SYSTEMATIC APPROACH TO THE ANALYSIS OF RECEIVABLES OF THE ENTERPRISE ON THE BASIS OF STATISTICAL DATA

The article examines the economic literature on the approaches to the analysis of receivables of the enterprise. The sequence of receivables analysis has been made by stages: definition of purpose, objects, tasks of analysis, work on sources of information, quantitative and qualitative analysis of receivables, evaluation and generalization of analysis results, development of appropriate recommendations to improve the efficiency of the enterprise. The system of indicators for the qualitative analysis of receivables of the enterprise has been generalized. According to the proposed system of indicators, the relevant calculations were made on the example of the food industry enterprise and recommendations were given to improve the status of settlements with debtors. The analysis carried out in this sequence will allow to assess the real state of receivables of the enterprise, as well as to identify problematic aspects of receivables management, to develop measures to reduce overdue and doubtful receivables.

Key words: receivables, receivables analysis, qualitative analysis, quantitative analysis, coefficients, indicators, financial condition, default risk.

Statement of the problem and its connection with important scientific and practical tasks. Usually receivables account for a large share of current assets of the enterprise, and therefore has a significant impact on its financial condition.

In a market economy, the presence of a small amount of receivables in the company is acceptable, but a significant increase in the latter can have negative consequences, as buyers will not always be able to fulfill their obligations in full and on time. Therefore, it is important for the company to be able to properly assess the condition and analyze receivables.

To date, the problem of the risk of default by debtors has been significantly complicated by the coronavirus pandemic. Quarantine measures and restrictions have had a significant impact on the financial situation of many businesses, especially small businesses. This problem makes the topic more relevant, because thanks to the proper organization of accounting and analysis of receivables, it is possible to avoid the risks of default and eliminate existing difficulties.

The analysis of the latest publications on the problems. The problem of methods of accounting and analysis of receivables at the enterprise was considered in the works of domestic and foreign scientists in different areas: - approaches to determining the nature of receivables were covered in the works of M.D. Bilyk, E.A. Ivanov, M.V. Kuzhelny.

- the issues of accounting for settlements with debtors were considered by such specialists as F.F. Butynets, M.S. Pushkar, V.O. Shevchuk, D. Stone, J. Van.Horn, Body Zwi.

- the method of analysis of receivables in modern economic conditions was proposed by such scientists as E.P. Gnatenko, T.C. Yedinak, P.Ya. Popovich, GV Savitska, O.Ya. Bazilinska, V.B. Ivashkevich, O.G. Lyshchenko, I.I. Pasinovich and others.

As can be seen from the above, the issue of accounting and analysis of receivables has been considered in a large number of papers by various experts, but, despite this, this problem remains relevant today, and therefore needs to be considered in further research.

Forming of the aims of the research. The purpose of the article is to study the economic literature...
on the approaches to the analysis of receivables of the enterprise, as well as conducting qualitative and quantitative analysis of receivables according to the proposed method on the example of the food industry enterprise.

**Giving an account of the main results and their substantiation.** According to the Regulation (standard) of accounting 10 “Accounts receivable” is the amount of debt of debtors to the company at a certain date [1].

Presence of receivables in the company is a normal phenomenon, but it is important to control its volume, which depends on the terms of settlements with customers, the period of deferred payment, payment discipline of customers, the organization of control over receivables at the company.

The analysis of receivables should be aimed at identifying the factors that affect the state of receivables, namely its growth and the development of measures to prevent this.

Information on the disclosure of receivables of the enterprise is provided in the financial statements, namely in the form №1 "Balance Sheet (Statement of financial condition of the enterprise)” you can find information on long-term receivables and receivables classified by type (lines 1040,1120-1155) and Form №5 “Notes to the annual financial statements” reflects receivables by maturity (lines 940-970).

Today, there are a large number of approaches to the method of analysis of receivables, proposed by scientists in the economic literature, the most common of which are shown in table 1.

| Author                        | Areas of analysis of receivables                                                                 |
|-------------------------------|--------------------------------------------------------------------------------------------------|
| F.F. Butynets                 | Analysis taking into account the parameters: the time of turnover of receivables, the structure of debtors on various grounds, schemes of settlements with customers, the scheme of control over the fulfillment of their obligations by debtors, the principles of provisioning for doubtful debts. |
| G.V. Savitskaya               | Analysis of the reasons for the change in receivables. Assessment of its quality and liquidity. The speed of collection of receivables. Losses from its late repayment. |
| P.Ya. Popovich                | Analysis of the state of receivables: dynamics, magnitude, composition and movement. Doubtful and bad debts are considered. Accounts payable analysis. |
| E.P. Gnatenko                 | Analysis of the dynamics, structure by terms and types of occurrence to identify overdue and bad debts, comparative analysis with accounts payable. |
| Pasinovich I.I., Shevchuk O.M. | Application of the following indicators for the analysis: the ratio of diversion of working capital into receivables, the turnover ratio of receivables, the average maturity, the ratio of receivables and payables. |

Table 1 compiled by the authors based on sources [2-6]

Table 1 shows that the approaches of scientists to the analysis of receivables differ. Butynets F.F. considers receivables by characteristics and pays attention to control over the timeliness of repayment of receivables by debtors. Popovich P.Ya. and Gnatenko EP offer to conduct a quantitative analysis of receivables, taking into account the comparative analysis of accounts payable and receivables. In contrast to the above scientists, Pasinovich II and Shevchuk OM offer to calculate indicators that characterize the state of receivables, without paying attention to accounts payable. Savitska GV considers the reasons for the change in receivables, as well as analyzes the risks of late repayment.

Thus, the study of the economic literature allowed us to make a sequence of analysis of receivables by stages, shown in Figure 1, which, in our opinion, is more appropriate.

In accordance with the proposed method, we will analyze receivables on the example of the food industry enterprise.

At the first stage of the analysis of receivables, its purpose, objects, tasks are determined. The purpose is to determine directly the status of settlements with debtors at the enterprise and to make appropriate management decisions to improve the situation. The objects of the analysis are receivables by type (for products, goods, works and services, by calculations, other current receivables, long-term receivables). The tasks of the analysis can be:

- identification of the factors that initiated the debt;
- assessment of the composition, dynamics and structure of receivables;
- analysis of receivables of the enterprise by maturity;
- analysis of the qualitative state of receivables according to the system of indicators;
- making appropriate management decisions to improve the status of settlements with debtors.

At the second stage of the analysis the sources of information are processed, which are the forms of financial statements (form №1 "Balance Sheet (Statement of financial condition of the enterprise)" and form №5 "Notes to the annual financial statements"), various analytical information on receivables, internal reporting.
At the third stage, the analysis of the composition, dynamics and structure of receivables, usually using an analytical table, table 2 is carried out. At this stage, it is possible to identify at the expense of which types there was a decrease or increase in receivables for a certain period, as well as the share of each type in the total debt.

Next, a system of indicators that characterize the state of receivables is calculated.

Table 2
Analysis of the composition, structure and dynamics of receivables on the example of the food industry enterprise*

| Indicators                                  | Absolute quantity | Specific weight,% | Deviation |
|---------------------------------------------|-------------------|------------------|-----------|
|                                             | at the beginning of the reporting year | at the end of the reporting year | at the beginning of the reporting year | at the end of the reporting year | absolute | specific | in% to the value at the beginning of the reporting year | in% to the amount of change in receivables |
| Accounts receivable total, including:       | 5980              | 278              | 100       | 100       | -5702    | x       | -95,35   | 100 |
| 1.1. Accounts receivable for goods, works, services | 1 911             | 278              | 31,96     | 100       | -1633    | 68,04   | -85,45   | 28,64|
| 1.2. Accounts receivable according to calculations: | 4 069             | -                | 68,04     | -         | -4069    | -68,04  | -100     | 71,36|
| - for issued advances                       | 4 069             | -                | 68,04     | -         | -4069    | 68,04   | -100     | 71,36|
| - with budget                               | -                 | -                | -         | -         | -        | -       | -        | -    |
| - including income tax                      | -                 | -                | -         | -         | -        | -       | -        | -    |
| - from accrued income                       | -                 | -                | -         | -         | -        | -       | -        | -    |
| - from internal calculations                | -                 | -                | -         | -         | -        | -       | -        | -    |
| 1.3. Other current receivables              | -                 | -                | -         | -         | -        | -       | -        | -    |

* calculated by the authors on the basis of financial statements of the enterprise
Table 2 shows that receivables at the end of the reporting year compared to the beginning of the year decreased by 5702 thousand UAH or 95.35%. This was due to a reduction in receivables for goods, works and services by UAH 1,633,000 or by 85.45%, arrears by calculations - by 4069 thousand UAH or 100%. In the structure of receivables at the beginning of the reporting year, the largest share is accounted for by arrears – 68.04%, the share of arrears for goods, works and services amounted to 31.96%. At the end of the reporting year, the following changes took place in the structure of receivables: the structure of receivables consists entirely of receivables for goods, works and services.

An important aspect of the analysis is the ratio of receivables and payables. This comparison makes it possible to draw certain conclusions about the excess of the former or the latter. Table 3 shows a comparative analysis of receivables and payables on the example of the food industry enterprise.

Table 3

| Indicators | Accounts receivable, thousand UAH | Accounts payable, thousand UAH | Excess of debt |
|------------|----------------------------------|--------------------------------|----------------|
| 1. Debt for goods, works, services, thousand UAH | 278 | 10381 | - 10103 |
| 2. According to calculations: | - | 5368 | - 5368 |
| - with budget | - | 4630 | - 4630 |
| - from insurance | - | 27 | - 27 |
| - on wages | - | 711 | - 711 |
| 3. Other types of debt | - | 5064 | - 5064 |
| Total | 278 | 20813 | - 20535 |

*calculated by the authors on the basis of the financial statements

Table 3 shows that at the end of the reporting year there was an excess of accounts payable over receivables by 20,535 thousand UAH. This was due to the excess of accounts payable for goods, works and services by UAH 10,103 thousand, arrears by calculations by UAH 5,368 thousand. and other current debt by UAH 5064 thousand. A significant excess of accounts payable over receivables poses a threat to the financial stability of the enterprise.

System of indicators characterizing the state of receivables*

| Indicator | Calculation formula | Economic content |
|-----------|---------------------|------------------|
| 1. The turnover ratio of receivables | Rtr = net profit from sales / average value of receivables | Shows how many times during the period under review, the funds invested in the calculations circulate. The positive dynamics of this indicator means the stability of financial relations with debtors. |
| 2. The duration of the receivables repayment period | Drp = reporting period in days / the turnover ratio of receivables | Shows how many days it takes the company to receive payment from buyers (customers) for the work (services provided). The longer the repayment period, the higher the risk of debt default. |
| 3. The share of receivables in total current assets | SHR = average value of the receivables / current assets * 100% | Shows the share of receivables in total current assets. The value of this indicator determines the mobility of the property structure of the enterprise. |
| 4. The ratio of receivables and payables | Rrp = receivables / payables | Shows the ability of the company to pay its debts to creditors at the expense of receivables. |
| 5. The share of doubtful accounts receivable in receivables | SHR = doubtful accounts receivables / average value of the receivables * 100% | The positive dynamics of this indicator and the amount of doubtful accounts receivables is a negative trend in settlements with buyers and customers. |

* compiled by authors based on sources [5-7]

Table 4 shows the indicators for a qualitative analysis of receivables. According to these indicators, it is more appropriate to conduct the analysis in dynamics, comparing the calculated indicators for the previous and
reporting periods. At comparison it is possible to draw conclusions about improvement or on the contrary deterioration of a condition of calculations with debtors.

The fourth and fifth stages are final and summary. At this stage, we evaluate the results of the analysis and draw appropriate conclusions that will further be able to make effective management decisions to improve the state of receivables and the enterprise as a whole.

Accordingly, the indicators presented in table 4 will analyze receivables on the example of the food industry enterprise.

### Table 5

| Indicator                                      | Previous year | Reporting year |
|------------------------------------------------|---------------|----------------|
| 1. Net profit, thousand UAH                   | 11075         | 3178           |
| 2. The average amount of receivables, thousand UAH | 10135         | 3129           |
| 3. Receivables turnover ratio, thousand UAH   | 1,09          | 1,02           |
| 4. Duration of the period, days               | 360           | 360            |
| 5. Duration of the receivables repayment period, days | 330           | 353            |
| 6. The value of current assets, thousand UAH  | 20170         | 16182          |
| 7. The share of receivables in total current assets, % | 50,25         | 19,34          |
| 8. The amount of accounts payable, thousand UAH | 20216         | 15479          |
| 9. The ratio of receivables and payables      | 0,3           | 0,02           |

* calculated by the authors on the basis of financial statements of the enterprise

Table 5 shows that in the reporting year compared to the previous year, the turnover ratio of receivables decreased significantly, which negatively characterizes the activities of the enterprise. The length of the receivables repayment period increased significantly from 330 days to 353 days, which indicates a higher risk of non-repayment of debts. The ratio of receivables and payables showed that the company is not able to pay its debts to creditors at the expense of receivables.

Thus, the analysis of receivables showed what exactly the management of the company should pay attention to in order to eliminate the shortcomings associated with receivables. The analysis of the composition, structure and dynamics of assets showed that receivables at the end of the reporting year compared to the beginning of the year decreased by 5702 thousand UAH or 95.35%. In the structure of receivables at the beginning of the reporting year, the largest share is accounted for by arrears – 68.04%, the share of arrears for goods, works and services amounted to 31.96%. At the end of the reporting year, the following changes took place in the structure of receivables: the structure of receivables consists entirely of receivables for goods, works and services. A comparative analysis of receivables and payables showed that at the end of the reporting year there was an excess of accounts payable over receivables by 20,535 thousand UAH. This was due to the excess of accounts payable for goods, works and services by UAH 10,103 thousand, arrears by calculations by UAH 5,368 thouands and other current debt by UAH 5064 thousand. Qualitative analysis showed that the turnover ratio of receivables has decreased significantly, which negatively characterizes the activities of the enterprise. The length of the receivables repayment period increased significantly from 330 days to 353 days, which indicates a higher risk of non-repayment of debts.

The proposed method can be used to identify and eliminate deficiencies related to receivables in order to improve the efficiency of the enterprise.

### Conclusions and prospects of the further investigations

Thus, the article considered the most common approaches to the analysis of receivables in the economic literature, proposed stages of the analysis of receivables, which include: definition of purpose, objects, tasks of analysis, work on sources of information, quantitative and qualitative analysis of receivables, evaluation and generalization of the results of the analysis, development of appropriate recommendations to improve the efficiency of the enterprise. According to these stages, the analysis of receivables was carried out on the example of the food industry enterprise. The proposed method will allow you to properly organize the analysis of receivables, as well as timely identify problems of occurrence and prevention of overdue receivables, which will increase the efficiency of economic activity of the enterprise and reduce the risk of default.
Системний Підхід до Аналізу Дебіторської Задовженності Підприємств на Основі Статистичних Даних

Організація уцілів дебіторської задовженності має важне значення для суб'єктів господарювання, освоєння всього арсеналу джерел. Успішне функціонування бізнесу можливе при умовах правильного управління рахунками з дебіторами. Стратегічне значення даної проблеми заключається в тому, що дебіторська задовжність оцінюється залежно від ликвидності активів, фінансове стан підприємства та платежеспособності підприємства.

В статті проведено аналіз економічної літератури по питанням подходів до аналізу дебіторської задовженності підприємств. Приведена послідовність проведення аналізу дебіторської задовженності за етапами: визначення цілей, об'єктів, задач аналізу; розробка форми аналізу; розробка моделей визначення показників аналізу; розробка моделей оцінки дебіторської задовженності підприємства. Обов'язка система аналізу дебіторської задовженності підприємства, на зміну якісним показникам дебіторської задовженності, приймає погашення, доля дебіторської
СИСТЕМНИЙ ПІДХІД ЩОДО ЗДІЙСНЕННЯ АНАЛІЗУ ДЕБІТОРСЬКОЇ ЗАБОРГОВАНОСТІ ПІДПРИЄМСТВА НА ПІДСТАВІ СТАТИСТИЧНИХ ДАНИХ

Організація обліку дебіторської заборгованості має важливе значення для суб’єктів господарювання всіх галузей. Адже успішне функціонування будь-якого підприємства можливе за умови правильної організації управління розрахунками з дебіторами. Стратегічне значення даної проблеми полягає в тому, що дебіторська заборгованість здатна впливати на ліквідність активів, фінансовий стан та платоспроможність підприємства.

В статті проведено дослідження економічної літератури з питань розгляду підходів до аналізу дебіторської заборгованості підприємства. Складено послідовність проведення аналізу дебіторської заборгованості за етапами: визначення мети, об’єктів, завдань аналізу; робота над джерелами інформації; проведення кількісного та якісного аналізу дебіторської заборгованості; оцінка та узагальнення результатів аналізу; розробка відповідних рекомендацій щодо підвищення ефективності діяльності підприємства. Узагальнено систему показників для якісного аналізу дебіторської заборгованості підприємства, до яких можна віднести: коефіцієнт оборотності дебіторської заборгованості, тривалість періоду погашення, питома вага дебіторської заборгованості в загальному обсязі оборотних активів, коекфіцієнт співвідношення дебіторської та кредиторської заборгованості. За запропонованою системою показників були проведено відповідні розрахунки на прикладі підприємства харчової промисловості та надані рекомендації щодо покращення стану розрахунків з дебіторами. Аналіз, проведений за розглянутою послідовністю, надає змогу оцінити реальній стан дебіторської заборгованості підприємства, а також дозволить виявити проблемні аспекти щодо управління дебіторською заборгованістю, розробити заходи щодо скорочення простроченої та сумнівної дебіторської заборгованості.

Ключові слова: дебіторська заборгованість, аналіз дебіторської заборгованості, управління дебіторською забогованістю, якісний аналіз, кількісний аналіз, коекфіцієнти, фінансовий стан, ризик неплатежей.
Література

1. Дебіторська заборгованість: Положення (стандарт) бухгалтерського обліку 10, затв. Наказом Міністерства фінансів України від 08.10.1999 р. № 237 за станом на 27.06.2013. URL: http://zakon.rada.gov.ua/laws/show/z0725-99 (дата звернення: 01.06.2020 р.).

2. Бухгалтерський фінансовий облік: підручник для студентів спеціалізування «Облік і аудит» вищих навчальних закладів / Ф. Ф. Бутинець та ін. Житомир: ПП «Рута», 2009. 912 с.

3. Савицька Г.В. Економічний аналіз діяльності підприємства: навчальний посібник. Київ: Знання, 2015. 662 с.

4. Гнатенко Є. П. Сучасні методики аналізу дебіторської заборгованості / Є. П. Гнатенко, А. М. Лебедин // Молодий вчений. 2016. № 11. С. 562-565. - URL: http://nbuv.gov.ua/UJRN/molv_2016_11_132. (дата звернення: 01.06.2020).

5. Пасінович І.І., Шевчук О.М. Актуальні проблеми аналізу і управління дебіторською заборгованістю підприємства // Економіка. Управління. Інновації. 2013. № 2. URL: http://nbuv.gov.ua/UJRN/eui_2013_2_65. (дата звернення: 01.06.2020).

6. Савицкая Г.В. Анализ эффективности и рисков предпринимательской деятельности: методологические аспекты: монография. 2-e изд., перераб. и доп. М.: ИНФРА-М, 2019. 291 с. URL: www.dx.doi.org/10.12737/23374 (дата звернення: 01.06.2020).

7. Міщук С.В., Сидорова І. Аналіз дебіторської та кредиторської заборгованості: проблемні аспекти // Економічна наука. 2018. № 26. С. 184-192. URL: http://dspace.kntu.kr.ua/jspui/bitstream/123456789/291/1/28.pdf (дата звернення: 01.06.2020).

8. Лисенко А.М. Методика проведения анализа дебиторской и кредиторской заборгованости субъектов господарования // Економічна наука. 2014 № 26. С. 54–57. Режим доступу: http://www.investplan.com.ua/pdf/2_2018/12. pdf (дата звернення: 01.06.2020).

9. Антонюк О.П., Ступницька Т.М., Купріна Н.М. Економічний аналіз: практикум: навч. посібник. Львів: Магнолія, 2006-2015. 325 с.

10. Stupnytska T., Volodina O., Holovachenko L., Vasylieva Yu. Methods of the analysis of the debts receivable: Modern aspect // Food Industry Economics. 2018. Vol.10, Issue 3. P. 94-101. doi: 10.15673/fie.v10i3.1066

Цитування згідно ДСТУ 8302:2015
Stupnytska T., Antonyuk O., Volodina O., Orel A. Systematic approach to the analysis of receivables of the enterprise on the basis of statistical data // Food Industry Economics. 2020. Vol.12, issue 3. P. 25-32. doi: 10.15673/fie.v12i3.1813

Cite as APA style citation
Stupnytska, T., Antonyuk, O., Volodina, O., & Orel, A. (2020). Systematic approach to the analysis of receivables of the enterprise on the basis of statistical data. Food Industry Economics, 12(3), 25-32. doi: 10.15673/fie.v12i3.1813