

- Immediate response to a crisis - identify the causes of a crisis.
- Creation of an anti-crisis team whose task is to bring the enterprise out of crisis with minimal losses.
- Mitigate and eliminate the effects of the crisis in the areas of finance, production, marketing, human resources management.

- Carrying out stabilization measures (restructuring, reorganization) and preventing the liquidation of the enterprise.

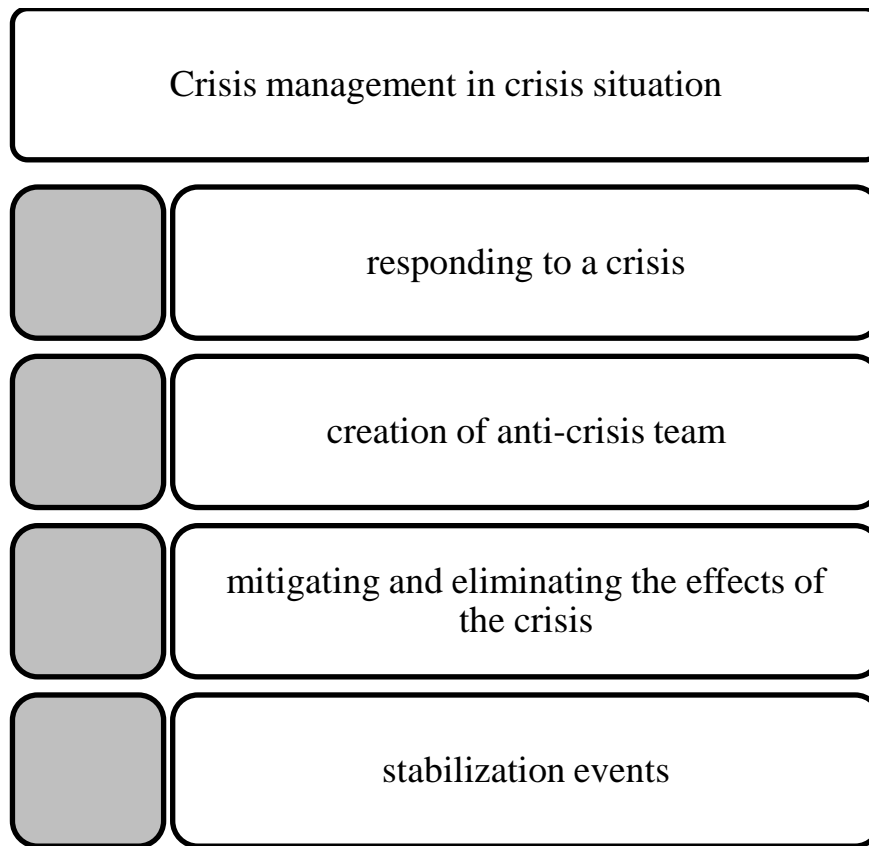


Fig. 1.3 Crisis management in a crisis

The development of anti-crisis policy at enterprises requires understanding the nature of the origin of crisis phenomena. Thus, the analysis of scientific literature makes it possible to identify a number of theories explaining the causes of economic cycles and crises. In our opinion, the most complete is the list of theories of cycles and crises highlighted by P. Samuelson in the book "Economics":

- monetary theory, which explains the cycle of bank credit expansion (Houtry, etc.);
- theory of innovations that explains the cycle of using important innovations in production (Schumpeter, Hansen);

- psychological theory, which considers the cycle as a result of waves of pessimistic and optimistic moods that cover the population (Pigu, Bejgoth, etc.);
- underutilization theory, which sees the cause of a cycle in too much of the income that goes to rich and thrifty people, compared to what can be invested (Hobson, Fosters, Ketchings, etc.);
- the theory of over-investment, whose supporters think that the cause of crises is over-investment (Hayek, Mises, etc.);
- theory of sunspots - weather - harvest (Jevons, Moore).

We can summarize that the approaches to determining the nature of crisis phenomena have changed over time depending on the change in the socio-economic situation itself.

Analyzing the development of the Ukrainian economy, we see that instability and crisis are characteristic phenomena for our country. The global financial and economic crisis, political collapse, imperfection of the legislation and insufficient level of state regulatory policy have a strong influence on the activity of domestic enterprises. In such circumstances, the management of enterprises should take into account the high level of influence of environmental factors, and therefore management must be to a certain extent anti-crisis.

The analysis of the experience of domestic enterprises makes it possible to conclude that crises most often occur in two phases, when after a sharp deterioration of the situation comes a period of gradual stabilization (adaptation). Practice has also shown that first-stage companies are at risk of becoming bankrupt. That is why the main tasks of crisis management are to prevent or mitigate the shock state, which is characterized by a lack of planning, inefficient management, interpersonal and intergroup breaks, chaos in the organizational structure. It is also necessary to strive to shorten the first phase period, which is characterized by short-term planning and authoritarian leadership style, to accelerate the process of adaptation and stabilization of the situation, ie return to

long-term planning, as well as joint coordination of work of enterprise units, flexible and creative solutions.

The study of domestic scientific works on the selected issues allows to distinguish a number of features of enterprise management in crisis conditions:

- crises can be anticipated, expected and triggered;
- crises can be accelerated, anticipated, eliminated to a certain extent;
- crisis situations need to be prepared;
- the effects of the crisis can be mitigated by responding promptly to their occurrence;
- crisis management requires specific approaches, specialist knowledge, experience and art;
- crisis processes can be managed to a certain extent;
- crisis management processes can accelerate these processes and minimize their consequences.

The level of efficiency of enterprise management in a crisis period depends to a large extent on such factors as the level of enterprise readiness for crisis, the degree of ownership of information about possible changes in the environment, conducting premature preventive measures, prompt response of the enterprise to changes in the environment, etc.

It should also be noted that anti-crisis management of enterprise activity, unlike current management, has certain features, which include flexibility and adaptability of management (most often characteristic of matrix management systems), tendency to strengthen informal management, motivation of staff to enthusiasm, patience and confidence. , “Diversification” of management and finding the best solutions for managing in difficult situations, situational decision-making, etc.

In modern management there are six functions of crisis management: pre-crisis management, crisis management, crisis management, stabilization of fragile situations (controllability), minimization of losses and missed opportunities,

timely decision-making. We can add that individually each of these management functions has its own peculiarities and purpose, but in their totality they characterize the crisis management as a whole.

It should also be noted that crisis management has its own specificity in processes and technologies. Thus, most of the authors highlight mobility and dynamism in resource use, change, implementation of innovative programs, implementation of program-targeted approaches in technologies of development and implementation of management decisions, increased sensitivity to the time factor in management processes, increasing attention to the previous and subsequent ones. evaluations of management decisions and choice of behavior and activity alternatives, use of anti-crisis criterion of quality of decisions during their development and implementation, etc.

The control mechanism that characterizes the means of influence also has its own characteristics. It is not always the usual means of influence that gives the necessary effect in a pre-crisis or crisis situation. In the crisis management mechanism, priorities should be given to staff motivation, resource savings, error prevention, caution, attitudes towards optimism, confidence and socio-psychological stability of activity, initiative in solving problems and finding the best options for development, deep analysis of situations, professionalism, etc.

The analysis of the basic functions and features of managing the activity of the enterprise in a crisis period allows to distinguish different strategies of crisis management [88, p.64-67]::

- preventive measures for crisis prevention;
- counteracting crisis phenomena, slowing down their processes;
- stabilization of the situation through the use of reserves, additional resources on the basis of pre-designed crisis management measures;
- gradual exit from the crisis;
- eliminating the effects of the crisis.

According to many national authors, preventive measures should occupy a special place in the system of crisis management of the enterprise. Therefore, in order to prevent the onset of crises at enterprises, work in the following areas should be constantly carried out:

- systematic analysis of environmental conditions in order to track the symptoms of a crisis (eg aggravation of political or economic situation in the country, acceleration of inflation, etc.).
- the enterprise's readiness to respond to force majeure (for example, the ability to quickly change pricing policies or distribution channels)
- limiting economic losses in times of crisis (for example, changing the terms of purchases or deliveries of certain groups of goods).
- work with staff (for example, internal loyalty programs, conducting corporate trainings and activities aimed at enhancing team engagement and corporate culture in general).

One of the most important steps in decommissioning a company is the development and implementation of anti-crisis measures.

The list of measures to improve the situation is individual for each enterprise and depends on the business sector, product group, market conditions, regional infrastructure, enterprise management system, cost structure for production and management, technical and other features.

The specific content of management measures depends on the depth of the financial crisis. From these positions, crisis management can be:

- system of preventive measures aimed at preventing the financial crisis;
- system of constructive and effective measures aimed at removing the enterprise from the financial crisis.

The purpose and tools of anti-crisis financial management, depending on the real financial condition of the enterprise are shown in Fig. 1.4.

Consider the aspects of managing an enterprise in a crisis in terms of practical application [99, p.80-85]:.

1. In the process of production and economic activity of enterprises, anti-crisis in its essence must be properly managed by the organization with careful fulfillment of all necessary management functions, respectively, the author used the concept of "crisis management" - specially organized management of enterprises in crisis, aimed at its adequate assessment, diagnosis and development of ways out of it.

2. The crisis of an enterprise's activity should be regarded as a crisis of its management, since a crisis is a situation that management recognizes as threatening to the existence of the enterprise itself. The analysis of production and economic activity of enterprises showed that the management entity in most cases acts as the cause and source of crisis situations.

3. Improvement of enterprises should be used and expedient to be used outside bankruptcy cases without allowing them to be started. As the most rational option of comprehensive recovery should be considered the independent initiation of the management of unprofitable enterprises necessary changes, by initiating processes to avoid a crisis. In the process of managing an enterprise in times of crisis, it is of great importance to advance analysis, development, adoption and advance implementation of management decisions, rapid diagnostics of the activities of enterprises that are nearing the stage of loss or in it, as well as those who have reached a supercritical level of insolvency.

An analysis of the practical experience of domestic enterprises shows that one of the main tools used in companies in crisis conditions is the normalization of all cost items and tight control over compliance with the established standards. In order to reduce the costs of an enterprise in a crisis, staff should be motivated to reduce costs and reduce costs that are not related to the main activity of the enterprise. In the context of cost reductions at an enterprise, we can recommend the following procedures:

1. horizontal and vertical integration of procurement. Horizontal integration involves looking for procurement opportunities with other buyers [90, p.78-83].

Increasing the volume of purchases allows you to get volume discounts. Vertical integration involves partnering with suppliers of key raw material names (timely fulfillment of contractual obligations, financial transparency, etc.).

2. analysis of outsourcing of expensive processes. It is worth assessing what kind of work is profitable to do on your own, and what is cheaper to buy from third parties. For example, most businesses that have heating systems consumed by the utility sector pass them on to local authorities because maintenance and maintenance costs too much. Alternatively, they set up their own autonomous heating systems, which are significantly more economical than utilities.

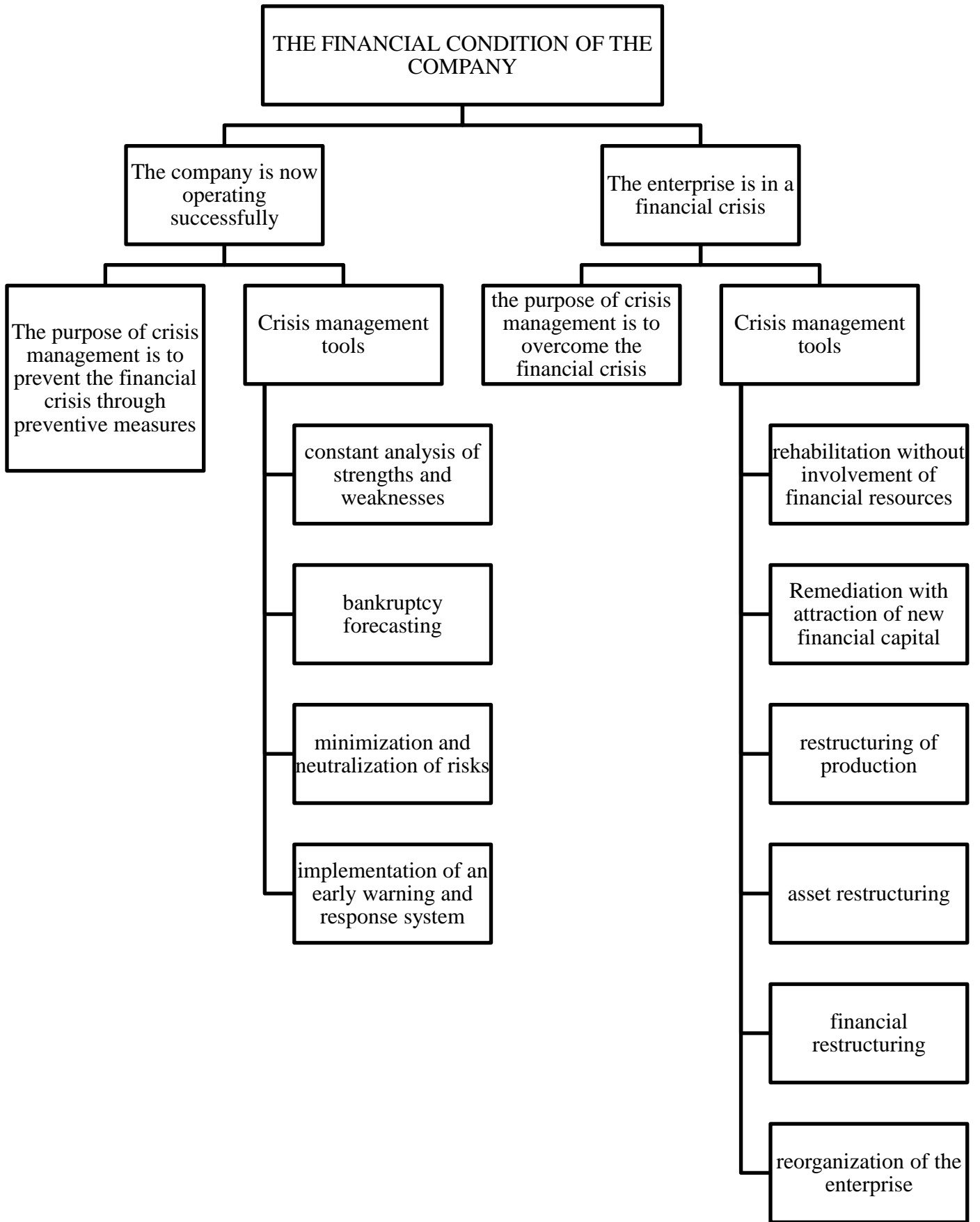


Fig. 1.4. The purpose and tools of crisis management

3. tight control over all types of costs.

4. optimization of technological processes. Optimization issues can be addressed by improving production technology and product quality. For example, it is possible to significantly reduce production waste by improving technology, constant control of staff and rigid production discipline.

5. reduction of labor costs. It is worth developing bonus schemes for company staff and motivating them to reduce costs. A scheme can be taken as a basis for which part of the saved costs will be paid to employees.

The organizational structure for eliminating unnecessary levels of governance should also be reviewed.

Thus, through concerted management decisions and proactive anti-crisis measures, businesses will be able to reduce and optimize their costs, reduce payables, increase the level of motivation and loyalty of staff and reduce the effects of the crisis on the enterprise as a whole.

Therefore, it should be noted that the scientific novelty of this work is the analysis of foreign and domestic literature on selected issues with the subsequent systematization of the features of enterprise management in crisis conditions, the separation of the main functions of crisis management, as well as the selection of a number of strategies for removing the enterprise from the crisis.

CHAPTER 2. STATUS ANALYSIS AND BANKRUPTCY ASSESSMENT AT LLC “MASTER-AVIA”

2.1 General characteristics of LLC “Master Avia”

LLC “Master Avia” - is the company that manages the International Airport “Kyiv in h. Sikorsky ».

Igor Sikorsky Kyiv International Airport (Zhuliany) (IATA: IEV, ICAO: UKKK) is one of the two passenger airports of the Ukrainian capital Kyiv, the other being Boryspil International Airport. It is owned by the municipality of Kyiv and located in the Zhuliany neighbourhood, about 7 kilometres (4.3 mi) southwest of the city centre.

Aside from facilitating regular passenger flights, Kyiv International Airport is also the main business aviation airport in Ukraine, and one of the busiest business aviation hubs in Europe.

Igor Sikorsky International Airport is the second largest aviation hub of Ukraine in terms of passenger traffic. In 2018, the airport served more than 2.8 million passengers. It is located in the middle of the city, in the business and political center of the capital of Ukraine. The good location of the airport made it the perfect base for more than 49 airlines, including REGULAR, LOW-COST carriers and private jets.

The airport provides comfortable passenger services to both regular carriers and general aviation, offering a diverse route network to Europe, North Africa and the Middle East.

There are three passenger terminals at Kyiv International Airport:

- Terminal "A". International flights service. Check In Desk 1-18.
- Terminal "B". Business terminal.
- Terminal "D". Domestic flight service. . Check In Desk 1-12.

Airport general information:

- Located in the business center of the capital, 7 km from the city center

- In terms of number of flights and passenger traffic, it has taken 2nd place in Ukraine
- Ranked in the top three airports in the category "International Airport for Small and Medium Sized Aircraft, Up to 4 Million Passengers" with the World Routes Awards 2013 Award.
- Certified staff.
- Has three terminals with a total area of 29,500 square meters.
- Separate Business Aviation Terminal - FBO Terminal B.
- The runway can accept B-737 and A-320 aircraft
- The platform accommodates 86 aircraft
- Parking for 700 parking spaces
- 14 restaurants and cafes with different cuisines
- 2 business halls
- Service Priority Line
- VIP service
- Airport Opening Date - May 24, 1924.

On the territory of international airport "Kyiv" there are the following ground handling companies:

- "Master-Avia";
- "Interavia";
- "Challenge";
- "Columbus".

The practice base is LLC "Master-Avia". This is the biggest ground handling company in the international airport "Kyiv". All the terminals, equipment and personnel, including different ground handling services and aviation security services, are owned by this company.

LLC "Master-Avia" is the main handler on passengers for all the airlines in the international airport "Kyiv" and main handler on apron for the following airlines as:

- Belavia
- Wizzair
- Jonika
- Pegasus
- Ernest
- Motorsich
- Bravo
- Lot
- Buta Airways
- Yanair

And the main handler on apron and pax for such international Private aircompanies as:

- Click
- AVS
- Jetex
- Skyhandling
- Aerostar
- Hyperion
- Shannon
- Wind Rose
- FCG, and so on.

Master-Avia also provides full ground handling of departing and arriving flights to Kyiv (Zhulhany) airport.

The company's mission is to create a positive image of the country, to promote its socio-economic development and prosperity, by creating a reliable and modern air gate of Ukraine, and raising the standards of the aviation industry of the country as a whole.

Vision of the company - is a team of like-minded professionals, where every employee of the company is a reliable partner for our shareholders, partners,

contractors, and a caring and hospitable host for all visitors and passengers of the airport.

Master Avia is:

- Qualified Certified Specialists
- More than 50 pieces of advanced equipment and machinery from top international manufacturers
- Compliance with and compliance with all international requirements and procedures
- Availability of necessary permits and certificates from national and international authorities for all activities
- Use of SITA automated system.
- The company is equipped with everything you need and provides the highest level of service.
- Anti-aircraft aircraft treatment. The company owns various types of anti-ice fluids to maximize the effective protection of aircraft surfaces and ensure flight safety in all weather conditions
- Preparation and maintenance of flights for departure in accordance with all requirements of airlines with the help of modern global automated system SITA, which provides, supports modern methods of developing electronic tickets of all reservation systems, working in IATA format, allows to make online check-in, check-in of passengers and their luggage to their final destination

Calculation of aircraft alignment. This service includes: maintenance of a database on operated aircraft, calculation of aircraft centering in an automated mode.

To date, the fleet operating on the platform of the airport has more than 60 units of specialized equipment. Kyiv Airport is ready for operation during the autumn-winter navigation.

According to the traffic flow by months (Fig. 2.1) we have the following tendency:

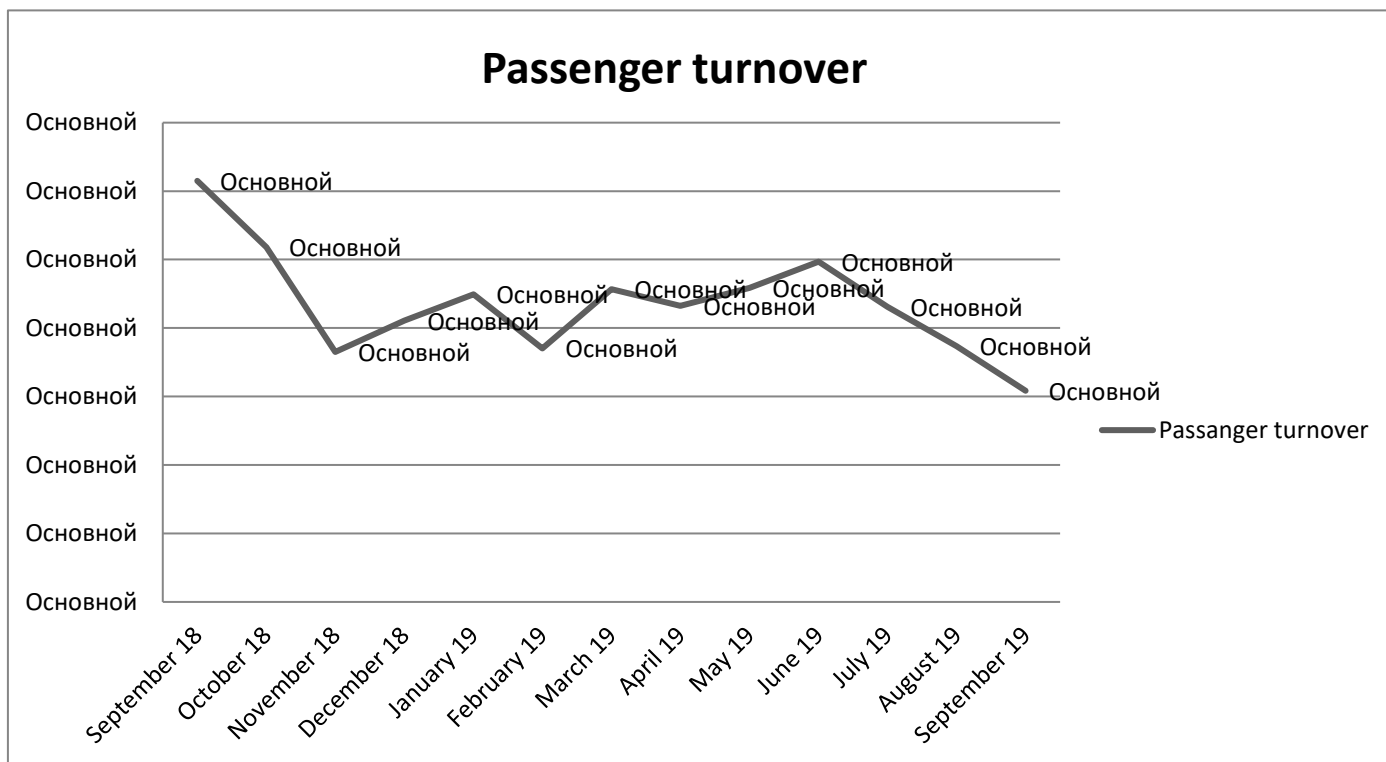
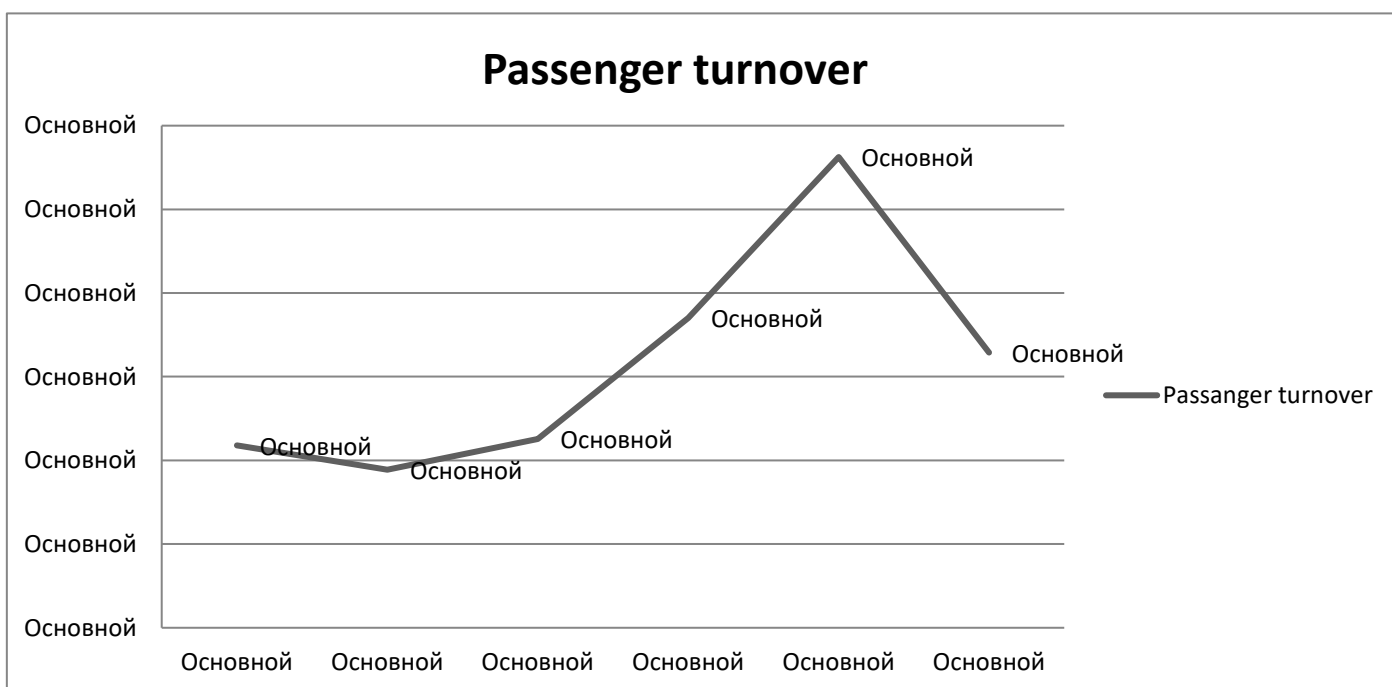


Fig. 2.1 Passenger traffic by months

According to passenger traffic by years (Fig. 2.2) we have the following



tendency:

Fig. 2.2 Passenger flow by years

Kyiv International Airport cooperates with more than 43 airlines operating flights to approximately 140 cities in 48 countries. About 2500 flights are made every month, and we serve almost 2 million passengers annually.

Kyiv International Airport is a permanent member of the International Airports Council of the European Region.

According to the Charter of the enterprise, Master Avia LLC performs the following functions:

- Provision of operation and functioning of the airfield, buildings, structures, engineering networks and other objects of airfield equipment, passenger and cargo terminals, as well as means of mechanization of specialized transport;
- Acceptance and departure of aircraft with the provision of air transportation of passengers, luggage and mail by the necessary means with obligatory observance of the established rules and norms of service;
- Maintenance of take-offs and landings of aircraft, their ground handling;
- Carrying out activities related to transportation of legal entities and / or natural persons to water, heat and electricity, other types of energy resources, as well as providing laboratory research services for heat and power grids;
- Buying and selling real estate and providing real estate and real estate related services.

Master-Avia LLC is a multidisciplinary enterprise providing services to aviation companies, passengers and other clients in aviation and non-aviation spheres of activity, ensuring regularity and safety of flights, one of the factors of development of the transport network of the capital of Ukraine.

The organizational structure of Master-Avia LLC is linear and functional.

The company is headed by a general manager, who is subordinated to the deputy directors, namely:

- Deputy Director-General for Aviation Security - Chief of Aviation Security Service;

- Deputy Director General for Airport Complex Development and Certification;
- Deputy General Director - Head of the Emergency and Fire Support and Mobilization Service and others.

The Deputy Directors-General are subject to the departments and services concerned.

The complete organizational structure of Master-Avia LLC is presented in Figure 2.3.

In order to fulfill the main tasks of the strategic plan for the development of new infrastructure elements of the airport and reconstruction of the existing ones, an investment program has been developed, which is based on the concept of technical development for Master Avia LLC, takes into account the requirements of International Standards of Service Quality and maintains modern, safe, efficient, economical and environmentally acceptable airport maintenance facilities.

The investment program is focused on the development and optimization of capacities for the main business on the basis of own needs and in accordance with market requirements:

- Ensuring the operation of aerodrome facilities (runway, stubble track, aircraft parking; facilities and networks that provide the operation of aerodrome facilities);
- Timely and qualitative carrying out of all types of repair work of the elements of the aerodrome in order to maintain it in a constant operational - technical condition necessary for ensuring the safety and regularity of flights;
- Ensuring flight safety, including adherence to airside and in-site regime of the controlled area and restricted airport area.

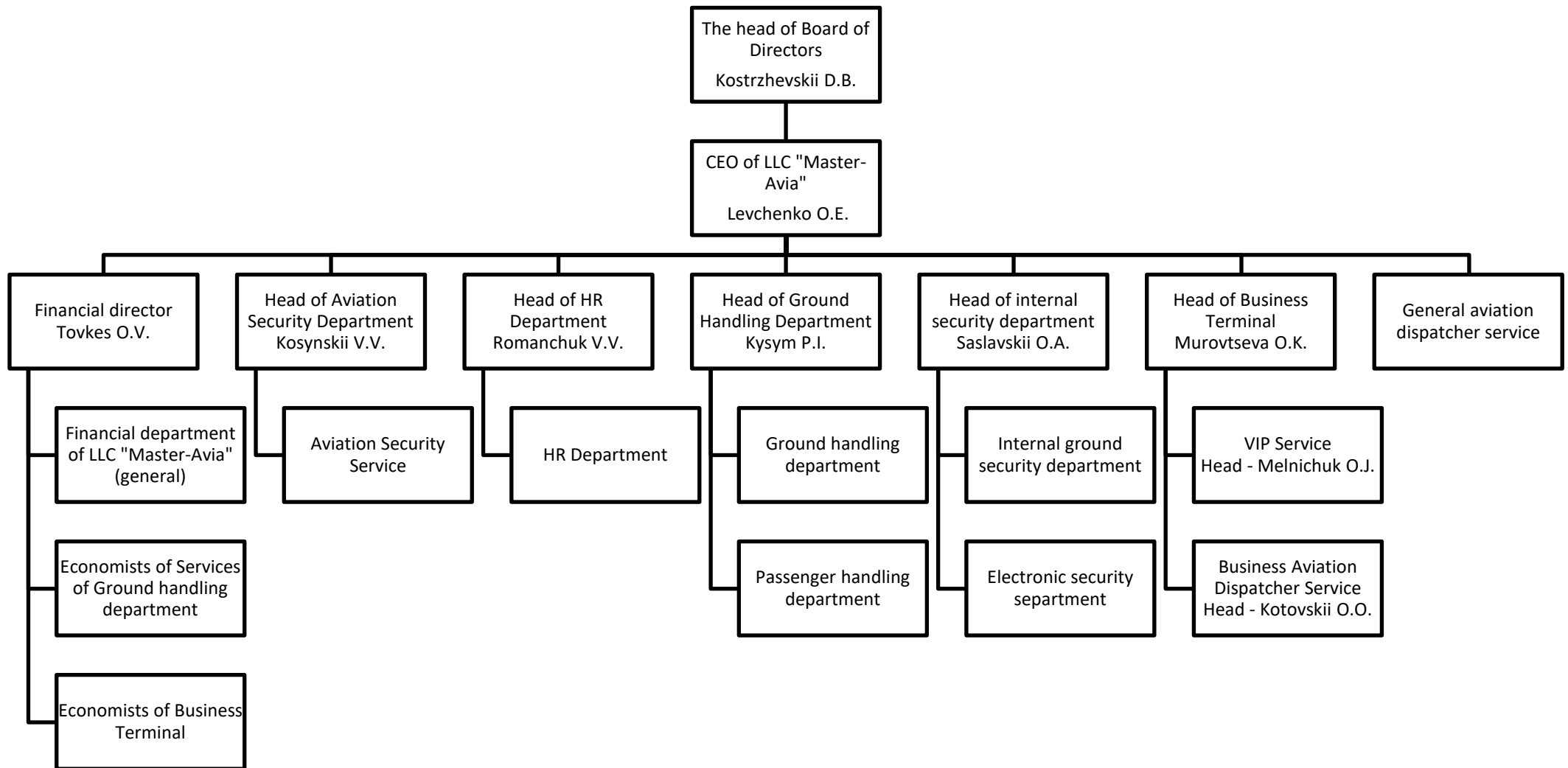


Fig. 2.3. Organizational structure of the company

2.2 Financial-economic analysis of LLC “Master-Avia”

The study of the global environment, the assessment of social, technological, economic and political factors that can have a significant impact on the business environment, has been called PEST analysis in management literature.

To carry out this type of analysis, the basic political, economic, social and technological factors are needed.

Political factors:

- The focus of state policy of Ukraine on the development of the innovative potential of the military-industrial complex;
- the almost complete absence of government regulation in the commercial aviation market;
- high fees and taxes on land rental;
- low number of government organizations in the industry;
- legal security of the business;
- political relations of the country.

Economic factors:

- a high degree of globalization and openness of the economy;
- average income of the population;
- Exchange Rates;
- Improving the investment climate in the domestic aircraft industry;
- economic growth rates.

Social factors:

- the government of Ukraine pursuing a course to increase the prestige of engineering specialties;
- the high average age of qualified specialists employed in aviation instrument-making enterprises;
- sex and age structure of the population and life expectancy;

- the level of population migration;

Technological factors:

- the readiness of aviation service enterprises in Ukraine to switch to a new technological structure;

- Extremely fast change of generations of aircraft.

Based on the PEST analysis, we can compile a profile of the external environment of LLC Master Avia (Table 2.1).

Table 2.1

PEST analysis

| Environmental factors | Importance for the industry | Organization Impact | Direction of influence | Integral Evaluation |
|--|-----------------------------|---------------------|------------------------|---------------------|
| 1 | 2 | 3 | 4 | 5 |
| Political factors | | | | |
| Legislation governing the industry | 3 | 3 | 3 | 27 |
| Taxes and fees | 2 | 3 | 2 | 12 |
| Sustainability of Political Power | 3 | 2 | 1 | 6 |
| The presence of government organizations in the industry | 3 | 3 | 1 | 9 |
| Legal security of business | 3 | 2 | 2 | 12 |
| Economic factors | | | | |
| Major Currency | 3 | 3 | 1 | 9 |

| | | | | |
|--|---|---|---|----|
| Rates | | | | |
| Population income level | 3 | 3 | 2 | 18 |
| 1 | 2 | 3 | 4 | 5 |
| Economic growth rate | 3 | 2 | 1 | 6 |
| The degree of globalization and openness of the economy | 3 | 3 | 1 | 9 |
| Social factors | | | | |
| Sex and age structure and life expectancy | 1 | 1 | 1 | 1 |
| Migration rate | 3 | 2 | 1 | 6 |
| Lifestyle and behavior habits | 1 | 2 | 2 | 4 |
| Technological factors | | | | |
| The degree of implementation and use of technology | 2 | 2 | 2 | 8 |
| Costs of introducing development and technology upgrades | 2 | 3 | 2 | 12 |

Let's do the assessment of use of labor resources, namely, we will calculate the indicators of movement and turnover of personnel at LLC "Master-Avia". Table 2.2 presents data on the movement of personnel of LLC "Master-Avia" for 2017-2018 years.

Table 2.2

Movement of personnel of LLC "Master-Avia" for 2017-2019

| The indicator | 2017 | 2018 | 2019 |
|--|------|------|------|
| Number of accepted employees, people. | 57 | 62 | 23 |
| The number of retired employees, people. | 25 | 27 | 125 |
| Number of retired employees at their will, person. | 15 | 18 | 59 |
| Number of employees dismissed for violation of labor discipline, people. | 2 | 4 | 7 |
| The number of employees worked all year, people. | 984 | 1012 | 887 |
| Average number of personnel, people. | 1220 | 1270 | 1168 |

1. The turnover rate for admission:

$$T_r 2017 = \frac{57}{1220} * 100\% = 4.67\% \quad (2.1)$$

$$T_r 2018 = \frac{62}{1270} * 100\% = 4.87\% \quad (2.2)$$

$$T_r 2019 = \frac{23}{1168} * 100\% = 1,97\% \quad (2.3)$$

2. Personnel retirement coefficient:

$$C_r 2017 = \frac{25}{1220} * 100\% = 2.05\% \quad (2.4)$$

$$C_r 2018 = \frac{27}{1270} * 100\% = 2.13\% \quad (2.5)$$

$$C_r 2019 = \frac{125}{1168} * 100\% = 10,7\% \quad (2.6)$$

3. Personnel flow coefficient:

$$C_f 2017 = \frac{15+2}{1220} * 100\% = 1.39\% \quad (2.7)$$

$$C_f 2018 = \frac{18+4}{1270} * 100\% = 1.73\% \quad (2.8)$$

$$C_f 2019 = \frac{59+7}{1168} * 100\% = 5,7\% \quad (2.9)$$

4. Coefitient of personnel constancy:

$$C_c 2017 = \frac{984}{1220} * 100\% = 80.65\% \quad (2.10)$$

$$C_c 2018 = \frac{1012}{1270} * 100\% = 79.68\% \quad (2.11)$$

$$C_c 2019 = \frac{887}{1168} * 100\% = 75,9\% \quad (2.12)$$

Based on the data in Table 1.2 we will analyze the use of working time. Table 2.3 shows data on the use of working time of LLC “Master-Avia” for 2018-2019 years.

Table 2.3

Use of working time of LLC “Master-Avia” for 2018-2019

| Indicator | 2018 | 2019 | Deviation |
|--|----------|----------|-----------|
| 1. Average number of personnel, people. | 1270 | 1168 | -102 |
| 2. Worked days by one employee for a year, days. | 192 | 187 | -5 |
| 3. Average working time, h. | 12 | 12 | 0 |
| 4. Hours worked by one employee per year, hour. | 2304 | 2244 | -60 |
| 5. Foundation of working time, people. - hour. | 2.926mln | 2.620mln | -304000 |

Determine the influence of factors on the change of working time fund in the period from 2018 to 2019.

WTF = -304000 people-hour. Including due to:

1) $WTF_{AD} = 102 * 192 * 12 = 235008$ people – hour

2) $WTF_D = 1270 * 12 * 12 = 182880$ people – hour

3) $WTF_H = 1270 * 187 * 0 = 0$ people – hour

Consequently, LLC “Master-Avia” uses its labor resources in full.

The general evaluation of “Master-Avia” financial status is achieved on the basis of such effective indicators as profit and profitability. The amount of profit, the level of profitability depends on the production, supply, marketing and commercial activities of the enterprise, in other words, these indicators characterize all aspects of management.

In accordance with the approved form of the profit and loss statement, the profit of the enterprise includes:

- profit (loss) from the sale of goods, products, works, services;
- profit (loss) from operating income and expenses;
- profit (loss) from non-operating income and expenses.

The analysis of profit by composition and dynamics is shown in table 2.4, where the Dynamics of profit for the period 2018-2019 years is presented.

For the period 2018-2019 there is a total decrease in all kinds of profits for the LLC Master Avia.

Net profit is that part of the profit that remains at the disposal of the enterprise after paying the income tax.

Table 2.4

Dynamics of profit for the period 2017-2019

| Indicator | 2017 | | 2018 | | 2019 | |
|---|---------------|--------------|---------------|--------------|---------------|--------------|
| | Thsnd, UAH | Weight, % | Thsnd, UAH | Weight, % | Thsnd, UAH | Weight, % |
| Profit (loss) | 227150 | 100% | 236170 | 100% | 147150 | 100% |
| Profit (loss) from sale | 153140 | 68,42% | 174023 | 73,7% | 98300 | 66,8% |
| Profit from operating income and expenses | 48560 | 21,38% | 56756 | 24.03% | 46852 | 31,8% |

| | | | | | | |
|---|------|------|------|-------|------|-------|
| Profit from non-operating income and expenses | 3840 | 1,7% | 4391 | 1.86% | 1998 | 1,36% |
|---|------|------|------|-------|------|-------|

The dynamics and directions of net profit distribution of " Master-Avia" LLC for 2018-2019 are presented in table 2.5.

The net profit in 2018 amounted to 236170 thousand UAH, in 2019 – 147510 thousand UAH. After tax, the profit is distributed as follows: 5% - reserve fund; 40% - to replenish their working capital; the rest of the amount is distributed between the accumulation fund and the consumption fund. Funds of these funds have a designated purpose and are spent in accordance with the approved estimates.

Table 2.5

Net profit distribution of " Master-Avia " LLC for 2017-2019

| Indicator | 2017 | 2018 | 2019 |
|-----------------------------------|--------|--------|--------|
| Net profit, thsnd UAH | 227150 | 236170 | 147150 |
| Reserve Fund, thsnd UAH | 13120 | 14403 | 8560 |
| Social Fund Foundation, thsnd UAH | 17500 | 18048 | 11250 |
| Fund of accumulation, thsnd UAH | 17520 | 18713 | 13420 |
| Consumption Fund, thsnd UAH | 20180 | 22181 | 14550 |

The funds of the consumption fund are directed to the implementation of measures for social development (in addition to capital investments), material incentives for the collective of the enterprise. In the period from 2018-2019, a decrease in the amount of deductions to the consumption fund is observed, which is primarily due to the decreasing of net profit.

The accumulation fund is used mainly to finance the costs of lowering production.

Indicators of profitability are more complete than profit, characterizing the final results of management, because their magnitude shows the ratio of the effect of cash resources used. They are used to assess the enterprise and as an instrument of investment policy and pricing.

Cost-effectiveness of products (return on costs) (R) is calculated by the ratio of profit (P) to the amount of costs of sold production (C). It shows how much the company has profits from each hryvnia spent on production and sales of products. It can be calculated in whole on the enterprise, its separate divisions and types of products:

$$2018: R = (174023/236170) * 100\% = 73.69\% \quad (2.13)$$

$$2019: R = (98300/147150) * 100\% = 66.8\% \quad (2.14)$$

Analyzing the estimated data, we can conclude that the decrease in the profitability of industrial activity in 2019 - by 6.89%, which was the result of a decrease in the level of sales. Profitability of capital for the analyzed period also has a negative dynamics, which is due to a decrease in volumes of production and sales.

For considering the main strong sides and weaknesses and also opportunities and threats of the company, we use the SWOT-analysis (Table 2.6).

Thus, the considered method of SWOT analysis determines the overall strategy of LLC " Master-Avia " as a whole and allows you to study the existing opportunities on the market, as well as weigh your capabilities.

Matrix of SWOT analysis is represented in table 2.7.

The BCG Matrix is a tool for strategic portfolio analysis of the situation in the market of goods, companies and units based on their market growth and market share. Such an instrument as the BCG matrix is now widely used in management, marketing, and other spheres of the economy (and not only).

Being a simple but effective tool, it allows you to identify the most promising and, on the contrary, the most "weak" products or divisions of the enterprise. Having built the BKG matrix, the manager or marketer gets a visual

Figure, on the basis of which he can decide on what goods (divisions, assortment groups) should be developed and protected, and which should be eliminated.

Graphically, the BCG matrix represents two axes and four square sectors enclosed between them. Let us consider the step-by-step construction of the BCG matrix:

1. Collection of input data. The first step is to make a list of those goods, units or companies that will be analyzed using the BCG matrix.

Then for them it is necessary to collect data on sales volumes and / or profits for a certain period (say, for the past year). In addition, you will need similar data on sales of a key competitor (or a number of major competitors). For convenience, it is desirable to present the data in the form of a table 2.8

Table 2.6

SWOT-analysis of LLC " Master-Avia "

| Strengths | Weaknesses |
|---|--|
| <ol style="list-style-type: none"> 1. Highly qualified technical personnel 2. A sufficiently high level of training of staff 3. High level of material and technical basis 4. Cooperation with enterprises and organizations 5. Availability of resources for the needs of the ground handling services 6. Monopolism in Kyiv International Airport | <ol style="list-style-type: none"> 1. Marketing strategy does not pay enough attention to attracting customers 2. The constant aging of the equipment base 3. Absence of joint training programs with foreign companies 4. Difficulties with the organization of staff development |

| Opportunities | Threats |
|---|--|
| 1. Demand of specialists with integrated knowledge 2. Partnership with large aviation companies 3. Use of new technologies for ground and passenger handling services | 1. Accessibility of another companies for ground handling 2. High competition outside the Airport “Kyiv” 3. Increase the cost of aviation services |

Table 2.7

Matrix of SWOT analysis

| | Strengths | Weaknesses |
|---------------|--|---|
| Opportunities | 1. Outsourcing own personnel and equipment for other ground handling companies and airports. 2. Using the positive image of the company in order to attract big aviation companies. | 1. Redirect the marketing strategy in order to attract big aviation companies 2. Renovate the equipment base in time. |
| Threats | 1. To locate “Master-Avia” department not only in International Airport “Kyiv”. | 1. To develop marketing strategy in order to have customers of other ground handling companies of International Airport “Kyiv”. |

Table 2.8

Volume of sales in International Airport “Kyiv”

| Company | Profit, thsnd UAH | | Volume of sales growth, % | Share among competitors, % |
|-------------|-------------------|--------|---------------------------|----------------------------|
| | 2017 | 2018 | | |
| Master Avia | 178815 | 236170 | 24.29% | 84.14% |
| Interavia | 26168 | 28195 | 7.19% | 10.05% |
| Challenge | 8722 | 10203 | 14.52% | 3.64% |
| Columbus | 4361 | 6117 | 28.71% | 2.18% |

2. Calculation of the growth rate of the market for the year. At this stage, you need to calculate the annual increase in sales (revenue) or profit. Alternatively, you can calculate both the increase in revenue, and the increase in profit for the year, and then calculate the average value. (Table 2.8)

3. Calculation of the relative market share. Calculating the growth rate of the market for the products (divisions) analyzed, it is necessary for them to calculate the relative market share among competitors.

4. Construction of the BCG matrix. In the fourth final stage, the matrix of the Boston Consulting Group is built. From the origin of the coordinates we carry out two axes: vertical (market growth rate) and horizontal (relative market share). (Fig. 2.4).

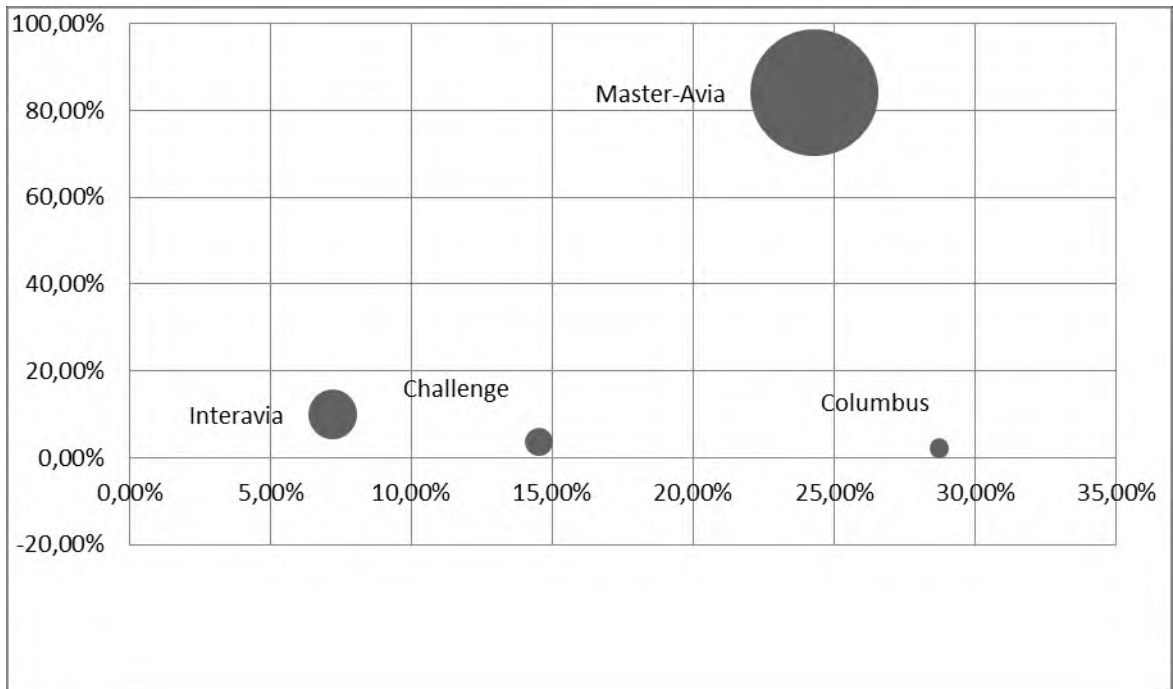


Fig. 2.4. BCG matrix on International Airport “Kyiv” ground handling companies

According to the BCG matrix, LLC “Master-Avia” is a “Star” on the internal market of International Airport “Kyiv”. Stars are units with a high market share in a fast-growing industry. They are graduated question marks with a market- or niche-leading trajectory, for example: amongst market share front-runners in a high-growth sector, and/or having a monopolistic or increasingly dominant unique selling proposition with burgeoning/fortuitous proposition drive(s) from: novelty, fashion/promotion, customer loyalty, goodwill and/or gearing etc. The hope is that stars become next cash cows.

Stars require high funding to fight competitors and maintain their growth rate. When industry growth slows, if they remain a niche leader or are amongst the market leaders, stars become cash cows; otherwise, they become dogs due to low relative market share.

2.3 Bankruptcy Probability Analysis of LLC “Master Avia”

In the activities of any organization, one of the most important tasks is to predict stability in the long run. To understand the future development of the company, a regular assessment of the overall financial stability of the enterprise should be carried out regularly, which demonstrates the ratio of own and borrowed funds. Naturally, the amount of equity should be higher than borrowed funds, that is, assets should exceed liabilities. Otherwise, the financial stability of the company becomes at risk, which portends the risk of bankruptcy.

Bankruptcy is an unsatisfactory balance sheet structure of an enterprise, insolvency and inability of an enterprise to satisfy creditors' claims for monetary obligations in the amount of at least 500 minimum wages for 3 months.

When this situation happens, the bankruptcy process begins, which entails the forced sale of the company's property at auction to pay off its debts and the subsequent liquidation of the company as a legal entity.

To avoid this, a predictive assessment of the financial stability of the enterprise, that is, an analysis of the probability of bankruptcy, should be carried out regularly.

Table 2.9 presents the dynamics of changes in key performance indicators of the company from January 2019 to December 2019.

Having built the trends of these indicators (Fig. 2.5, Fig. 2.6), we can see that in 2019, without exception, all the indicators that experienced growth before that decreased.

Table 2.9

Key performance indicators of the company, thousand UAH

| Indicator | 01.19 | 02.19 | 03.19 | 04.19 | 05.19 | 06.19 | 07.19 | 08.19 | 09.19 | 10.19 | 11.19 | 12.19 |
|----------------------|--------|--------|--------|--------|--------|--------|--------|--------|-------|-------|-------|-------|
| Revenue | 8422 | 8980 | 8400 | 7325 | 7020 | 5780 | 5120 | 4860 | 3120 | 3150 | 2920 | 2870 |
| Net profit | 6968 | 7430 | 6950 | 6061 | 5808 | 4782 | 4236 | 4021 | 2581 | 2606 | 2416 | 2375 |
| Assets | 245138 | 261380 | 244498 | 213208 | 204330 | 168238 | 149027 | 141460 | 90814 | 91687 | 84992 | 83537 |
| Capital and reserves | 221366 | 236033 | 220788 | 192532 | 184515 | 151923 | 134575 | 127741 | 82007 | 82795 | 76750 | 75436 |

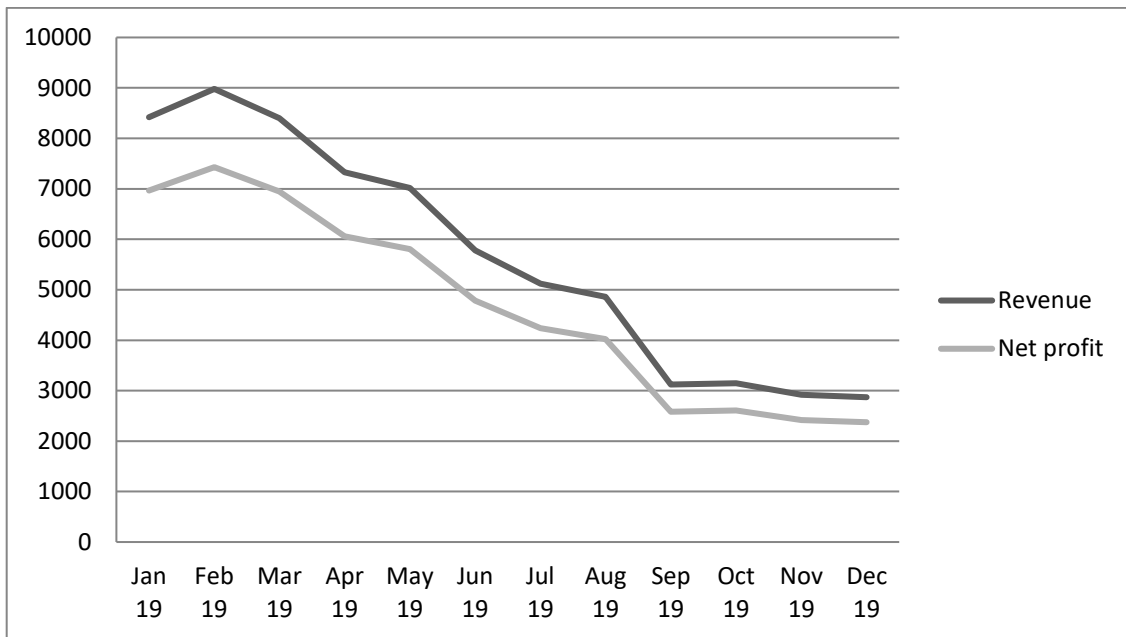


Fig. 2.5. Monthly revenue and net profit graph for 2019

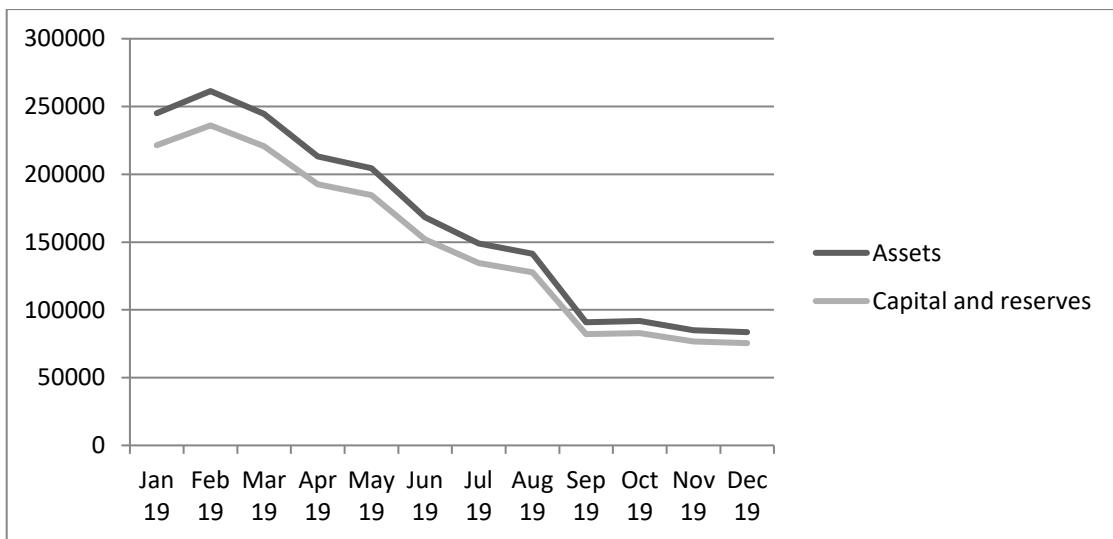


Fig. 2.6. Asset and capital indicators chart for 2019 by months

Build a point forecast (table. 2.7) for 1 month using the average absolute increase according to the formula:

$$\pi = \frac{y_n - y_1}{n-1} \quad (2.15)$$

Table 2.7

The average absolute increase, thousand UAH

| | |
|----------------------|--------------|
| Revenue | -504,7272727 |
| Net profit | -417,5972671 |
| Assets | -14691,04869 |
| Capital and reserves | -13266,38064 |

We calculate the forecast indicators for 1 month in advance. The calculation results are shown in table 2.8.

Table 2.8

Forecast indicators, thousand UAH

| Indicator | 07.19 | 08.19 | 09.19 | 10.19 | 11.19 | 12.19 | 01.20 |
|----------------------|--------|--------|-------|-------|-----------|-------|-------|
| Revenue | 5120 | 4860 | 3120 | 3150 | 2920 | 2870 | 2365 |
| Net profit | 4236 | 4021 | 2581 | 2606 | 2416 | 2375 | 1957 |
| Assets | 149027 | 141460 | 90814 | 91687 | 8499 2 | 83537 | 68846 |
| Capital and reserves | 134575 | 127741 | 82007 | 82795 | 7675 0 | 75436 | 62169 |

Now we use the methods of analytical alignment of the series. We will use MS Excel as a tool. We will build a forecast for 6 months of 2020, if you do not take any actions of crisis management. The forecasting results are shown in table 2.9.

Having built the trends of these indicators (Fig. 2.7, Fig. 2.8), we can see that without any anti-crisis solutions, in 2020 all indicators will drop without exception, and in June all indicators of the enterprise will go negative.

Table 2.9

Forecast of indicators in the first half of 2020, thousand UAH

| Indicator | 01.20 | 02.20 | 03.20 | 04.20 | 05.20 | 06.20 |
|----------------------|-------|-------|-------|-------|-------|-------|
| Revenue | 2365 | 1861 | 1356 | 851 | 346 | -158 |
| Net profit | 1957 | 1539 | 1122 | 704 | 287 | -131 |
| Assets | 68846 | 54155 | 39464 | 24773 | 10082 | -4609 |
| Capital and reserves | 62169 | 48903 | 35637 | 22370 | 9104 | -4162 |

Having built the trends of these indicators (Fig. 3.5, Fig. 3.6), we can see that without any anti-crisis solutions, in 2020 all indicators will drop without exception, and in June all indicators of the enterprise will go negative.

In world practice, a number of methods for forecasting bankruptcy have been developed that are based on the use of formalized and informal criteria. These methods are calculations of a comprehensive indicator of financial stability.

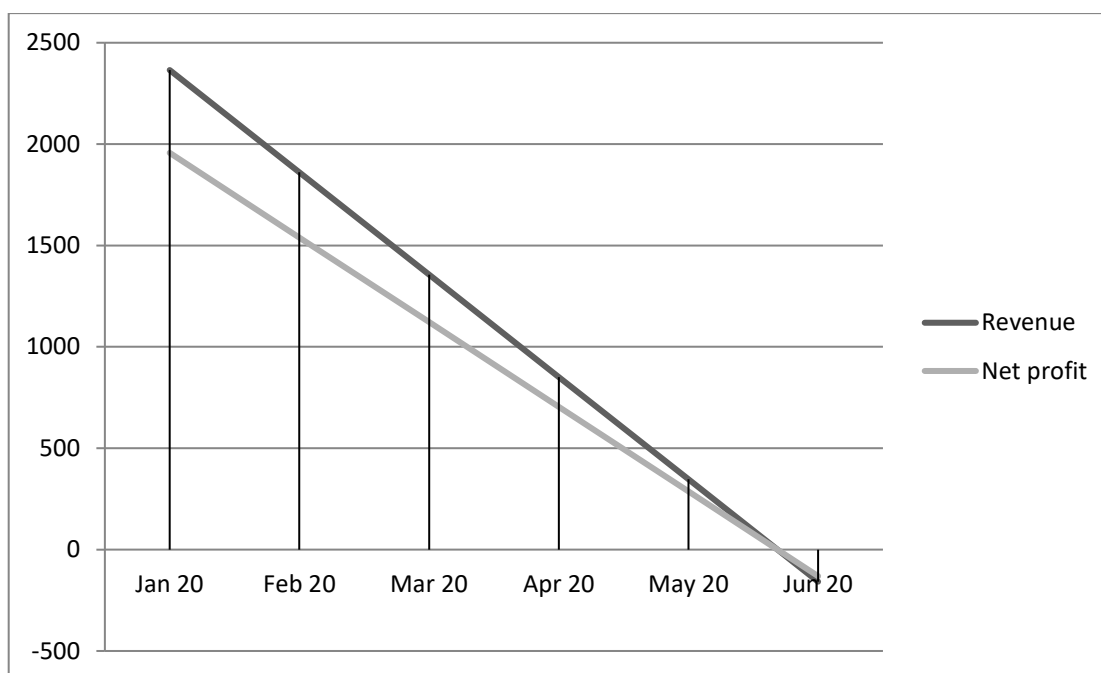


Fig. 2.7. Schedule forecast revenue and net profit for 2020 by month

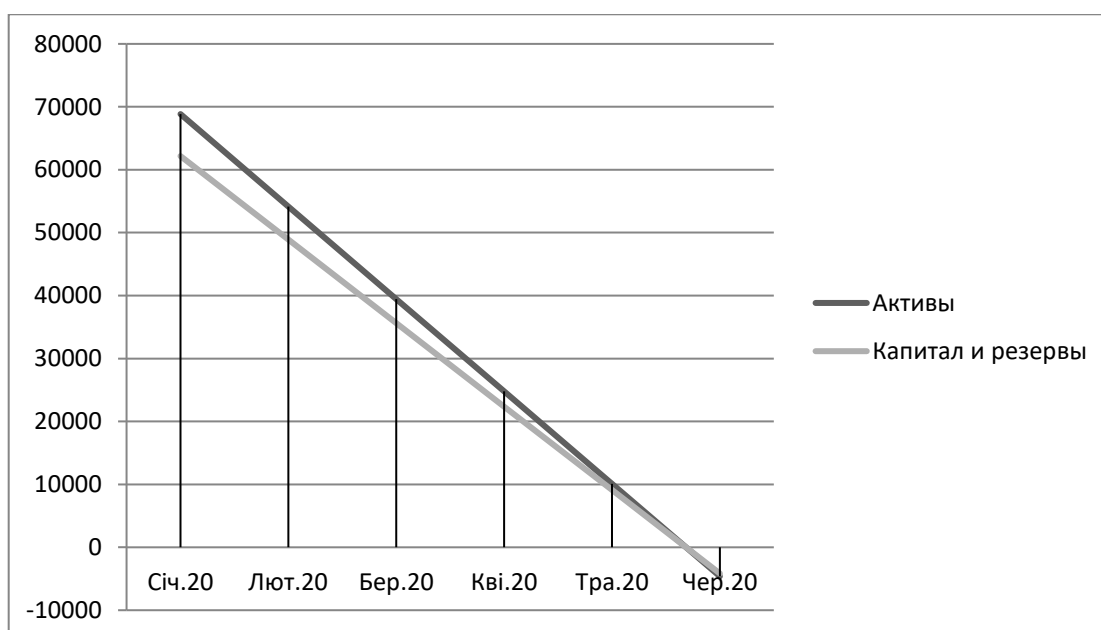


Fig. 2.8. Asset and Capital Indicator Forecast Chart 2020 for Months

In world practice, a number of methods for forecasting bankruptcy have been developed that are based on the use of formalized and informal criteria. These methods are calculations of a comprehensive indicator of financial stability.

In fact, these are special analytical coefficients for predicting bankruptcy in the form of a set of formulas developed by leading European and domestic economists. Among the most famous and popular methods are:

- 1) Models of step-by-step discriminatory analysis of Altman.
- 2) Fulmer model.
- 3) Springate model.
- 4) The Fox model.
- 5) Tuffler model.

For a qualitative, objective and complete analysis of the likelihood of bankruptcy, studies should be conducted using at least the three above-mentioned models.

To conduct the construction of various models, you need to use the balance sheet of the enterprise. All the necessary data and extracts from the balance sheet of the company for 2019 provided in table 2.10.

Table 2.10

Data for calculating the probability of bankruptcy

| Article | At the beginning of the reporting period, thousand UAH | At the end of the reporting period, thousand UAH |
|--------------------------|--|--|
| Tangible assets | 40 239 | 30 096 |
| Total non-current assets | 1 940 259 | 1 889 438 |
| Current assets | 112 765 | 88 871 |
| Total assets | 2 053 024 | 1 978 309 |
| Registered capital | 24 444 | 24 444 |
| Additional capital | 186 891 | 120 639 |
| Equity | 2 860 076 | 1 786 462 |
| Long-term liabilities | 54 500 | 26 562 |

| | | |
|--|-----------|-----------|
| Credit obligations | 31 420 | 192 110 |
| Current liabilities | 199 361 | 357 465 |
| Total liabilities | 2 053 024 | 1 978 309 |
| Net operating income | 236 170 | 178 815 |
| Financial result from operating activities | 85 262 | 61 649 |
| Other income | 6 284 | 4391 |
| Financial result before tax | 89 647 | 67967 |
| Net financial result | 73 620 | 56 234 |

Build the Altman model. For our calculations, we use a five-factor forecasting model:

$$Z5 = 1,2 * X1 + 1,4* X2 + 3,3* X3 + 0,6* X4 +1,0* X5 \quad (2.16)$$

Coefficients needed to build the model:

$$X1 = \frac{\text{net working capital}}{\text{the amount of assets}} \quad (2.17)$$

$$X2 = \frac{\text{retained earnings}}{\text{the amount of assets}} \quad (2.18)$$

$$X3 = \frac{\text{balance sheet profit}}{\text{the amount of assets}} \quad (2.19)$$

$$X4 = \frac{\text{authorized capital} + \text{additional capital}}{\text{Short-term liabilities}} \quad (2.20)$$

$$X5 = \frac{\text{revenues from sales}}{\text{the amount of assets}} \quad (2.21)$$

We calculate the reduced coefficients:

At the beginning of the reporting period:

$$X1=946\,379/2\,053\,024 = 0,46 \quad (2.22)$$

$$X2=0/2\,053\,024 = 0 \quad (2.23)$$

$$X3= 91546 / 2\,053\,024 = 0,045 \quad (2.24)$$

$$X4=211\,335 / 31\,420= 6,73 \quad (2.25)$$

$$X5=236\,170 / 2\,053\,024 = 0,12 \quad (2.26)$$

At the end of the reporting period:

$$X1= (-76\,414)/1\,978\,309 = (-0,04) \quad (2.27)$$

$$X2= 0/1\,978\,309 = 0 \quad (2.28)$$

$$X3= 66\,040 / 1\,978\,309 = 0,034 \quad (2.29)$$

$$X4= 145\,083/192\,110 = 0,76 \quad (2.30)$$

$$X5=178\,815/1\,978\,309 = 0,09 \quad (2.31)$$

As a result, we get the information collected in Table 2.11.

Table 2.11

Altman Model Coefficients Results

| Coefficient | The beginning of the reporting period | End of reporting period | Deviation |
|-------------|---------------------------------------|-------------------------|-----------|
| x1 | 0,46 | -0,04 | -0,5 |
| x2 | 0 | 0 | 0 |
| x3 | 0,045 | 0,034 | -0,011 |
| x4 | 6,73 | 0,76 | -5,97 |
| x5 | 0,12 | 0,09 | -0,03 |

Based on the column of table 2.10 “deviation”, we see a drop in all coefficients of the Altman model compared to the end and beginning of the reporting period.

We construct the Altman model for the calculated values:

At the beginning of the period:

$$Z5 = 1,2 * 0,46 + 1,4 * 0 + 3,3 * 0,045 + 0,6 * 6,73 + 1,0 * 0,12 = 0,552 + 0 + 0,1485 + 4,038 + 0,12 = 4,8585 \quad (2.32)$$

At the end of the reporting period:

$$Z5 = 1,2 * (-0,04) + 1,4 * 0 + 3,3 * 0,034 + 0,6 * 0,76 + 1,0 * 0,09 = (-0,048) + 0 + 0,1122 + 0,456 + 0,09 = 0,6102 \quad (2.33)$$

To compare the results of the Altman model at the beginning of the reporting period and at the end of the reporting period, we construct a graph (Fig. 2.9).

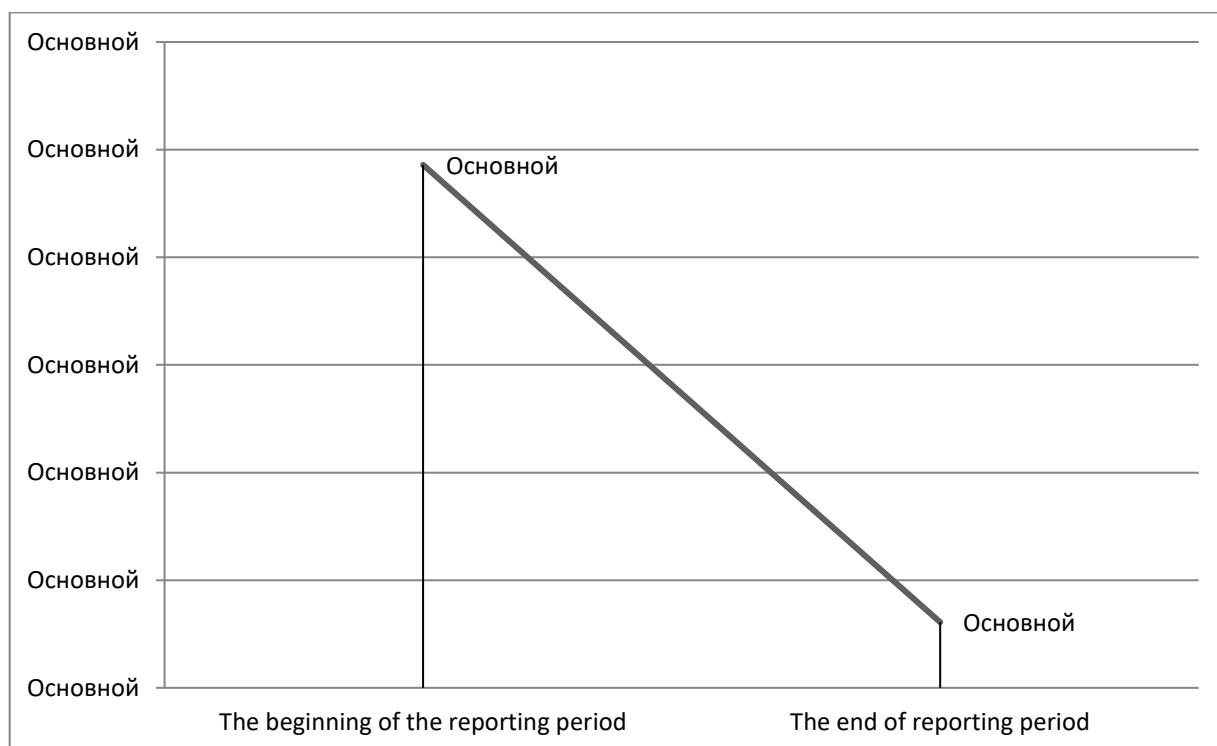


Fig. 2.9. Altman Model Results

Based on the obtained Z values, the following conclusions can be drawn:

At the beginning of the year, the probability of bankruptcy at this enterprise was very low ($Z > 2.99$). The company had a good coverage ratio and return on assets.

By the end of the year, Z decreased sharply, and the company faces bankruptcy.

The decrease in the Z value was due to a decrease in all the coefficients used in the model:

- a decrease in the coverage ratio occurred due to an increase in the amount of short-term liabilities (more than 3 times) and, at the same time, a decrease in additional paid-in capital. It can be assumed that due to changes in the financial condition of the company, the market value of its shares decreased.

- decrease in the rate of return on assets. After analyzing the balance, we can conclude that this is the result of a significant increase in the amount of assets with a very slight increase in revenue.

- the share of working capital decreased due to a strong increase in the amount of assets and a slight increase in capital

- return on assets decreased due to an increase in the amount of assets with a slight increase in retained earnings

- return on assets calculated at book value also decreased due to a strong decrease in book profit and an increase in the amount of assets.

Build a Fulmer model. This model was created on the basis of data processing of 60 enterprises: 30 crashed and 30 normally working - with an average annual turnover of 455 thousand US dollars.

The formula for determining the probability of bankruptcy according to the Fulmer model has the form:

$$H = 5,528*X1 + 0,212*X2 + 0,073*X3 + 1,270*X4 - 0,120*X5 + 2,335*X6 + 0,575*X7 + 1,083*X8 + 0,894*X9 - 6,075 \quad (2.34)$$

where,

X1 - Average retained earning / Average total assets;

X2 - Revenues / Average total assets;

X3 - EBT / Total equity (market cap + preferred stock equity + noncontrolling interests);

X4 - Cash flow / Average total debt;

X5 - Average debt / Average total assets;

X6 - Current liabilities / Average total assets;

X7 - Log (tangible total assets);

X8 - Average working capital / Average total debt;

X9 - Log (EBIT + Interest).

We calculate the reduced coefficients:

At the beginning of the reporting period:

$$X1 = 0 / 2\,053\,024 = 0 \quad (2.35)$$

$$X2 = 236\,170 / 2\,053\,024 = 0,12 \quad (2.36)$$

$$X3 = 89\,647 / 2\,860\,076 = 0,031 \quad (2.37)$$

$$X4 = 73\,620 / (54\,500 + 31\,420) = 0,86 \quad (2.38)$$

$$X5 = 54\,500 / 2\,053\,024 = 0,027 \quad (2.39)$$

$$X6 = 31\,420 / 2\,053\,024 = 0,015 \quad (2.40)$$

$$X7 = \log(40\,239) = 4,61 \quad (2.41)$$

$$X8 = 946\,379 / (54\,500 + 31\,420) = 11,014 \quad (2.42)$$

$$X9 = \log(89\,647 + 0) = 4,95 \quad (2.43)$$

We calculate the Fulmer model at the end of the reporting period:

$$X1 = 0 / 1\,978\,309 = 0 \quad (2.44)$$

$$X_2 = 178\,815 / 1\,978\,309 = 0,09 \quad (2.45)$$

$$X_3 = 67\,967 / 1\,786\,462 = 0,038 \quad (2.46)$$

$$X_4 = 56\,234 / (26\,562 + 192\,110) = 0,26 \quad (2.47)$$

$$X_5 = 26\,562 / 1\,978\,309 = 0,013 \quad (2.48)$$

$$X_6 = 192\,110 / 1\,978\,309 = 0,097 \quad (2.49)$$

$$X_7 = \log(30\,096) = 4,47 \quad (2.50)$$

$$X_8 = (-76\,414) / (26\,562 + 192\,110) = (-0,35) \quad (2.51)$$

$$X_9 = \log(67\,967 + 0) = 4,83 \quad (2.52)$$

As a result, we get the information collected in Table 2.12.

Table 2.12

Fulmer Model Coefficients Results

| Coefficient | The beginning of the reporting period | End of reporting period | Deviation |
|-------------|---------------------------------------|-------------------------|-----------|
| x1 | 0 | 0 | 0 |
| x2 | 0,12 | 0,09 | -0,03 |
| x3 | 0,031 | 0,038 | 0,007 |
| x4 | 0,86 | 0,26 | -0,6 |
| x5 | 0,027 | 0,013 | -0,014 |
| x6 | 0,015 | 0,097 | 0,082 |
| x7 | 4,61 | 4,47 | -0,14 |
| x8 | 11,014 | -0,35 | -11,364 |
| x9 | 4,95 | 4,83 | -0,12 |

Based on the column of table 2.12 “deviation”, we see a drop in all the coefficients of the Fulmer model in comparison with the end and beginning of the reporting period.

We calculate the formula at the beginning of the period:

$$H = 5,528*0 + 0,212*0,12 + 0,073*0,031 + 1,270*0,86 - 0,120*0,027 + 2,335*0,015 + 0,575*4,61 + 1,083*11,014 + 0,894*4,95 -$$

$$6,075 = 0 + 0,02544 + 0,002263 + 1,0922 - 0,00324 + 0,035 + 2,65075 + 11,9281 + 4,4253 - 6,075 = 14,081 \quad (2.53)$$

We calculate the formula at the end of the period:

$$H = 5,528*0 + 0,212*0,09 + 0,073*0,038 + 1,270*0,26 - 0,120*0,013 + 2,335*0,097 + 0,575*4,47 + 1,083*(-0,35) + 0,894*4,83 - 6,075 = 0 + 0,19 + 0,0028 + 0,33 - 0,00156 + 0,27 + 2,57 - 0,38 + 4,32 - 6,075 = 1,226 \quad (2.54)$$

To compare the results of the Fulmer model at the beginning of the reporting period and at the end of the reporting period, we construct a graph (Fig. 2.10).

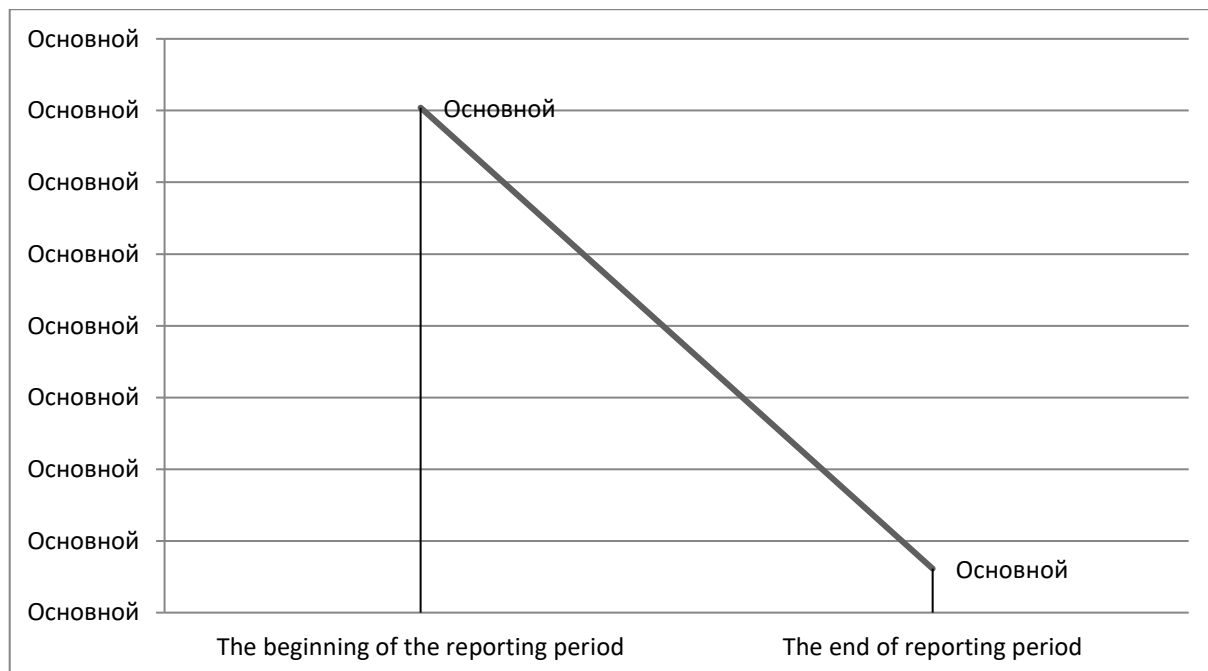


Fig. 2.10. Fulmer Model Results

The onset of insolvency is inevitable at $H < 0$.

Based on the Fulmer model, we see that at the beginning of the reporting period, LLC Master Avia, the probability of bankruptcy at this enterprise was very low. By the end of the year, the value of H sharply decreased, and the company faces bankruptcy.

Tuffler's model is a methodology for predicting bankruptcy of enterprises based on its financial indicators, proposed in 1977 by British scientists R. Tuffler and G. Tishou. This model was developed by them according to the results of testing the earlier Altman model on the reporting data of British companies as more consistent with the new economic realities. The four-factor Tuffler model is as follows:

$$Z = 0,53X1 + 0,13X2 + 0,18X3 + 0,16X4 \quad (2.55)$$

X1 - the ratio of profit from sales before tax to the amount of current liabilities;

X2 - the ratio of current assets to total liabilities;

X3 - the ratio of the amount of current liabilities to the total amount of assets;

X4 - the ratio of revenue to total assets.

The final value of Z is interpreted as follows. If the value of Z is more than 0.3, this indicates that the company has a stable financial position, if less than 0.2, there is a significant probability of bankruptcy.

We calculate the Tuffler model at the beginning of the reporting period.:

$$X1 = 89\,647 / 199\,361 = 0,45 \quad (2.56)$$

$$X2 = 112\,765 / 2\,053\,024 = 0,06 \quad (2.57)$$

$$X3 = 199\,361 / 2\,053\,024 = 0,1 \quad (2.58)$$

$$X4 = 236\,170 / 2\,053\,024 = 0,12 \quad (2.59)$$

$$Z = 0,53*0,45 + 0,13*0,06 + 0,18*0,1 + 0,16*0,12 = 0,24 + 0,008 + 0,018 + 0,02 = 0,3 \quad (2.60)$$

We calculate the Tuffler model at the end of the reporting period.:

$$X1 = 67\,967 / 357\,465 = 0,2 \quad (2.61)$$

$$X2 = 88\,871 / 1\,978\,309 = 0,05 \quad (2.62)$$

$$X3 = 357\,465 / 1\,978\,309 = 0,18 \quad (2.63)$$

$$X4 = 178\,815 / 1\,978\,309 = 0,09 \quad (2.64)$$

$$Z = 0,53*0,2 + 0,13*0,05 + 0,18*0,18 + 0,16*0,09 = 0,11 + 0,01 + 0,032 + 0,02 = 0,17 \quad (2.65)$$

As a result, we get the information collected in Table 2.13.

Based on the column of table 2.12 “deviation”, we see a drop in all coefficients of the Tuffler model compared to the end and beginning of the reporting period.

Таблица 2.13

Tuffler Model Coefficient Results

| Coefficients | The beginning of the reporting period | End of reporting period | Deviation |
|--------------|---------------------------------------|-------------------------|-----------|
| x1 | 0,45 | 0,2 | -0,25 |
| x2 | 0,06 | 0,05 | -0,01 |
| x3 | 0,1 | 0,18 | 0,08 |
| x4 | 0,12 | 0,09 | -0,03 |

To compare the results of the Fulmer model at the beginning of the reporting period and at the end of the reporting period, we construct a graph (Fig. 2.11).

Therefore, since the Z value at the beginning of the reporting period was 0.3, the company had a stable financial position. But since Z at the end of the reporting period was 0.17, which is less than 0.2, the company has a significant probability of bankruptcy.

A summary graph of bankruptcy probability analysis of Master-Avia LLC using Altman, Fulmer, and Taffler models can be seen in Fig. 2.12.

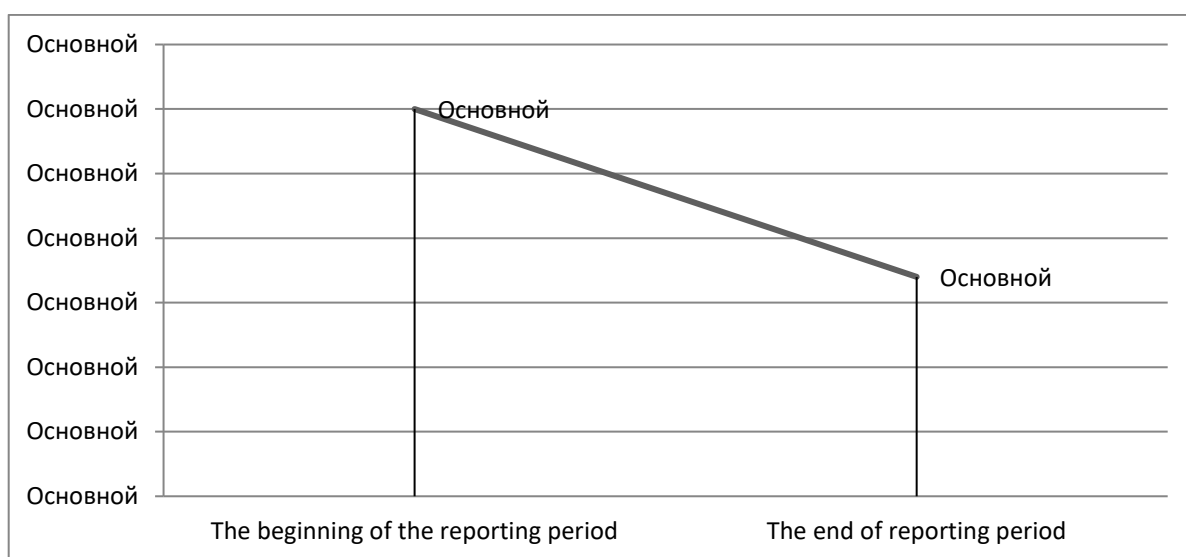


Fig. 2.11. Tuffler Model Results

It follows from this that at the end of the reporting period, LLC Master Avia has a crisis financial condition associated with the insolvency of the enterprise. The company needs to look for ways to restore equilibrium.

After analyzing the likelihood of bankruptcy of Master Avia LLC, using 3 different methods, it was revealed that the company has an unstable financial condition associated with a violation of solvency.

As the analysis shows, LLC “Master Avia” at the beginning of the reporting period had a normal financial condition, which guarantees solvency. But at the end of the reporting period, the situation changed - there was a crisis financial condition associated with insolvency.

It should be noted that all of the above models have both advantages (ease of financial calculations) and disadvantages (the subjectivity of the use of Western models in relation to Russian enterprises). At the same time, differences in external factors affecting the functioning of the enterprise (the degree of development of the stock market, tax legislation, regulatory support of accounting) and, therefore, on the economic indicators used in the proposed Altman model distort probabilistic estimates. But all models can be used to objectively form a conclusion about the financial situation of an enterprise.

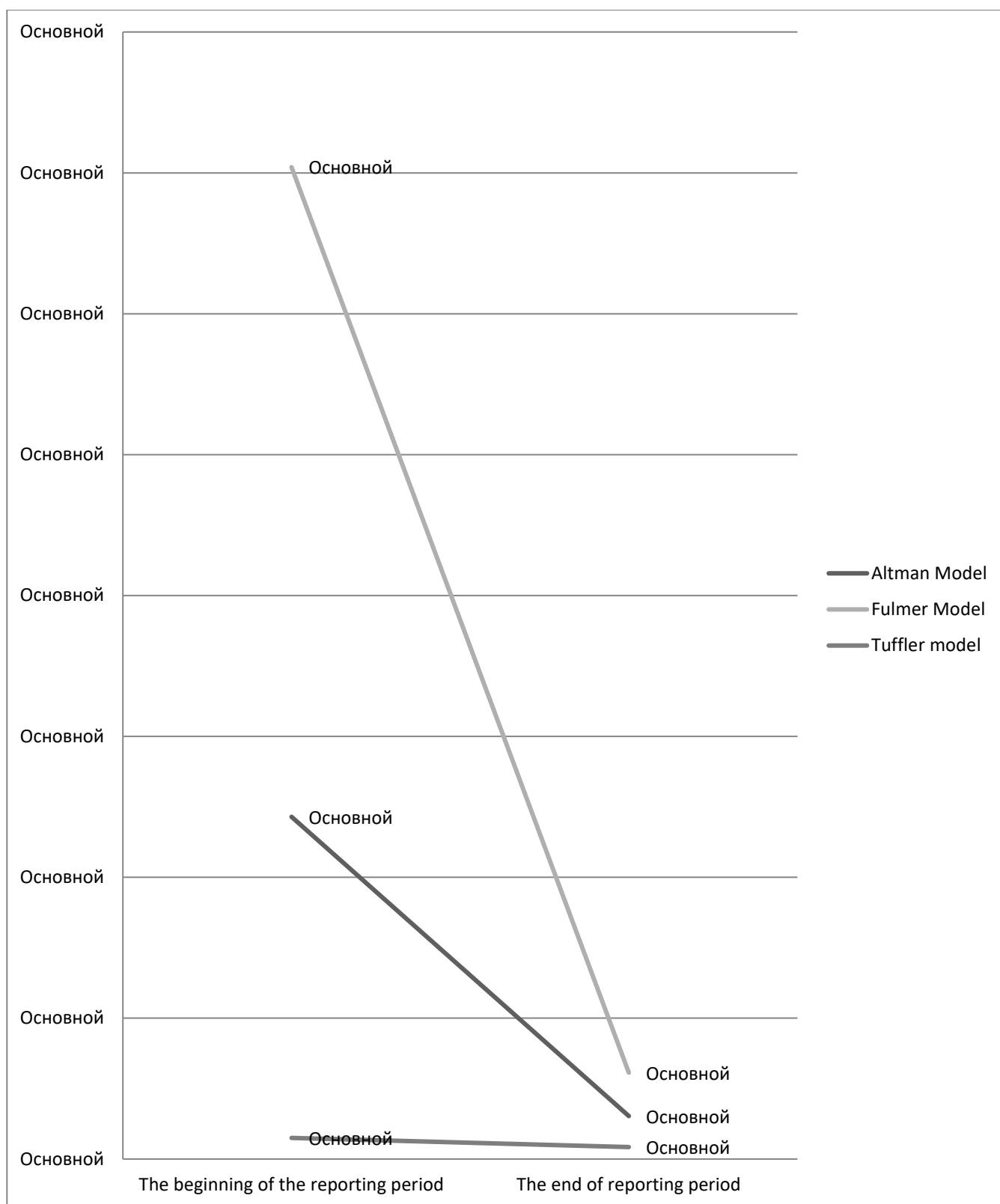


Fig. 2.12. Results of Altman, Fulmer and Tuffler models

Thus, we can conclude that the analysis revealed an unsatisfactory balance sheet structure and a rather high probability of bankruptcy. This requires finding ways to financial recovery.

CHAPTER 3. DEVELOPMENT OF ANTI-CRISIS MEASURES OF MANAGEMENT OF LLC “MASTER AVIA”

3.1 Development of ways of crisis management of LLC “Master Avia”

The study of the main factors that determine the crisis development of the enterprise, this study is the final stage in the diagnosis of bankruptcy. Since the factors that determine the crisis development of an enterprise are both a form of realization of certain types of financial risks, they are also divided into two main groups during the study:

- not dependent on the activities of the enterprise (external or exogenous factors);
- depending on the activities of the enterprise (internal or endogenous factors).

External factors of crisis development, in turn, are divided into three subgroups in the analysis:

- socio-economic factors of the overall development of the country. As part of these factors, only those that have a negative impact on the economic activity of a given enterprise, i.e. form the potential risk of bankruptcy;
- market factors. When considering these factors, negative tendencies for the development of commodity (both for raw materials and materials, as well as for manufactured products) and financial (money, stock and foreign exchange) markets are investigated;
- other external factors. The company determines their composition independently, taking into account the specifics of its business activities.

The internal factors of crisis development are also subdivided in the analysis into three subgroups depending on the characteristics of the formation of cash flows:

- factors associated with production activities;
- factors related to investment activity;

- factors related to financial activities.

In the process of studying factors, their influence on the nature of the crisis development of the enterprise is determined. Quantitatively, the degree of this influence can be determined using one or multivariate correlation models.

According to the results of this assessment, ranking of individual factors is carried out according to the degree of their negative impact on the financial condition of the enterprise.

At the final stage, a forecast is made of the development of certain factors that have the most significant negative impact and cause the greatest threat of bankruptcy of the enterprise in the coming period. Here are the factors that may affect the activities of LLC “Master Avia”.

External factors of the crisis can be divided into:

1. Factors of socio-economic development:

- The growth of inflation;
- Instability of the tax system;
- Instability of regulatory legislation;
- Decrease in the level of real incomes of the population;
- The growth of unemployment.

2. Market factors:

1. Decrease in the capacity of the domestic market;
2. The instability of the currency market.

3. Other factors:

- Political instability;
- Natural disasters (environmental factor);
- Weather.

4. The growth of criminal activity.

Internal factors of the crisis can be divided into:

1. Management:

- High level of commercial risk;

- Insufficient knowledge of market conditions;
- Ineffective financial management;
- Poor production cost management;
- Lack of flexibility in management;
- Insufficient quality accounting and reporting system.

2. Production:

- Obsolete and worn out fixed assets;
- Low labor productivity;
- High energy costs;
- Overloaded with objects of the social sphere;
- Insecurity of the unity of the enterprise as a property complex.

3. Market:

- Low competitiveness of products;
- Dependence on a limited circle of suppliers and buyers.

Each of these factors can cause an enterprise crisis. A situation where the crisis is based on several factors from different groups, but, as a rule, it is always based on one factor that goes unnoticed for a long time, progresses and worsens the situation with each turn of the production or business cycle, accumulating unresolved problems. preparing fertile soil for the growth of risks of other factors. As a rule, such an effect on the enterprise is exerted by management factors that are insignificant at first glance; they tend to spontaneously grow and can lead to a serious crisis situation.

It is management inefficiency that should be attributed to the most characteristic problem for modern enterprises that impedes their effective functioning in the conditions of prevailing market relations. This problem is caused by the following reasons:

- Lack of strategy in the enterprise and focus on short-term results to the detriment of medium and long term;

- The lack of a clear distribution of functions and responsibilities among the managers and personnel of the enterprise;
- Low qualification and inexperience of managers;
- The low level of responsibility of enterprise managers to owners for the consequences of decisions made, the safety and efficient use of the property of the enterprise, as well as for the financial and economic results of its activities;
- Weak financial management;
- Weak production management.

Thus, we can conclude that at Master-Avia LLC, the main factors that caused the crisis in the company may be:

- The first factor is the low level of non-cash and cash monetary component in the calculations. Money makes up about a third in all calculations, the remaining payments are carried out in other forms.
- The second factor is the huge amount of increasing external debt.
- The third factor, supplementing the general unfavorable picture, is a very weak management, completely disproportionate to a powerful resource base and applied technologies and, as a result, very low labor productivity.

Although the struggle of enterprises for survival in crisis conditions requires an interconnection of organizational, legal, financial and managerial aspects, even such an ideal combination of factors contributing to overcoming the crisis is not capable of quickly stabilizing the economy of LLC Master Avia in a specific situation.

In order to prevent a crisis at LLC Master Avia, first of all, it is necessary to reduce long-term loans and, if possible, improve management. Thus, we will reduce the amount of existing debt. It is possible to cover these debts if the system of receivables repayment is improved; the company also needs more stimulation of sales of its products.

To eliminate the emerging crisis at Master Avia LLC, it is recommended to carry out a number of measures:

- Increase solvency;
- Preservation of financial stability;
- Ensuring financial equilibrium in the long term.

To maintain and increase the level of financial stability of the enterprise, it is necessary to reduce the amount of consumed financial resources.

At this stage of enterprise development, this can be done by temporarily abandoning external social and other programs of the enterprise financed by its profit.

An increase in the inflow of own funds here can be achieved by optimizing the pricing policy, increasing payment for services, implementing a rational tax policy that minimizes tax payments within the law.

In the future, financial stability (balance) in the long term can be ensured by such measures as the use of effective material resources to reduce costs, improve product quality, and accelerate the turnover of current assets.

At the moment, the main thing for the company is a return to previous profit indicators, therefore, an increase in sales.

To increase sales at the enterprise in question, it will be rational to conduct an analysis of the price and volume of products sold and find the most reasonable compromise.

To increase profits, it is also necessary to consider the option of reducing costs in industrial and commercial activities:

- introduction of energy-saving technologies;
- simplification of the organizational structure in order to eliminate unnecessary levels of management and reduce the cost of remuneration of management personnel;
- reduction of costs for the purchase of materials;
- the use of less expensive components, where possible;
- improvement of the management system;
- inventory;

- optimization of receivables;
- reduction of production costs;
- sale of subsidiaries and shares in the capital of other enterprises;
- sale of construction in progress;
- optimization of the number of personnel and provision of social benefits for the laid-off
- sale of surplus equipment, materials and stockpiled finished products;
- conversion of debts by converting short-term debts into long-term loans or long-term mortgages;
- advanced technologies, mechanization, automation, production;
- improvement of labor organization;
- overhaul, modernization of fixed assets, replacement of obsolete equipment, acquisition of additional fixed assets.

In order to speed up cash flow, it is necessary to create a system of incentives (discounts) to customers that increase the volume of purchases and pay for them on time, as well as consider relations with customers, their financial condition in terms of possible risks and establish, depending on them, commodity credit limits for each client .

To reduce cash outflows, it would be optimal to divide suppliers into categories according to their importance for the organization's activities in order to pay payables priority. It is possible to search for alternative suppliers offering better payment terms or better products, which reduces production costs.

It is also recommended that Master Avia LLC reduce the share of funds in settlement accounts by investing them in production, purchasing new equipment, and improving the management system. Those. the enterprise does not need to strive to accumulate a "nest egg", but it is necessary to invest money in the business.

Thus, having completed a number of proposed measures, the company will strengthen its solvency, financial stability and financial equilibrium.

Negative moments as a result of the financial and economic activities of Master Avia LLC may be due to unsuccessful decisions in the field of marketing, inexperience of managers, insufficient prudence and competence of management. As a result, miscalculations arise in working with customers, the use of unreasonably expensive technologies, tools and objects of labor.

The company is faced with the problem of improving its financial condition. The enterprise is characterized by a "reactive" form of financial management. It is based on management decisions as a response to current problems, i.e. "Patching holes", which usually come down to providing the most urgent current payments at all costs and leads to significant violations of the interests of owners and managers, the interests of enterprise groups and the fiscal interests of the state, which is largely due to the lack of a financial strategy.

The reaction aimed at avoiding strategic measures for crisis management is shown in Fig. 3.1. It is based on the assumption that difficulties can be overcome with the usual, though radical, counter-measures. A form of management that is reactive in nature takes strategic action only if it continues to suffer losses despite operational measures and austerity. At this point, a lot of time has already been spent, significant losses are being accumulated and the company has high costs.

In the case of reactive crisis management, the onset of reaction to crisis manifestations is delayed relative to the time of rational start of the action T_0 for a period of time (T_0, T') (Fig. 3.2). Such behavior is typical for large enterprises with many years of successful experience when the initial data (factors) of crisis phenomena in practice is not sufficient to implement appropriate crisis management measures aimed at preventing crisis phenomena. The equation of total losses in jet control will be (3.1).

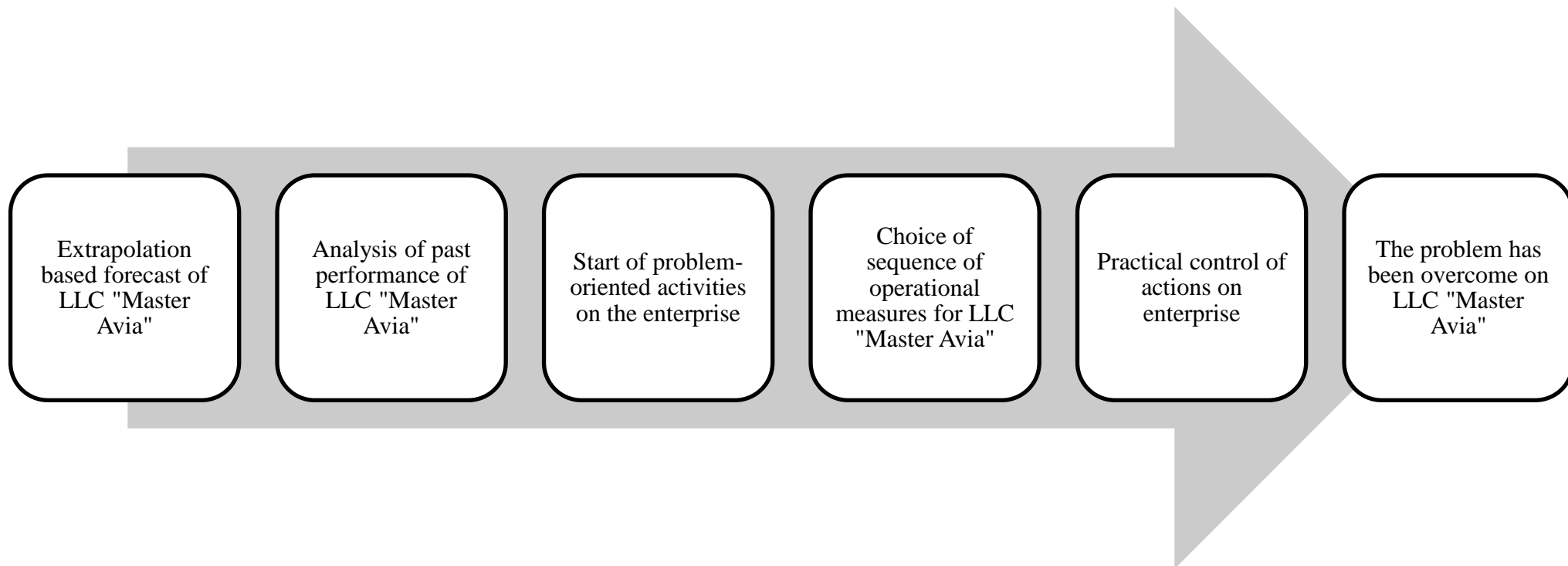


Fig. 3.1. General scheme of implementation of reactive crisis management on LLC “Master Avia”

In this case, the reaction begins before the onset of the crisis, but is too late to counteract the crisis impact on its onset. The costs of this type of crisis management will be higher than the active type of crisis management.

$$Z_{zag}(T) = \int_0^{T_1} F_1(T) - \int_T^{T_1} F_2(T) \quad (3.1)$$

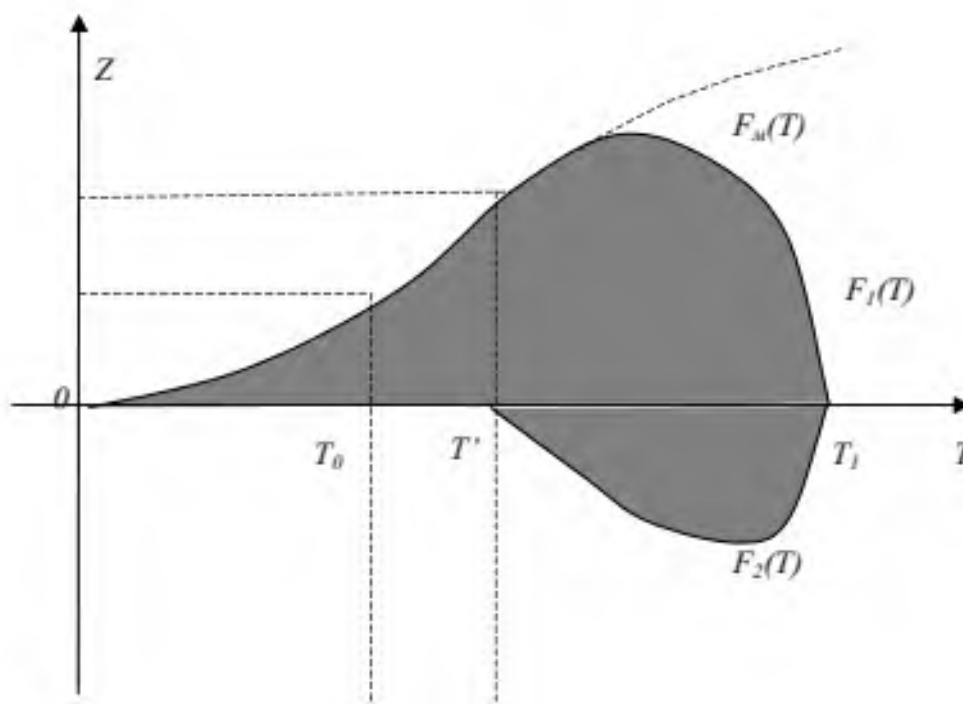


Fig. 3.2 Reactive crisis management

where $F_1(T)$ is the enterprise's costs at time T of the crisis;
 $F_2(T)$ - costs of the enterprise for implementation of crisis management;
 $F_m(T)$ - possible losses of the enterprise without the implementation of crisis management.

Thus, we have developed ways to exit Master Air Avia from the crisis by implementing reactive crisis management.

3.2 Organizational support for the implementation of anti-crisis measures at LLC "Master-Avia"

To start the implementation of reactive crisis management, we will use forecasting based on the extrapolation method for months, starting in January 2019. It was described in 2.3.

Based on the forecast, we see that the adoption of anti-crisis decisions is inevitable if we want to remove the company from the state of crisis. Therefore, we need to move on to the second stage of reactive crisis management - the definition and selection of a sequence of operational measures for crisis management.

Drawing conclusions on the basis of all the analyzes done, we can conclude that the decline in financial performance of Master Avia LLC is associated with the departure of some airlines from the base of Kyiv International Airport. Thus, one of the very first proposals for improving the financial condition of Master Avia LLC is negotiations on the return of the base of airlines such as FlyDubai, Pegasus, Sky Up to Kyiv International Airport. Moreover, this is necessary to unload the current base of these airlines - the Boryspil International Airport.

The reasons for the departure of these airlines were: the impossibility of the airport accepting some aircraft for a technical reason (insufficient runway length), as well as the high cost of fuel.

During negotiations with representatives of FlyDubai, Pegasus, Sky Up airlines, it was agreed to extend the runway to allow the landing of large-sized aircraft at the Kyiv international airport of the above airlines at the expense of the airlines themselves.

Another suggestion for obtaining more income for Master Avia LLC is to increase the cost of additional airport services, such as servicing at the Business Terminal, Priority Line service, individual transport service from terminal to board the aircraft, and Business Lounge. The cost of these services has not increased for more than 3 years. Given the increase in prices for wages, gasoline and other components of the price of additional services, to increase revenue, we propose to

increase these prices by 20%. Prices for these services, as well as the size of the price increase and the final proposed value, can be seen in table 3.9.

Table 3.9

Prices for additional services at the Kyiv International Airport

| Type of service | Current cost, UAH | Amount of increase (20%), UAH | Final suggested price, UAH |
|--|-------------------|-------------------------------|----------------------------|
| Business Terminal (commercial flights) | 4900 | 980 | 5880 |
| Business Terminal (business flights) | 7300 | 1460 | 8760 |
| Priority line | 750 | 150 | 900 |
| Transfer (Terminal-Plane) | 500 | 100 | 600 |
| Business Hall | 900 | 180 | 1080 |

From the table above we see that a 20% price increase for additional services of Kyiv International Airport will give a significant increase in the total revenue of Master Avia LLC. These services will still be bought, as they are usually ordered by wealthy passengers for the convenience and comfort of completing formalities and moving aboard an aircraft, as well as waiting for a flight.

To reduce passenger dissatisfaction, we suggest raising prices for additional services in stages. The stages of raising prices for additional services are presented in Figure 3.7.

The price equivalent of raising the cost of additional services at the Kyiv International Airport can be seen in table 3.10.

General results with proposals for the implementation of crisis management can be seen in Figure 3.8.

Given all the proposed solutions to the crisis of LLC “Master Avia”, you can create a calendar for the implementation of these decisions.

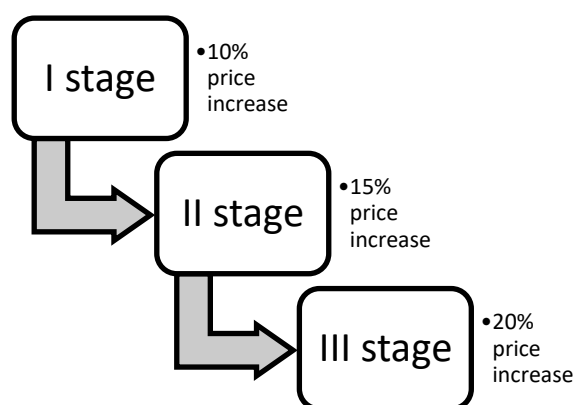


Fig. 3.7. Phased increase in prices for additional services at the Kyiv International Airport

Table 3.10

Phased increase in prices for additional services at the Kyiv International Airport

| Type of service | Current cost, UAH | Cost after increase (10%), I stage, UAH | Cost after increase (15%), II stage, UAH | Cost after increase(20%), III stage, UAH |
|--|-------------------|---|--|--|
| Business Terminal (commercial flights) | 4900 | 5390 | 5635 | 5880 |
| Business Terminal (business flights) | 7300 | 8030 | 8395 | 8760 |
| Priority line | 750 | 825 | 863 | 900 |
| Transfer (Terminal-Plane) | 500 | 550 | 575 | 600 |
| Business Hall | 900 | 990 | 1035 | 1080 |

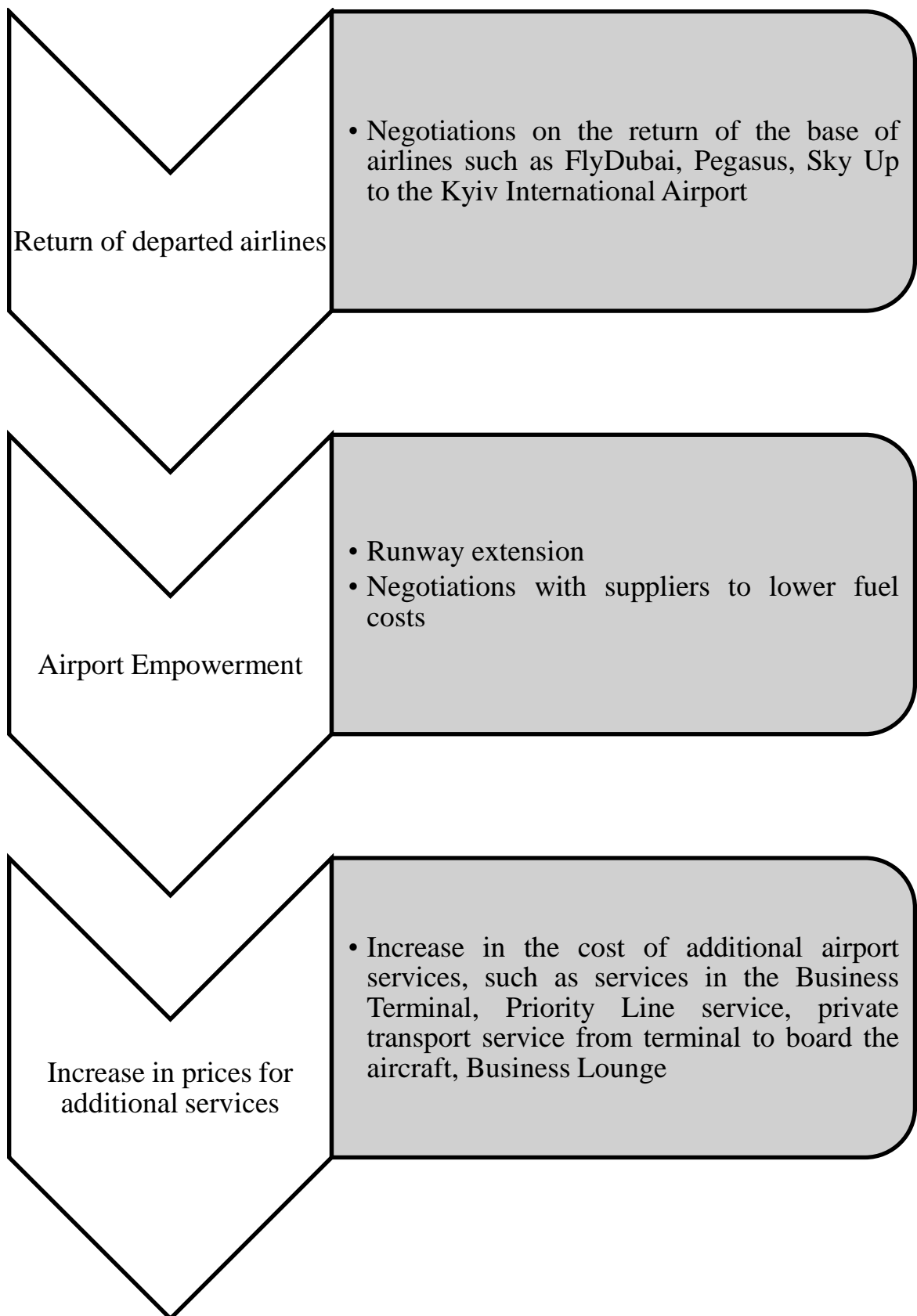


Fig. 3.8. Crisis Management Solutions Suggestions

The calendar for the implementation of decisions can be seen in table 3.11.

Table 3.11

Crisis Action Calendar

| Deadline | Act | Description of Actions |
|-------------------------|---|--|
| January 2020 | Negotiation Preparation | Organization of negotiations with airlines FlyDubai, Pegasus, Sky Up Preparation of conditions for the return of airlines |
| January 2020 | Raising the prices of additional services (I stage) | Stage I - raising prices by 10% |
| February 2020 | Conversation | - Negotiations with airlines FlyDubai, Pegasus, Sky Up - Negotiations with suppliers to reduce fuel prices |
| March 2020 | Raising the prices of additional services (stage II) | II stage - raising prices by 15% |
| March 2020 | Start of technical work | Runway extension work |
| April 2020 | Raising the prices of additional services (stage III) | III stage - raising prices by 20% |
| August 2020 | Completion of technical work | Runway renewal deadline |
| August - September 2020 | Return a / c | The return of the base of such airlines as FlyDubai, Pegasus, Sky Up to the Kyiv airport |

As a result, we see that approximately in the middle of 2020, the end of all anti-crisis decisions is expected, as well as a sharper increase in the finances of Master Avia LLC. In the meantime, it is possible that throughout the whole period the financial situation of Master Avia LLC will increase slowly, as debt for loans will decrease and investment will be injected into the company by those airlines that will return to the international airport “Kyiv”.

3.3 Evaluation of the results of the proposed crisis management measures of Master-Avia LLC

As the first stage of the price increase is in January 2020, and the reduction of the debt to the bank on the loan is in February 2020, according to the experts of the economic department of Master Avia LLC, from February to March (the second period of the price increase) will be observed reducing the rate of decline of the financial situation at the enterprise, in the period from April to August 2020.

First of all, we will calculate the investment plan for all the anticrisis decisions, suggested in 3.10.

We will also take into account, that on previous agreements, 80% of all expenses for Runway extension will pay airline companies, that will be handled on lower prices for several time.

So, for LLC “Master Avia” the investment plan is represented in table 3.12.

To begin evaluating the results of the decisions of the reactive crisis management, let's carry out forecasting on the basis of the extrapolation method by months, starting in January 2020.

To begin evaluating the results of the decisions of the reactive crisis management, let's carry out forecasting on the basis of the extrapolation method by months, starting in January 2020.

Table 3.12

Investment plan

| Month | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | Total |
|---|------|-----------|-----------|-----------|-------------|-----------|------------|------------|----------|
| Investment, thousand UAH | 3800 | 2400 | 2400 | 2400 | 1800 | 1800 | 1800 | 1800 | 18200 |
| Income, thousand UAH | | 2790 | 2920 | 3020 | 3150 | 3480 | 3755 | 3860 | 22975 |
| Discounted coefficient (4%) | | 0,9967369 | 0,9934845 | 0,9902427 | 0,987011517 | 0,9837908 | 0,98058067 | 0,97738098 | |
| Discounted investment, thousand UAH | | 2388,37 | 2376,81 | 2365,29 | 1765,38 | 1756,82 | 1748,31 | 1739,85 | 14140,83 |
| Discounted income, thousand UAH | | 2776,49 | 2891,78 | 2976,33 | 3089,41 | 3396,53 | 3647,18 | 3731,00 | 22508,71 |

The calculations of the results according to the investment plan are represented in the table 3.13.

Table 3.13

Calculations of the result

| Indicator | Formula | Result |
|---------------------------------|---|----------|
| Present Value, thousand UAH | $= I_{d1} + I_{d2} + I_{d3} + \dots + I_{dn}$ | 22508,71 |
| Net Present Value, thousand UAH | $= PV - IC$ | 18708,71 |
| Profitability Index | $= PV/IC$ | 5,92 |
| Payback Period, years | $= IC/Av.I_d$ | 1,26 |

The present value (PV) of expected income according to these calculations is 22508,71 thousand UAH, while the net present value (NPV) is equal to 18708,71 thousand UAH. The profitability index for this investment would be 5,92, while the payback period is almost 2 months.

To begin evaluating the results of the decisions of the reactive crisis management, let's carry out forecasting on the basis of the extrapolation method by months, starting in January 2020.

Table 3.14 presents the dynamics of change in key performance indicators of the company after all anti-crisis activities according to the calendar presented above, from January 2020 to September 2020 according to the forecasts of Master-Avia LLC experts.

These data were provided by the economic department of Master-Avia LLC and are valid subject to all anti-crisis solutions presented below.

Using the forecast by extrapolation, we will continue the series until the end of December 2020.

Construct a point forecast (table. 3.15) for 1 month using the average absolute increase according to the formula 3.2.

Table 3.14

Key performance indicators of the company according to expert forecasts,
thousand UAH

| Indicator | 01.20 | 02.20 | 03.20 | 04.20 | 05.20 | 06.20 | 07.20 | 08.20 | 09.20 |
|----------------------------|-------|-------|-------|-------|------------|--------|--------|--------|------------|
| Revenue | 2790 | 2920 | 3020 | 3150 | 3480 | 3755 | 3860 | 3920 | 5260 |
| Net profit | 2308 | 2416 | 2499 | 2606 | 2879 | 3107 | 3194 | 3243 | 4352 |
| Assets | 81208 | 84992 | 87903 | 91687 | 10129 2 | 109296 | 112353 | 114099 | 15310 2 |
| Capital and reserves | 73333 | 76750 | 79378 | 82795 | 91469 | 98697 | 101457 | 103034 | 13825 5 |

Table 3.15

The average absolute increase, thousand UAH

| | |
|----------------------|-------------|
| Revenue | 308,75 |
| Net profit | 255,4511381 |
| Assets | 8986,756864 |
| Capital and reserves | 8115,263915 |

We calculate the forecast indicators for 3 months in advance. The calculation results are shown in table 3.16.

Having built the trends of these indicators (Fig. 3.9, Fig. 3.10), we can see that with the help of the anti-crisis solutions proposed in paragraph 3.2 in 2020, all indicators without exception will increase, and so will Master Avia LLC.

Table 3.16

Forecast indicators, thousand UAH

| Indicator | 10.20 | 11.20 | 12.20 |
|----------------------|----------|----------|----------|
| Revenue | 5568,8 | 5877,5 | 6186,3 |
| Net profit | 4607,4 | 4862,9 | 5118,3 |
| Assets | 162089,1 | 171075,8 | 180062,6 |
| Capital and reserves | 146370,4 | 154485,7 | 162601,0 |

Having built the trends of these indicators (Fig. 3.9, Fig. 3.10), we can see that with the help of the anti-crisis solutions proposed in paragraph 3.2 in 2020, all indicators without exception will increase, and so will Master Avia LLC.

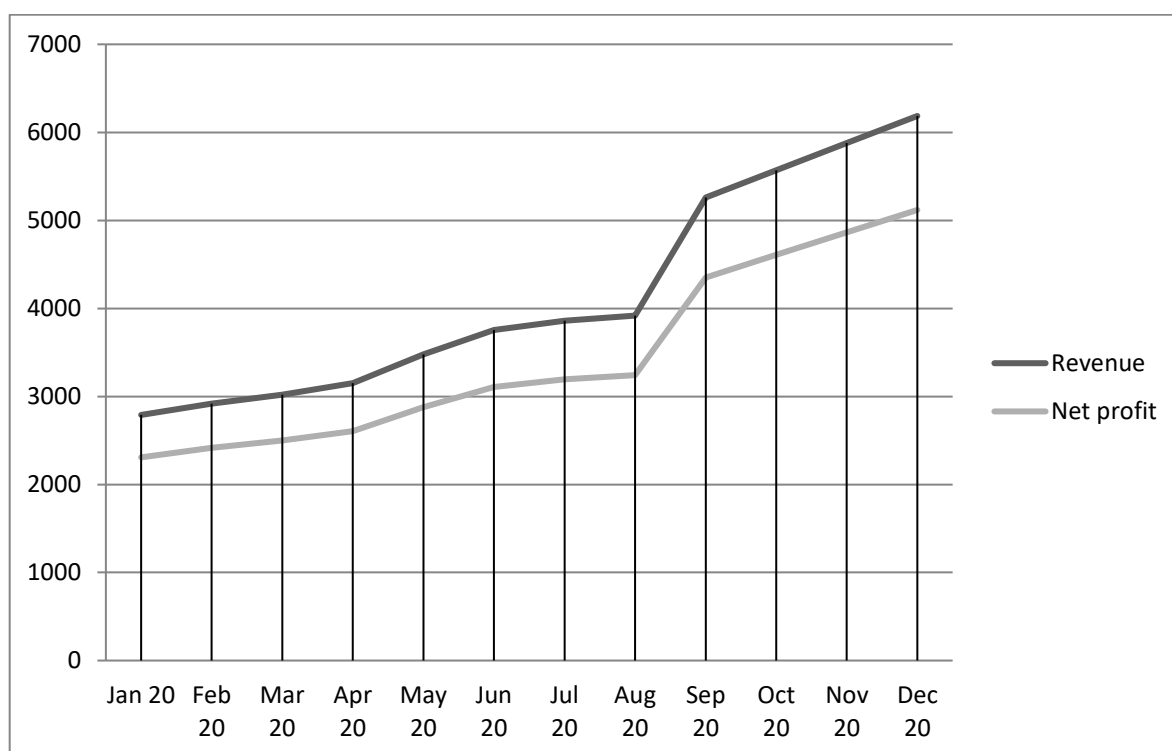


Fig. 3.9. Monthly revenue and net profit chart for 2020

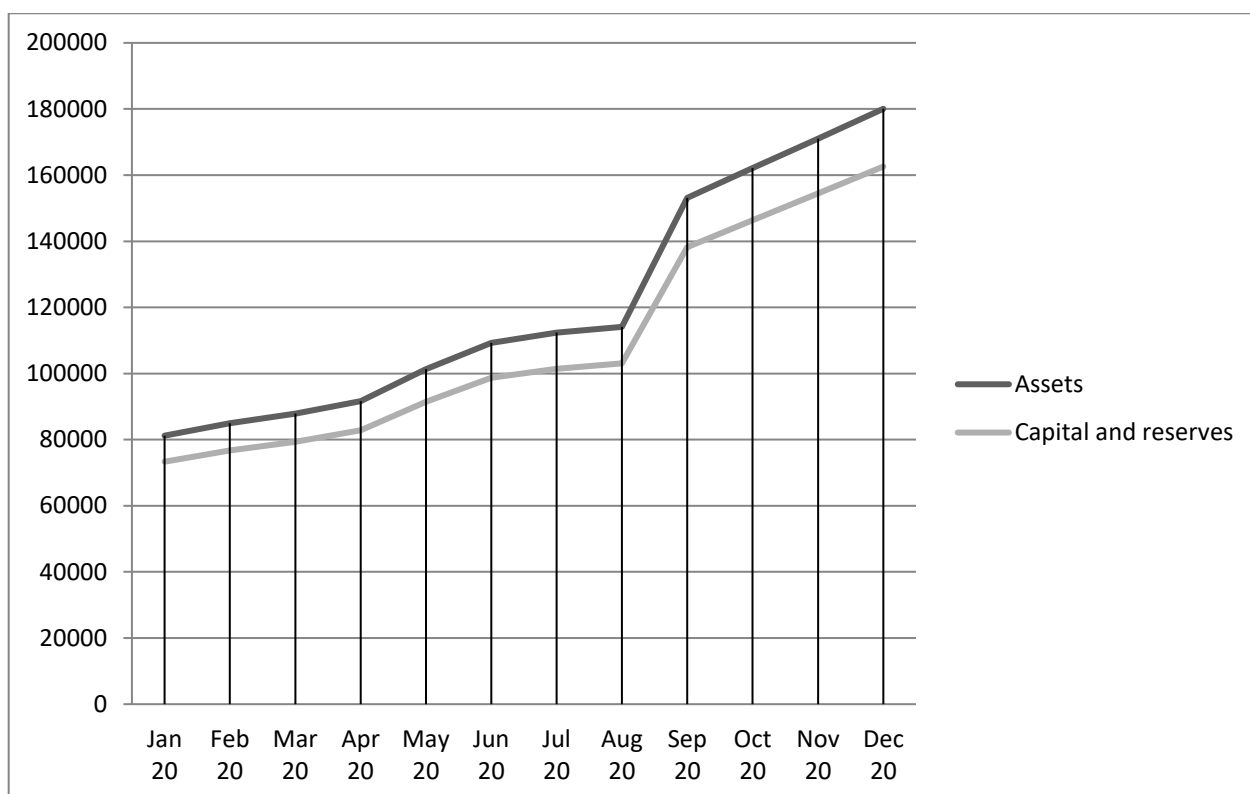


Fig. 3.10. Asset and capital indicators chart for 2020 by months

Based on the graphs, we see positive trends in changes in the financial indicators of LLC Master Avia.

Thus, the adoption of anti-crisis decisions such as negotiations with airlines regarding their return to the base of Kyiv International Airport, extension of the runway, negotiations on reducing the cost of fuel supplies, as well as raising prices for additional airport services, will help Master Avia LLC » to get out of crisis.

CONCLUSIONS

Therefore, based on the study, we can draw the following conclusions. The crisis is an objective prerequisite for the development of any micro - and macroeconomic system. The patterns of emergence and the course of crises reflect both their own rhythms of development of each enterprise, as well as the general rhythms of development of the country and the world.

The ability to respond adequately to changes in space and over time characterizes the degree of maturity of the enterprise. The particular danger of crisis as a phenomenon in the process of enterprise development is that the crisis can be completely unexpected and during the harmonious development of the organization and be of the nature of an insurmountable catastrophe. But, even if a crisis arises according to assumptions and calculations, its consequences can be unpredictable.

During the diploma work the following tasks were performed:

- theoretical principles of anti-crisis management have been systematized;
- methods and tools of crisis management of the enterprise are investigated;
- the financial and economic analysis of the studied enterprise is carried out;
- the ways of crisis management for the company have been developed;
- the results of the proposed anti-crisis management measures were evaluated.

Anti-crisis financial management is a system of principles and methods of financial management of the enterprise, aimed at conducting diagnostics of bankruptcy threat, in case of withdrawal of the enterprise from crisis and its overcoming in order to ensure continuous activity of the enterprise at all stages of its development.

The essence of crisis management of an enterprise is that measures to prevent a crisis situation should be taken long before the situation.

Methods of crisis management of the enterprise should be based on scientific world and national heritage in the areas of: optimization methods, methods of mathematical statistics and probability theory, elements of the theory of mathematical programming, human-machine systems, program-target planning, mathematical interaction and cooperative multiplication, strategic management, enterprise management based on cost-effectiveness analysis, heuristic methods.

One of the most important tasks of crisis management is to diagnose the enterprise and assess its current state.

On the adequacy and timeliness of the latter depends on the effectiveness of anti-crisis management of the enterprise as a whole.

In the course of the study, a financial and economic analysis of Mater Avia LLC was conducted, which showed a decrease in the financial performance of the company, as well as a bankruptcy probability analysis showed that the company needs immediate management anti-crisis decisions, as Master Avia LLC is already in crisis.

Thus, it can be concluded that the analysis revealed an unsatisfactory balance sheet structure and a high probability of bankruptcy. It requires finding ways of financial recovery.

Also during the course of the diploma work several management decisions were proposed.

To improve the effectiveness of crisis management of the enterprise, it is necessary to use modern information technologies, which will provide promptness and validity of management decisions to overcome the crisis of the enterprise, as well as for a fuller realization of the intellectual potential and experience of management personnel.

Adoption of anti-crisis decisions, such as negotiations with airlines on their return to the base of Kyiv International Airport, extension of the runway, negotiations on reducing the cost of fuel delivery, as well as raising prices for additional airport services, will help the company Master Air Avia crisis state.

According to the experts' forecast, as well as with the help of extrapolation forecasting, financial indicators for the months for 2020 were forecasted and trends were developed, which shows the growth of all financial indicators, as well as the way out of the crisis state of the enterprise.

REFERENCES

1. Автоматизация управления предприятием/ Баронов В.В. и др. – М.: ИНФРА-М, 2010. – 239 с.
2. Адамов В.Е., Квитко А.В. Статистическое изучение экономической эффективности промышленного производства, 4-е изд. – К.: Наукова думка, 2014. – 41с.
3. Азоев Г.Л. Конкуренция: анализ, стратегия и практика, 2-е изд. – М.: Центр экономики и маркетинга, 2016. – 208 с.
4. Айзерман М.А., Вольский В.И., Литвяков Б.М. Элементы теории выбора. Псевдокритерии и псевдокритериальный выбор, 3-е издание. – К.: Выща школа, 2014. – 240 с.
5. Александров В.В., Чернышева Л.В. Тенденции развития информационных систем, баз знаний, экспертных систем, 4-е изд. // УСиМ. – 2016. – с.19-25.
6. Алексеев А.В., Просина В.С. Типы неопределенности информации в системах поддержки принятия решений // Нечеткие системы: модели и программные средства. – Тверь: Твер. гос. ун-т, 2011. – С. 111.
7. Алимов О.М., Дорогунцов С.И., Амоша О.И., Иванов Н.И., Михальская В.А., Левина Е.В. Структурные сдвиги в производственном потенциле, 3-е изд. – К.: Нау-кова думка. – 2013. – 230 с.
8. Ансофф И. Стратегическое управление, 5-е изд. – Пер. С англ. – К.: Выща школа, 2009. – 519 с.
9. Антикризисное управление: от банкротства к финансовому оздоровлению / Под ред. Г.П. Иванова. – К.: Наукова думка, ЮНИТИ, 2004. – 317 с.
10. Антикризисное управление: Учеб. Пособие для технических вузов, 3-е изд. / В.Г. Крыжановский, В.И. Лапенков, В.И. Лютер и др.; под ред. Э.С. Минаева и В.П. Панагушина. – К.: Вид-во «Хвиля-Прес», 2008. – 432 с.

11. Антикризисное управление: Учеб. пособие: В 2 т. / Отв. ред. Г.К. Таль. - Т. 1: Правовые основы - 928 с. Т. 2: Экономические основы. - К.: Выща школа, 2014. - 1027 с.
12. Антикризисное управление: Учебник / Под ред. Э.М. Короткова. – М.: ИНФРА-М, 2010. – 432 с.
13. Антикризисный менеджмент / Под ред проф. Грязновой А.Г. – К.: Вид-во «Хвиля-Прес», 2002. – 368 с.
14. Аргинабаев К.М., Балабахин А.А. Моделирование производственной программы предприятий в условиях неопределенности // РАН Сиб. отделение. Ин-т экономики и орг.пром.производства. – Новосибирск: Препринт, 2013. – 30 с.
15. Багриновский К.А., Бусыгин В.П. Математика плановых решений, 5-е изд. – М.: Наука, 2014. – 224 с.
16. Балабанов И.Т. Финансовый менеджмент, 3-е изд. – К.: Наукова думка. – 2014. – 224 с.
17. Василенко В. О. Антикризисне управління підприємством: навч. посіб. [для студ. вищ. навч. закл.] / В. О. Василенко. – К.: ЦУЛ, 2013. – 504 с.
18. Власова Н.М., Вещиков С.И. Универсальный инструмент управления, 3-е изд. // ЭКО: Экономика и организация промышленного производства. – Новосибирск, 2017. - №8. – С.111-120.
19. Гермейер Ю.Б. Введение в теорию исследования операций, 4-е изд. – М.: Наука, 2011. – 384 с.
20. Гермейер Ю.Б. Игры с противоположными интересами, 6-е изд. – К.: Вид-во «Хвиля-Прес», 2016. – 328 с.
21. Гермейер Ю.Б., Ватель И.А. Игры с иерархическим вектором интересов, 4-е изд. // Тех. Кибернетика. 2014. - №3. – с.38-51.
22. Глазунов В.Н. Финансовый анализ и оценка риска реальных инвестиций. – К.: Вид-во «Хвиля-Прес», 2007. – 135 с.

23. Глівенко С.В., Соколов М.О., Теліженко О.М. Економічне прогнозування. Навчальний посібник для студентів ВУЗів. – Суми: ВПП „Мрія-1” ЛТД, 2010. – 120 с.
24. Глушков В.М. Основы безбумажной информатики, 3-е изд. – М.: Наука, 2012. – 552 с.
25. Глушков В.М., Михалевич В.С., Волкович В.Л., Доленко Г.А. К вопросу системной оптимизации в многокритериальных задачах линейного программирования. – Кибернетика, 2000. №5, с.89-90.
26. Голиков Е.А. Маркетинг и логистика: Учебное пособие. – 3-е изд. – К.: Наукова думка, 2011. – 412 с.
27. Голубков Е.П., Голубкова Е.Н., Секерин В.Д. Маркетинг: выбор лучшего решения. – М.: Экономика. 1993. – 222 с.
28. Горелик В.А., Горелов М.А., Кононенко А.Ф. Анализ конфликтных ситуаций в системах управления. – М.: Радио и связь, 2001. – 288 с.
29. Горшков М. О дальнейших изменениях структуры промышленного производства // Плановое хозяйство. – 2008. - №12. – с.26-34.
30. Градов А.П., Кузин Б.И. Стратегия и тактика антикризисного управления фирмой. – М.: Специальная литература. – 2006. – 510 с.
31. Гранберг А.Г. Моделирование социалистической экономики, 4-е изд. – М.: Экономика, 2018. – 272 с.
32. Гриценко В.И. Панышин Б.Н. Информационная технология: вопросы развития и применения, 5-е изд. – К.: Наукова думка. – 2018. – 273 с.
33. Грузинов В.П. Экономика предприятий и предпринимательства, 3-е изд. – К.: Выща школа, 2014. – 496 с.
34. Данильченко Т.Н., Кононенко А.Ф. Динамические модели принятия решений в иерархических системах // Современное состояние теории исследования операций. – М.: Наука, 1999. – С.18-44.
35. Джексон П. Введение в экспертные системы. Пер. с англ.: Уч. Пос. – К.: Наукова думка, 2001. – 624 с.

36. Долан Э.Дж., Линдсей Д. Рынок: микроэкономическая модель / Пер. с англ. В.Лукашевича и др.; Под общ. Ред. Б.Лисовика и В.Лукашевича. – С.-Пб., 2002. – 496 с.
37. Евланов Л.Г. Теория и практика принятия решений, 2-е изд. – К.: Выща школа. – 2004. – 176 с.
38. Евсеев В.В., Овезгельдыев А.О. Системное моделирование процессов управления социально-экономическими объектами // Изв. АН ТССР. Сер. Физ.-техн., хим. и геол.наук. – 2008. - №3. – с.9-14.
39. Економіка підприємства.: Підручник. – В 2 т / За ред. С.Ф. Прокопівного. – К.: Вид-во «Хвиля-Прес», Донецьк: Мале підприємство «Поиск». Т-во книго-любів, 2015.
40. Ефимова М.Р. Статистические методы в управлении производством. – К.: Выща школа, 2008. – 151 с.
41. Ефремов В.С. Стратегия бизнеса. Концепция и методы планирования. – М.: Финпресс, 2008. – 192 с.
42. Жилин А.В. Формализованное описание финансовой деятельности промышленного предприятия// Автоматизированные системы управления и приборы автоматики. – 2001. - №117. – С.24-32.
43. Завгородній В.П. Автоматизація бухгалтерського обліку, контролю, аналізу та аудіту. – К.: А.С.К., 2008. – 768с.
44. Заимков О.О., Толстопятченко А.В., Черемных Ю.Н. Математические методы в экономике. – М.: ДИС, 2007. – 486 с.
45. Залогіна К.І. Антикризове управління промисловим підприємством в умовах перехідної економіки України: Автореф. дис. канд. екон. наук: 08.06.01. / К.І. Залогіна.— Хмельниц., 2004. - 20, [1] с.
46. Згуровский М.З., Померанцева Т.Н. Методы принятия решений в социальных системах на основе спиновых моделей Ивинга // Проблемы управления информатики. – 2005. - №1. – с.89-97.

47. Золотарьов А., Волик І. Ефективне використання оборотних коштів // Еко-но-міка України. – 2008. - №7. – с.12-16
48. Зуховицкий С.И., Авдеева Л.И. Линейное и выпуклое программирование, 4-е изд. – М.: Наука, 2017. – 460 с.
49. Интеллектуальные системы принятия проектных решений, 3-е изд. / А.В.Алексеев, А.Н.Борисов, Э.Р.Вилломс, Н.Н.Слядзь, С.А.Фомин. – Рига: Зинатне, 2014. – 320 с.
50. Интема Д., Длем Л. Оценка многомерных ситуаций с помощью ЦВМ, 4-е изд. // Зарубежная электроника. – 2011. - №2. – с.38-40.
51. Информационные технологии в бизнесе / Под ред. М.Желены. – К.: Выща школа, 2012. – 1120 с.
52. Иозайтис В.Ф., Львов Ю.А. Экономико-математическое моделирование про-изводственных систем, 2-е изд. – М.: Высшая школа, 2011. – 192 с.
53. Исследование операций: В 2-х томах. Пер. с англ./ Под ред. Дж. Моудера, С. Элмаграби. – К.: Выща школа, 2011. Т.1. – 712 с., Т.2. – 712 с.
54. Калянов Г.Н. CASE-технологии. Консалтинг при автоматизации бизнес-процессов. 3-е изд. перераб. и доп. – К.: Вид-во «Хвиля-Прес» – Телеком, 2015. – 320 с.
55. Канторович Л.В., Лассман В., Шилар Х. и др. Экономика и оптимизация. – К.: Выща школа, 2010. – 414 с.
56. Карлин С. Математические методы в теории игр, программировании и эконо-номике, 4-е изд. – М.: Мир, 2014. – 840 с.
57. Келлер. Кевин Лейн Стратегический бренд-менеджмент: создание, оценка и управление марочным капиталом [Текст] /К. Л. Келлер – К.: Выща школа, 2011;
58. Котлер Ф. Основы маркетинга, 4-е изд. – К.: Вид-во «Хвиля-Прес». – 2011. – 736 с.

59. Кошкин В.И. и др. Антикризисное управление: 17-модульная программа для менеджеров «Управление развитием организации». Модуль 11. – М.: «ИНФРА-М», 2004. – 560 с.
60. Краснощеков П.С., Петров А.А. Принципы построения моделей, 2-е изд. – К.: Вид-во «Хвиля-Прес», 2013. – 176 с.
61. Круглова Н.Ю. Стратегический менеджмент.- К.: Вид-во «Хвиля-Прес», 2013. – 464 с.
62. Кугаенко А.А. Использование методов динамического моделирования для совершенствования управления национальной экономикой // Управляющие системы и машины. – 2007. - №1/3. – с.53-60.
63. Лавинский Г.В. Построение и функционирование сложных систем управления, 3-е изд. К.: Выща школа. –2016. – 336 с.
64. Ларичев О.И. Объективные модели и субъективные решения, 3-е изд. – М.: Наука, 2012. – 134 с.
65. Левин М.И., Макаров В.Л., Рубинов А.М. Математические модели экономического взаимодействия, 2-е изд. М.: Физматлит., 2013. – 374 с.
66. Литвак Б.Г. Экспертная информация: методы получения и анализа. – М.: Радио и связь, 1982. – 184 с.
67. Лігоненко Л.О. Антикризове управління підприємством: теоретико-методологічні засади та практичний інструментарій / Л.В. Лігоненко.: Київ. нац. торг.-екон. ун-т. — К., 2001. — 580 с.
68. Лукінов І.І. Наслідки і перспективи ринкових перетворень в економіці України // Економіка України. – 2005. - №12. – с.4.
69. Лэсдон Л.С. Оптимизация больших систем / Пер. С англ. – К.: А.С.К, 2015. – 432 с.
70. Мак Генри В.К., Гудмэн С.Э. Управленческие информационные системы на советских промышленных предприятиях: несостоятельность работы сверху // УСиМ. – 2010. - №5.-с.11-18.

71. Маленво Э. Лекции по микроэкономическому анализу / Пер. с франц. Под ред. К.А. Багриновского. – М.: Наука. Главная редакция физико-математической литературы, 2015. – 392 с.
72. Медницкий В.Г. Анализ экономической эффективности с помощью оптимизационных моделей // Экономика и математические методы. – 2006. – Т.32. – Вып.2. – С.104-116.
73. Мескон М.Х., Альберт М., Хедоури Ф. Основы менеджмента. – К.: Выща школа.-2012. - 702 с.
74. Метод статистических испытаний (метод Монте-Карло) / Н.П. Бусленко, Д.И. Голенко, И.М. Соболев, В.Г. Срагович, Ю.А. Шрейдер. – К.: А.С.К, 2002. – 330 с.
75. Методика проведения анализов и изучения рынка. – Люксембург: Офис официальных зданий Европейского Сообщества. – 2016. – 68 с.
76. Миркин В.Г. Анализ качественных признаков и структур, 3-е изд. – К.: Выща школа, 2012. – 320 с.
77. Михалевич В.С., Волкович В.Л. Вычислительные методы проектирования и анализа сложных систем. – М.: Наука, 2003. – 336 с.
78. Михалевич В.С., Михалевич М.В. Динамические макромоделли процессов це-нообразования в переходной экономике / Кибернетика и системный анализ. – К., 2005. - №3. – с.116 – 130.
79. Моисеев Н.Н. Математические задачи системного анализа. – М.: Наука, 2001. – 488 с.
80. Молчанов А.А. Моделирование и проектирование сложных систем, 3-е изд. – К.: Ви-ща школа, 2015. – 359 с.
81. Мулен Э. Кооперативное принятие решений: Аксиомы и модели./Пер. с англ. Под ред. Меньшикова И.С. – К.: Наукова думка, 2011. – 463 с.
82. Науменко В.І., Панасюк Б.Я. Впровадження методів прогнозування і планування в умовах ринкової економіки. – К.: Глобус, 2005. – 198 с.

83. Нейлор Т. и др. Машинные имитационные эксперименты с моделями экономических систем, 3-е изд. – М.: Мир, 2005. – 502 с.
84. Немчинов В.С. Экономико-математические методы и модели, 3-е изд. – М.: Мысль, 2005. – 478 с.
85. Нечеткие множества в моделях управления и искусственного интеллекта / Под ред. Д.А. Поспелова. – М.: Наука, 2016. – 312 с.
86. Оборська С.В. Концептуальні засади формування системи антикризового управління промисловим підприємством / С.В. Оборська. // Вісн. Нац. ун-ту "Львів. політехніка". Пробл. економіки та упр. — 2008. — N 628. — С. 592-595.
87. Обработка нечеткой информации в системах принятия решений / А.Н. Бори-сов, А.В. Алексеев, Г.В. Меркурьева, Н.Н. Слядзь, В.И. Глушков. – К.: Наукова думка, 2009. – 256 с.
88. Овезгельдыев А.О. Принятие решений в условиях нестационарных параметров системы// Вестник Херсонского технического университета. – 2008. - №2. – с.36-40.
89. Овезгельдыев А.О., Петров Э.Г., Петров К.Э. Синтез и идентификация моделей многофакторного оценивания и оптимизации. – К.: Наукова думка, 2002. – 163 с.
90. Ойхман Е.Г., Попов Э.В. Реинжиниринг бизнеса, 3-е изд. – М.: Финансы и статисти-ка. –2013. – 336 с.
91. Самуэльсон П. Э. Экономика: [учебник]: Пер. с англ. / П. Э. Самуэльсон, В. Д. Нордхаус. — К.: Выща школа, 2009. — 1358 с.
92. Терещенко О.О. Антикризове фінансове управління на підприємстві: [моногр.] / О.О. Терещенко. — К.: КНЕУ, 2004. — 268 с.
93. Штангрет А. М. Антикризове управління підприємством: [навч. посіб.] / А. М. Штангрет, О. І. Копилюк. – К.: Знання, 2007. – 335 с.
94. Яковцев Ю.В. Циклы. Кризисы, Прогнозы. / Ю.В. Яковцев. - М.: Наука, 2002. – 295 с.

95. «IATA отчиталась об ускорении роста пассажирских перевозок» [Электронный ресурс]: Режим доступа: <http://www.ato.ru/content/iataotchitalas-ob-uskorenii-rosta-passazhirskih-aviaperevozok>;
96. «PEST анализ: разбираем подробно» [Электронный ресурс]: Режим доступа: <http://powerbranding.ru/biznes-analiz/pest/>;
97. «Авиакомпании и их реакция на кризис» [Электронный ресурс]: Режим доступа: http://expert.ru/ratings/table_25879/;
98. «Авиакомпании» [Электронный ресурс]: Режим доступа: <http://www.ato.ua/airlines>;
99. «Международная ассоциация IATA зафиксировала рост пассажиропотока на 7,3%» [Электронный ресурс]: Режим доступа: <http://www.gudok.ru/passengertrans/>;
100. Batagelj V., Ferligoj A., Doreian P., Fitting Pre – specified blockmodels. Preprint Series, University of Ljubljana v.52, 2010. - 534 p.
101. Bellman R.E., Zadeh L.A. Decision-making in a fuzzy environment. – Management Sci., - 2012. – V.37, 4, 141-164 pp.
102. Blossfeld H.-P., Prein G. Business Information Technology Management: Alternative and Adaptive Futures. – Basingstoke: Macmillan, 2000. – 499 p.
103. Booth S, Crisis Management Strategy. Competition and Change in Modern Enterprises. / S. Booth. - London: "Routledge", 1993. - 13 p.
104. Buxton R. Modelling uncertainty in expert systems. – Int. J. Man-Machine Studies, V.53, 2011, 415-476.
105. Carroll G.R., Teece D.J. Firms, Markets, and Hierarchies: The Transaction Cost Economics Perspective. – N.Y.: Oxford University Press, 2002. – 544 p.
106. Chen M., Liou Y.I., Weber E.S. Developing Intelligent Organizations: a Context-Based Approach to Individual and Organizational Effectiveness. – Journal of Organizational Computing, - 2014. – V.15, 2, 181-203 pp.

107. Chiapello E., Lebas M. The Tableau de Bord, a French Approach to Management Information, Working Paper (Revised Third Draft), August 2001, p.3.
108. Chrystal A., Lipsey R.G. Economics for Business and Management. – N.Y.: Oxford University Press, 1997. – 722 p.
109. Cooper W.R., Ijiri Y.R., Kozmetsky G.R. Creative and Innovative Approaches to the Science of Management. – Westport: Quorum Books, 2017. – V.22, 506 p.
110. Davis Ph. Debt, Financial Fragility and Systemic Risk. – London: Oxford University, 2015. – V.10, 396 p.
111. Dubois D., Prade H. Fuzzy Sets and Systems. – N.Y.: Academic Press, 2017. – V.8, 393 p.
112. Gerard-Varet L.-A., Kirman A.P. Economics beyond the Millennium. – Oxford: Oxford University Press, 2016. – V.15, 366 p.
113. Hicks D.T. Activity-based costing: making it work for small and mid-sized companies, 2-nd ed., John Wiley & Sons, New York, NY, 1999.
114. Ibrahim A., Ayyub B.M. Multi-criteria ranking of components according to their priority for inspection (Invited Review). – Fuzzy Sets and Systems, 48, 1, 2016. – V.5, 1-14.
115. Kaplan R.S., Norton D.P. The Balanced Scorecard: Translating Strategy into Action, Harvard Business School Press, Boston, 1996.
116. King P.J., Mamdani E.H. The application of fuzzy control systems to industrial processes, Automatica, vol.13, 2017. - V.15, p. 242.
117. Kosko B. Fuzzy Engineering. Prentice-Hall, New Jersey, 2015. – V.15, 549 p.
118. Levy, Haim & Sarnat, Marshal. Capital investment & financial decisions. NY, Prentice Hall, 2014. – V.22, 782 p.
119. Loning H., Pesqueux Y. et al.. Le controle de gestion, Dunod, Paris, 1998.

120. McCahery J., Picciotto S., Scott C. Corporate Control and Accountability: Chang-ing Structures and the Dynamics of Regulation. – Oxford: Clarendon Press, 2013. – V.15, 456 p.
121. Meyers, Gerald C., and John Holusha. When It Hits the Fan. / G. Meyers., J. Holusha. - London: Unwin Hyman, 2016. – V.25, p.176
122. Mintzberg, Henry and Quinn, James Brian. The Strategy Process. Concepts, Con-texts, Cases. New Jersy, Englewood Cliffs^ Prentice Hall, 2011. – V.12, 1083 p.
123. Nielsen, J. Heuristic evaluation, in J.Nielsen and R.Mack (eds). Usability Inspec-tion Methods. – NY: John Wiley and Sons, 2014. - V.16, 634 p.
124. Nielsen, J. Usability Engineering. – Boston, MA: Academic Press, 2017. - V.21, 202p.