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**Accounting problems in the management of financial
resources of agricultural producers**

ABSTRACT

**of a dissertation for the award of an educational and
scientific degree "doctor" in a scientific specialty**

"Economics and Management (Agriculture)"

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STRUCTURE AND SCOPE OF THE DEVELOPMENT

The developed dissertation has a volume of 201 pages of main text and 22 pages of appendices. The material is illustrated by 37 figures and 20 tables. The structure of the development consists of an introduction, an exposition in three chapters, general conclusions from the dissertation research, recommendations of a practical-applied nature and a list of the literature used. The number of literary and information sources used is 87 monographs, textbooks, studies, articles, reports; 32 normative acts; 6 official websites of institutions. 2 appendices are presented to the dissertation work.

The dissertation was discussed and referred for defense by the Department of Economics at Trakia University, Stara Zagora, with protocol No. 5/15.03.2023.

The public defense of the dissertation work will take place on 16.06.2023. from 1:00 p.m. in Hall 3-A of Trakia University, Stara Zagora, at an open meeting of the scientific jury, determined by Order No. 1198/07.04.2023. of the Rector of Trakia University, Stara Zagora.

The materials for the defense of the dissertation are available in the "Scientific" department of the Faculty of Economics, Trakia University and online at <https://trakia-uni.bg/>

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I. GENERAL CHARACTERISTICS OF THE DISSERTATION

1. Relevance of the problem

As a result of its membership in the European Union, the agricultural sector in Bulgaria is undergoing technological development and economic upswing. This dynamic development leads to the need to improve the administration of enterprises in the sector and increase their financial security. Inevitably, under these circumstances, the need to improve the accounting information system also arises. The increase in the complexity of transactions leads to a number of challenges for accounting science, with a view to providing relevant and reliable information. The need for a new approach in determining the cause-and-effect relationships for guaranteeing liquidity and sustainability of the enterprise through financial resources is outlined. Both land relations and agrarian policy are changed. EU legislation and the common agricultural policy determine the role of the sector in the state economy. Until joining the union, Bulgarian farmers did not apply the rules and requirements of the community for financial support. The administrative enforcement challenges, in addition to the farming community, also turn out to be great for the institutions, in the form of the State Fund "Agriculture" - Paying Agency. For the implementation of all information activities in agriculture, it is also reported

the need to create a specialized information system for his condition, through the construction of a unified environment. The data, processed according to a unified methodology, collected in an identical way, provide an excellent basis for analyses, regarding the mechanisms of the Common Agricultural Policy and the activities under the EU Structural Policy.

From the point of view of the complex assessment, the management of the financial resources of the enterprise is a set of targeted methods, operations, levers, methods of influencing various types of finances to achieve a certain result, as well as the income intended for the fulfillment of financial obligations and making expenses .

From the point of view of their accounting treatment, for the accounting of financial resources we have to follow the Law of Reciprocity - the accounting theory considers every event or transaction bilaterally. Firstly, the acquisition of financial resources is considered through the relationship with their source and secondly – the management of the resources themselves – i.e. their transformation into other resources or their use to repay obligations (liabilities).

2. Object and subject of the study

The subject of the author's research is the management of the financial resources of agricultural producers.

The object is accounting in the management of the financial resources of agricultural producers in the agrarian sector, the structure

of financial resources, features of formation and disposition. The research is aimed at presenting opportunities for improving the accounting system of financial resources.

3. Purpose and tasks of the research

The purpose of the research is to identify the accounting problems in the management of financial resources of agricultural producers and, on this basis, to optimize existing and develop new models for accounting reporting of financial resources.

To achieve the set goal of the study, the following **research tasks** are set:

- Defining the concept of "financial resource" through the lens of accounting theory;
- Identification of accounting problems in the management of internal and external financial resources;
- Research of the subjective evaluations of accountants and farm managers about management-accounting problems;
- Development of optimized management-accounting models for reporting and analysis of financial resources in bilateral accounting;
- Development of an accounting model for disclosure of financial resources in unilateral accounting;
- Analysis and evaluation of the management of dependencies between financial resources in the agricultural holding.

4. Research thesis and research methodology.

The main thesis underlying the research can be decomposed into two sub-hypotheses:

1. There are accounting problems in the management of financial resources of agricultural producers, which relate to the four used elements of the accounting reporting method (normative basis, documentation, accounting interpretation and disclosure of GFO). The most serious problems are expected to stand out in the accounting interpretation.
2. Existing accounting models can be optimized and new models developed to overcome the identified problems.

To achieve the set goals and fulfill the research tasks, traditional research **methods** and tools are used, such as: historical approach to the development of the object, dialectical approach to the studied object, systematic approach, the methods of communication and comparison, analysis and synthesis, survey research and specific observations.

5. Scope of the study.

The scope of the study includes data with financial indicators from the statistical reports of all economic units from the aggregate that meet the previously set criteria: to exercise activity as agricultural producers on the territory of the Republic of Bulgaria. These are all companies, individuals and sole traders who have declared to the National Statistical Institute economic activity code 01 "Crop breeding, animal

husbandry and hunting; auxiliary activities" according to the CID 2008. Two groups falling under section 1 of the CID are excluded from the scope of the study 2008, namely groups 01.6 "Ancillary activities in agriculture" and 01.7 "Hunting and auxiliary activities". The research period includes 2016 – 2021.

6. Approval.

Parts of the dissertation have been published in specialized scientific publications. Some of the main studies and ideas of the author have been reported at international scientific conferences - Jubilee Conference "25th Trakia University", held in June 2020 and International Scientific Conference "Business and Development of Regions", held in June 2021 in the city of Stara Zagora . The proposed approaches to the improvement of the accounting information system, in its part with the accounting of financial resources in the agricultural holding, are aimed at the needs of managers and accountants employed in the field. The results of the study could be used by them, in the process of development of the organization and technology of accounting reporting and analyses.

II. STRUCTURE AND CONTENT OF THE DISSERTATION

The developed dissertation has a volume of 201 pages of main text and 22 pages of appendix. The material is illustrated by 37 figures and 20 tables. The structure of the development consists of an introduction, an exposition in three chapters, general conclusions from the dissertation research, recommendations of a practical-applied nature and a list of the

literature used. The number of literary and information sources used is 87 monographs, textbooks, studies, articles, reports; 32 normative acts; 6 official websites of institutions. 2 appendices are presented to the dissertation work.

First chapter. Theoretical foundations of the concepts of formation, management and reporting of financial resources among agricultural producers.

The development of this chapter is the result of the first research task. The definitions of the main concepts that will be considered in the study have been analyzed. The types and classification of concepts, both by Bulgarian and foreign authors, were examined. A detailed theoretical overview of the legal framework regarding the accounting reporting of agricultural producers has been made.

The first section of the first chapter summarizes the main definitions of the terms "financial resources" and "farmers". Every financial resource has a **dual nature** in accounting-economic theory. In concepts of authors such as Mirkovic and Trifonov: "The problem of duality in the economy... stems from expediency as a structural feature of the economic system. Resources and purpose are the two manifestations of this sign. It results in the relationship between factors and results and in the relationship between value and utility (the signs of equilibrium and metricity of the economic system)". According to Trifonov, the dual nature of accounting objects (economic resources as use and exchange values) is the basis of the research methods that

accounting applies - they specify the nature and specificity of accounting research compared to other economic disciplines. One of these methods is precisely the dual study (analysis) of the accounting accounts for the dynamic state of the accounting objects under the influence of the performed operations (deals).

Therefore, in accounting theory and practice, the financial resource acquires an active reflection, and its origin (the source) - a passive reflection. A further clarification is that for the purposes of the current study, financial resource and financial asset are used as synonymous terms.

In a scientific study by Radchenko, it was confirmed that the resources of the activity are represented in the balance sheet of the economic unit, by their types, composition and functional role in the process of production reproduction on the one hand and they are represented by the sources of their formation on the other. In turn, the structure of the financial balance sheet is the most informative form that allows management decisions to be made, to determine the degree of security of one's own funds; to find out which articles caused the biggest changes.

In conclusion, it can be summarized that the composition of financial resources in an agricultural holding, in active terms, can be reduced to the following types:

- Available cash in a cash register or current account;
- Receivables (from customers);

- Investments in securities;

- Given loans;

These assets have their passive expression which traces their origin. They can be reduced to:

- Income from sales of goods, production, services, property and other fixed assets;

- Subsidies for reimbursement of farm expenses, in connection with the achievement of certain goals;

- Received external financing - loans, leases;

- Retained earnings.

For the purposes of the current study, this classification is accepted as working, in the study of the accounting aspects in accounting for the management of financial resources.

The activity of agricultural producers in Bulgaria is governed by the Law on Assistance to Agricultural Producers and Ordinance No. 3 of 1999. to create and maintain a register of agricultural producers. In 2015, following a decision of the National Assembly, the term "producer" was replaced by "farmer" in the entire Law on Assistance to Agricultural Producers, except for the title. Inevitably, the same thing happens with Ordinance No. 3, whose new name, however, becomes Ordinance No. 3 of January 29, 1999 on the creation and maintenance of a register of farmers. For the purposes of this dissertation, the terms

"farmer" and "farmer" are used synonymously and absolutely interchangeably.

In the **second section** of this chapter, the normative framework of the accounting reporting of agricultural producers is analyzed. Agricultural enterprises in Bulgaria do not fall within the scope of mandatory application based on the International Accounting Standards, but still the legislator gives such a right of choice. Regarding sole traders in Bulgaria - they can choose whether their reporting should be by the unilateral method or bilateral, since sole traders are natural persons by their legal nature. However, in the event that the net revenues from sales for the year are over BGN 50,000, their reporting must be carried out using the double-entry bookkeeping method.

For individuals, the reporting rules are similar to sole traders, although they are not subject to the Accounting Act. They are registered in the BULSTAT Register, which is maintained by the Registration Agency, maintaining interaction with the register of farmers. In the event that their net income from sales exceeds the value of BGN 50,000, they are required to register under the Law on Added Value, which in turn requires the two-sided form of accounting reporting, for the purposes of monthly submission of the Reference-Declaration.

In the **third section** of this chapter, the accounting standards applicable to the reporting and disclosure of financial resources in agriculture are analyzed sequentially, with a parallel examination of the national and international basis. The main similarities and differences

are tabulated and conclusions drawn. From a practical point of view, the utility and significance of such a summary could be very high.

In the **fourth section** of the first chapter, the importance of analytical and synthetic accounting is discussed. General and analytical accounting complement each other. Often, in the practice of countries with a developed market economy, they are conducted simultaneously and are based on almost the same sources of information: the main documents from which information is drawn are the same (invoices, payrolls, etc.).

The characteristic features of synthetic and analytical accounting are shown in tabular form:

Table 1 Comparative analysis of synthetic and analytical accounting.

Synthetic accounting	Analytical accounting
Mandatory	Voluntary
With strict rules and restrictions	Flexible and adaptable
Classification of costs by types	Classification of costs by economic purpose
Useful for general financial management	Useful for all types of management
Predominantly reflects external flows.	Predominantly reflects internal flows and directs attention to them

Analytical accounting is primarily a management tool. It is a set of rules and procedures related to the processing of information on the assessment of the main elements in order to determine the costs and the income-expenditure difference for different levels. On this basis, it is made detailed analysis of the functioning of the enterprise in order to facilitate the making of management decisions. This type of accounting must be adapted for each type of enterprise in accordance with the information base. Some of the main accounting reporting models developed in the dissertation are based precisely on the advantages of analytical accounting.

2. Second chapter. Methodology and methodological problems of accounting in the management of financial resources of agricultural producers

In the **first section of this chapter**, the methodology and methodology of the research is presented. After the concept of "financial resource" has been defined, according to the theory of management, its analogue from the accounting theory has been deduced through the method of comparison in the First Chapter in point 1.1.1, through the comparative analysis in point 1.3 the accounting standards that are used in the accounting of financial resources. After reviewing the legal framework and literary sources, it becomes clear that a different accounting technology is applied (one-sided or two-sided), compared to the legal form of registration of the agricultural producer (in point 1.2). The logical scheme of the overall development is presented in fig. 2.1. from the dissertation.

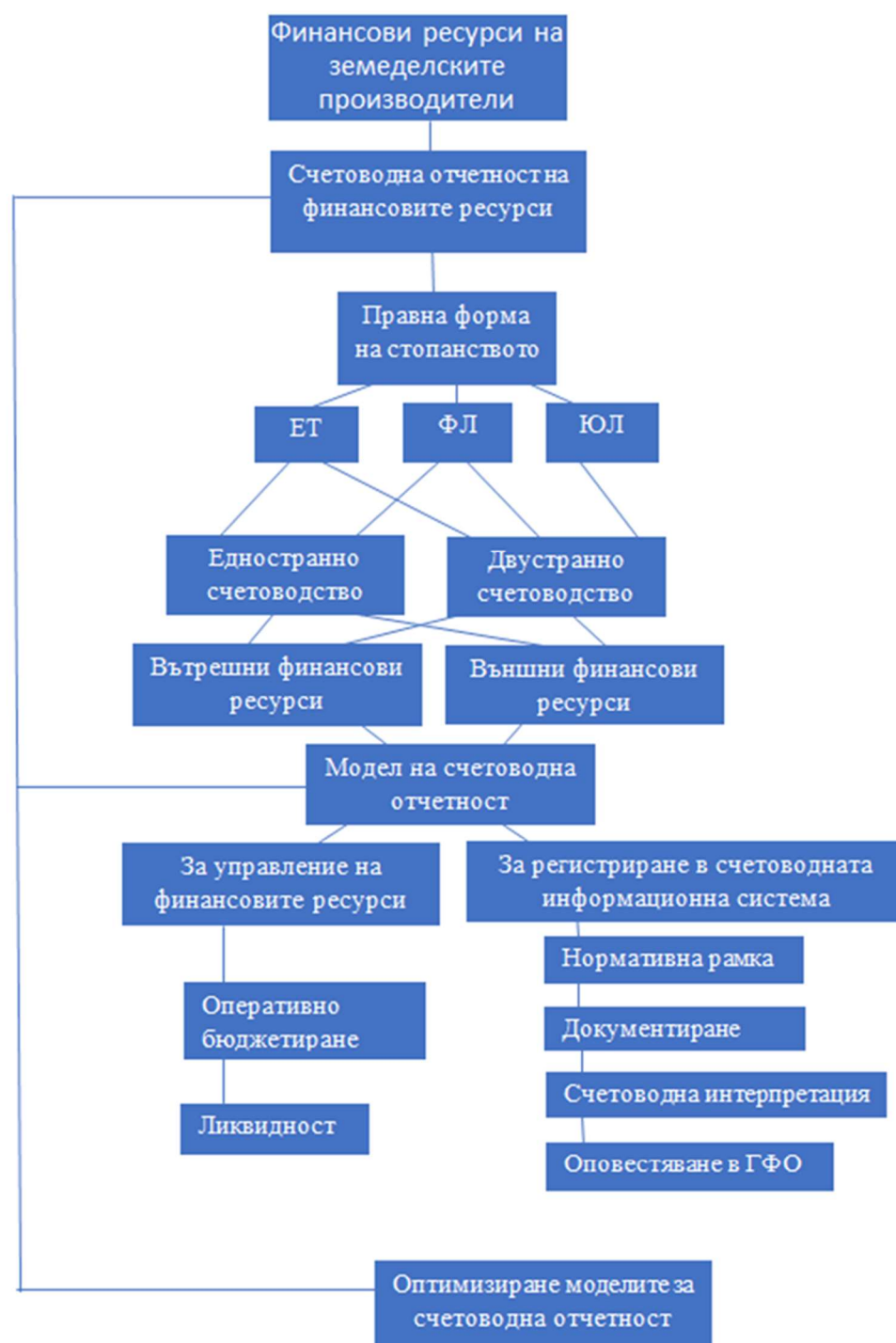


Fig.1. Structure diagram of the logical sequence in the dissertation. Source: own development.

Some of the most effective approaches and methods for analyzing aspects of the accounting information system were used for the study of the object. They are graphically presented in the following scheme:

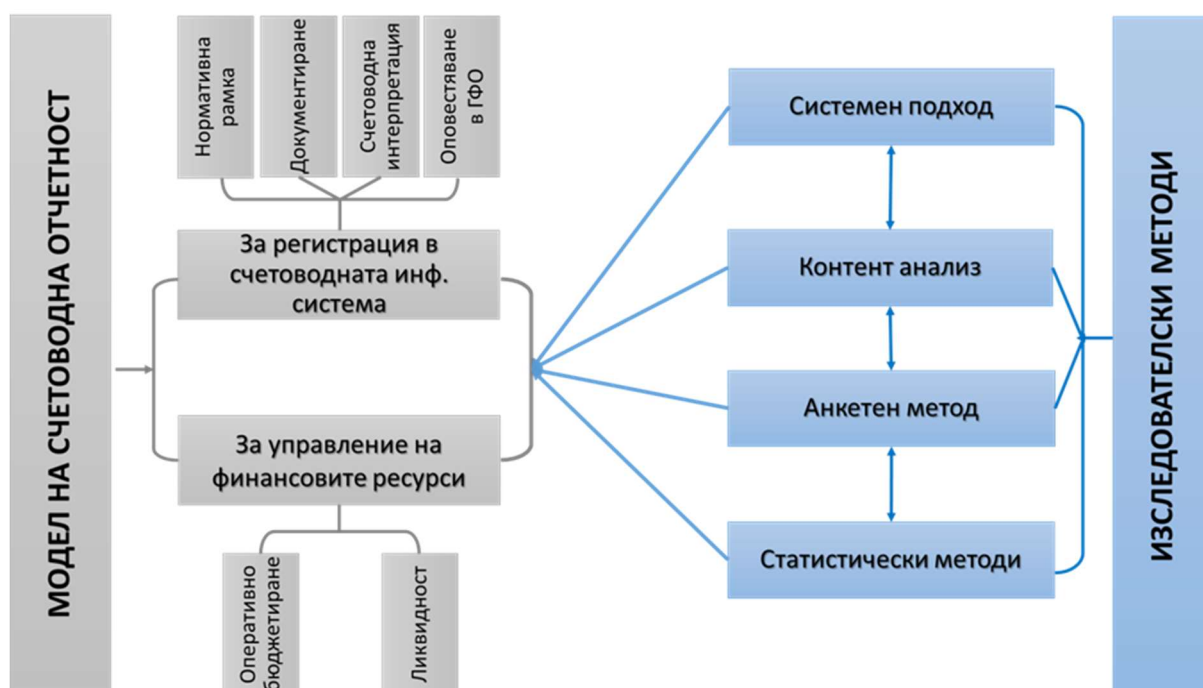


Fig. 2. Correspondence between the research object and the research methods. Source: own development.

The systematic approach method, standard for this type of research, was used to perform an analysis of accounting reporting by types of financial resources, in relation to the technology of accounting reporting - one-sided and two-sided.

Specific accounting methods such as the method of accounting accounts, documentation and periodic summarization are also used. To solve the identified problems, optimized models for accounting interpretation (for double-entry accounting) and for management reporting (for the unilateral). I.e. the results of the analysis through the

system approach are the basis for the creation of optimized models for accounting interpretation and for management purposes.

- Content analysis (content analysis) was used as a method to identify problems in the applicability of accounting information in the management of financial resources. As a result of this analysis, the accounting problems in the management of the financial resources of agricultural producers are identified.

- The survey method was applied to study the subjective assessments of management-accounting problems of agricultural producers. With the help of a survey and specific observations, additional verification of already identified problematic accounting aspects in the management of financial resources is sought, according to the subjective judgments of specialists - accounting and management personnel.

- Statistical methods for information processing – The statistical processing of the studied data was carried out using the SPSS statistical analysis package, using the following basic statistical analyses:

- Analysis of variance (ANOVA) - to establish the influence of objective activity parameters and preferences on subjective assessments of accounting problems in the management of financial resources;

- Student-Fisher t-test - to measure the significance of the differences between the groups of respondents, formed according to

the subscales of the studied variables, their demographic characteristics;

- Analysis of frequencies for the distribution of responses for the various variables;

- Graphical method for visualization and comparison of the obtained results.

The **second and third parts** of the second chapter examine the features and applicability of accounting information in the management of internal (own) and external sources of financial resources.

The problems related to accountability are isolated by means of an author's method borrowed from the elements of accountability methodology generally accepted by accounting theory. It consists of four main directions:

- Normative base – the applicable legal framework is synthesized for each considered financial resource and its source.

- Documentation – the principle of creating a document, as well as the requirements for it, so that it is suitable for registration in the accounting information system, without contradicting the legal framework for the relevant financial resource, is illustrated.

- Accounting interpretation – it is shown how the corresponding already documented financial resource is registered in the system, through the method of double-sided accounting debit and credit of the respective accounting accounts.

- Presentation in the annual financial report – how the accounting information about financial resources is disclosed in the Annual Financial Report is examined, with a detailed description of each of the five components of the GFO.

The considered theoretical statements and normative requirements present a broad analysis of the peculiarities in the accounting of financial resources in agricultural holdings. After the admission of Bulgaria to the European Union, the agricultural sector in the country realized an upswing, both in terms of its production volumes and in terms of its technological development. In parallel with this, the obligation to develop the farm's administrative system inevitably follows. Accounting, as a basic and mandatory administrative unit, is imperative to "catch up" in terms of development with other aspects of the economy.

The reporting of financial resources needs to be improved. The main problem is the difficulties in their correct classification, which is due to various reasons: poor familiarity of the accountant with operational agricultural issues, poor familiarity with the measures and schemes by which producers receive funds from the EU, untimely provision of references by agronomists, by the representatives of the economy, etc.

There is an urgent need to specify and clarify the requirements for the presentation and disclosure of financial resources in the reports. This, in turn, necessitates giving a separate definition for each type, for the

purpose of clarity and comprehensibility, and help in choosing a valuation method, in the absence of an active market.

The "information hole" that has formed due to the imperfections in the reports is clearly visible through the appendices to the reports - more and more information has to be supplemented and added there in order to make it public.

Based on the analysis, there is a need to optimize existing or develop new models of accounting of agricultural producers to help solve the problems of accounting of the management of financial resources.

3. Third chapter. Practical-applied solutions to accounting problems in the reporting of the management of the financial resources of agricultural producers.

As a result of the formed problems, optimized accounting models have been developed in the following directions:

- a model for budgeting by responsibility centers, based on the theory of management accounting;

The developed author's model is based on the principles of operational budgeting, being based on the matrix principle of alternatives. The farmer can choose one or more of the possible means that are most suitable for his production. By preparing a profit matrix, one can measure the effects of substituting one resource for another in the structure of production or another aspect of the operation of the

enterprise. The presented method is a reliable tool for operational budgeting, with which farm managers can make informed management decisions to successfully invest and allocate financial resources in their farms.

- models for primary registration of financial resources in the accounting information system, based on the basic accounting theory; In solving the isolated problematic aspects in the second chapter, optimized models for registration of financial resources in the accounting information system have been developed. They are based on analytical reporting. Every commercial organization has the right to keep its accounts according to an individually prepared chart of accounts. It is recommended that the accounts on which the financial resources are reported directly or indirectly, depending on their nature, be kept materially and by the "partner" item. The models are detailed in point 3.2.2.

The economic benefits of this type of reporting stand out both in the organization of operational-financial activity and in management planning. When preparing documents for financing from external sources (e.g. banks or leasing companies), reporting through these models enables additional detailed inquiries, which are valued as data with greater transparency and administrative organization, by the authorities to which provide. Regarding the accounting models for the primary registration of financial resources in the accounting information system of agricultural producers, a number of optimizations have been proposed. One of the major improvements in

terms of reporting is the introduction of analytics in reporting. Each account is examined individually and a reasoned proposal is made for improving the organization of its reporting;

- adapted model for accounting reporting in unilateral accounting;

A model adapted to agricultural activity has been developed for those who report using the single-sided recording technology, based on applications in HSS1. The thesis presents its structure, as well as detailed instructions for filling it out. It has been tested practically, with an interpretation of the results and a description of the advantages.

- subjective assessments of the management-accounting problems of agricultural producers,

In addition to the application of the system-analytical method in the process of developing the topic, in communication with accounting specialists on the investigated problems, opinions were outlined that can be useful for clarifying the problems in the accounting reporting of the financial resources of agricultural producers.

Therefore, the empirical study on subjective evaluations of management accounting problems was conceived and conducted. As a result of a dispersion analysis, it was established that the subjective assessments of the management-accounting problems of farmers confirm the presence of difficulties for a significant part of the respondents and in a significant part of the activities, as there are objective factors that determine these subjective assessments. Problems in accounting reporting are found equally for almost all types of

accounting activities performed. The results of the empirical study confirm the established facts of the system analysis, which is an additional reason for the need to optimize existing or create new accounting models.

Dependencies were sought between all variables in the study that can explain the subjective assessments of the presence of a problem in the accounting reporting of financial resources. A one-way analysis of variance (ANOVA) was used to clearly delineate the determinations and to avoid interactions between different factors, as would occur when applying MANOVA.

The following statistically significant influences on subjective assessments of the presence of accounting problems were found:

- Position held by the respondent;

The position taken by the respondents has a statistically significant effect on the number of accounting activities in which the greatest difficulties are encountered ($F=123.7$ $p<0.001$; Table 1)

Table 1 Influence of the position held on activities causing difficulties in accounting and subjective assessments of the need to change the legislation.

Independent Variable	Dependent Variable	Ranks of Independent Variable	x Avg. of the dependent prom.	F, p	t
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Position occupied by the respondent	Number of activities with the greatest difficulties	Accountants Managers	X ₁ =6,23 X ₂ =2,82	F=123,7 p<0,001	-
	Need to change legislation	Accountants Managers	X ₁ =2,66 X ₂ =1,42	F=49,3 p<0,001	-

Source: own development.

Accountants in agricultural holdings state much more problems in accounting reporting (X₁=6.23) compared to managers (X₂=2.82). The position taken also affects

the opinion of the need to change the legislation (F=49.3, p<0.001; Table 1). In both cases, accountants indicated a statistically significantly greater number of problems and had a greater number of suggestions than farm managers.

- The size of the holding, relative to the SPO;

Table 2 Influence of the size of the farm according to the SPO, on the activities causing difficulties in accounting reporting.

Independent Variable	Dependent Variable	Ranks of Independent Variable	X Avg. of the dependent prom.	F, p	t
Size of the holding according to SPO	Number of activities with the greatest difficulties	Small holding (<2000 € SPO)	x ₁ =5,05	F=3,01 p<0,005	t _{1,2} =3,28 p<0,05 t _{1,3} =2,45 p<0,05
		Medium farm (2000-8000 € SPO)	x ₂ =3,56		
		Large farm (>8000 € SPO) x ₁ =5.05 (>8000 € CPO)	x ₃ =4,14		

Source: own development.

Another objective factor that has a statistically significant effect on subjective assessments of problems in accounting reporting is the size of the farm, relative to the SPO ($F=3.01$, $p<0.001$; Table 2). The Student-Fisher t-test ($t_{1.2}=3.28$, $p<0.05$ and $t_{1.3}=2.45$, $p<0.05$) shows statistically significant differences in the following directions: accountants and managers of small farms ($x_1=5.05$) encounter significantly more problems compared to medium and large farms ($x_2=3.56$ and $x_3=4.14$, respectively). If comparable to descriptive statistics, it can be assumed that significantly more problems are expected for farms that have difficulty accessing specialized accounting services, which should be verified in larger samples in future research.

- Preferences for financing the activity;

Table 3. Influence of the preferred financing, on the subjective assessments of the need to change the legislation regarding accounting reporting and the number of accounting activities causing difficulties in accounting reporting.

Independent Variable	Dependent Variable	Ranks of Independent Variable	X Avg. of the dependent prom.	F, p	t
Preferred financing of the activity	Need to change the legislation	With own funds With raised capital.	$x_1=3,50$ $x_2=2,95$	$F=36,47$ $p<0,001$	-
	Number of activities with the greatest difficulties	With own funds With raised capital.	$x_1=1,35$ $x_2=1,66$	$F=28,69$ $p<0,001$	-

Source: own development.

It can be seen from Table 3 that the preferred financing determines, statistically significantly, the subjective assessments of the need to change the legislation regarding accounting reporting ($F=36.47$, $p<0.001$) and the number of accounting activities causing difficulties in accounting reporting ($F= 28.69$, $p<0.001$), in different directions. The preference for financing the activity with the farm's own funds determines stronger needs for changes in the legislation regarding accounting reporting ($x_1=3.50$), but fewer problems encountered in reporting ($x_1=1.35$), in comparison with the preferences for financing with borrowed capital (respectively $x_2=2.95$ and $x_2=1.66$, Table 3). The explanation for the above empirical facts could be sought in the fact that in the present study, mostly small farms operate entirely with their own financing, whose accounting reporting requires fewer activities. But on the other hand, their expressed need for changes in legislation could be explained by the need for administrative relief.

- Maturity of the financing preference;

Table 4 Influence of the preferred term of financing on the number of accounting activities in which the greatest difficulties are encountered.

Independent Variable	Dependent Variable	Ranks of Independent Variable	X Avg. of the dependent prom.	F, p	T
Duration of financing preference	Number of activities with the greatest difficulties	Short-term financing Long-term financing	$x_1=3,17$ $x_2=4,54$	$F=7,35$ $p<0,005$	-

Source: own development.

The maturity of the preferred financing also has a statistically significant effect on the activities that represent problems in accounting reporting ($F=7.35$ $p<0.005$, Table 4). It is natural to expect such a result, since long-term financing is associated with accountability and reporting activities over multiple periods. Due to the dynamics of external determinants (for example, a change in the basic interest rate on a loan), it is necessary to carry out additional activities that create difficulties in reporting.

- Level of administrative preparation for entering the international market;

Table 5 Influence of the administrative preparation for operating in international markets, on the subjective assessment of the need to change the legislation, in terms of accounting reporting and the preferred financing of the activity.

Independent Variable	Dependent Variable	Ranks of Independent Variable	X Avg. of the dependent prom.	F, p	t
Level of administrative preparation for entering the international market	Need to change the legislation regarding the accounting of agricultural holdings	1 – No 2 - No, but I will try to prepare. 3 - Yes, somewhat. 4 - Yes, completely	$x_1=1,23$ $x_2=1,78$ $x_3=2,59$ $x_4=2,27$	$F=9,41$ $p<0,001$	$t_{1,3}=4,21$ $p<0,05$ $t_{1,4}=3,65$ $p<0,05$ $t_{2,3}=2,95$ $p<0,05$ $t_{2,4}=2,87$ $p<0,05$
	Funding preference for activity	1 – No	$x_1=1,59$ $x_2=1,83$ $x_3=2,17$	$F=7,37$ $p<0,001$	$t_{1,2}=2,14$ $p<0,05$ $t_{1,3}=2,87$

		2 - No, but I will try to prepare. 3 - Yes, somewhat. 4 - Yes, completely.	$x_4=1,93$		$p<0,05$ $t_{1,4}=2,54$ $p<0,05$
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Source: own development.

The subjective evaluations of the administrative preparation for operating in international markets (Table 5) have a statistically significant effect on the opinions about the need for a change in the legislation ($F=9.41$ $p<0.001$) and the preferences for financing the activity ($F=7.37$ $p<0.001$). Insufficient administrative preparation ($x_1=1.23$, $x_2=1.78$) for entering international markets also determines weaker subjective assessments of the need for changes in the regulatory framework concerning accounting reporting ($t_{1.3}$ to $t_{2.4}$, at $p<0.05$, Table 5). This can be explained by the lack of in-depth knowledge of the applicable legal framework. Compared to them, those who self-assess as administratively more prepared ($x_3=2.59$, $x_4=2.27$) state greater and more diverse needs for change in the legislation, which is explained by the fact that the more - they are administratively competent, the more focused and critical the problems in the legal basis of accounting reporting are examined. An additional fact visible from Table 5 is that the higher the respondents self-assess, in terms of their administrative preparation for operating international markets, the more there are preferences for external financing of the activity ($F=7.37$ $p<0.001$, Table 3.5).

- Assessment of administrative training of farm managers.

It can be summarized that the subjective assessments of management-accounting problems of farmers confirm the existence of difficulties for a significant part of the respondents and in a significant part of the activities, as there are objective factors that determine these subjective assessments. Problems in accounting reporting are found equally for almost all types of accounting activities performed. The results of the empirical study confirm the established facts of the system analysis, which is an additional reason for the need to optimize existing or create new accounting models.

- assessment and analysis of the management of dependencies between financial resources in the agricultural holding

In fulfillment of one of the tasks set in the dissertation, an analysis of the relationship between financial assets and financial liabilities, in their capacity as a financial resource of agricultural producers, was carried out by measuring liquidity.

Table 6. Calculation of the current assets of agricultural holdings, according to NSI data, for 5 years, in thousands of BGN.

Current assets	2016	2017	2018	2019	2020
Receivables	1 904 571	1 989 902	2 154 572	2 339 130	2 265 705
Inventories	2 437 868	2 716 693	2 976 767	2 930 843	2 940 306
Financial assets	1 359 941	1 216 708	1 232 194	1 290 460	1 493 397
Investments	31 788	33 470	32 995	37 913	15 609
Total:	5 734 168	5 956 773	6 396 528	6 598 346	6 715 017

Source: own development.



Fig.3. Graphic visualization of the trend of the total liquidity ratio for a period of 5 years. Source: own development.

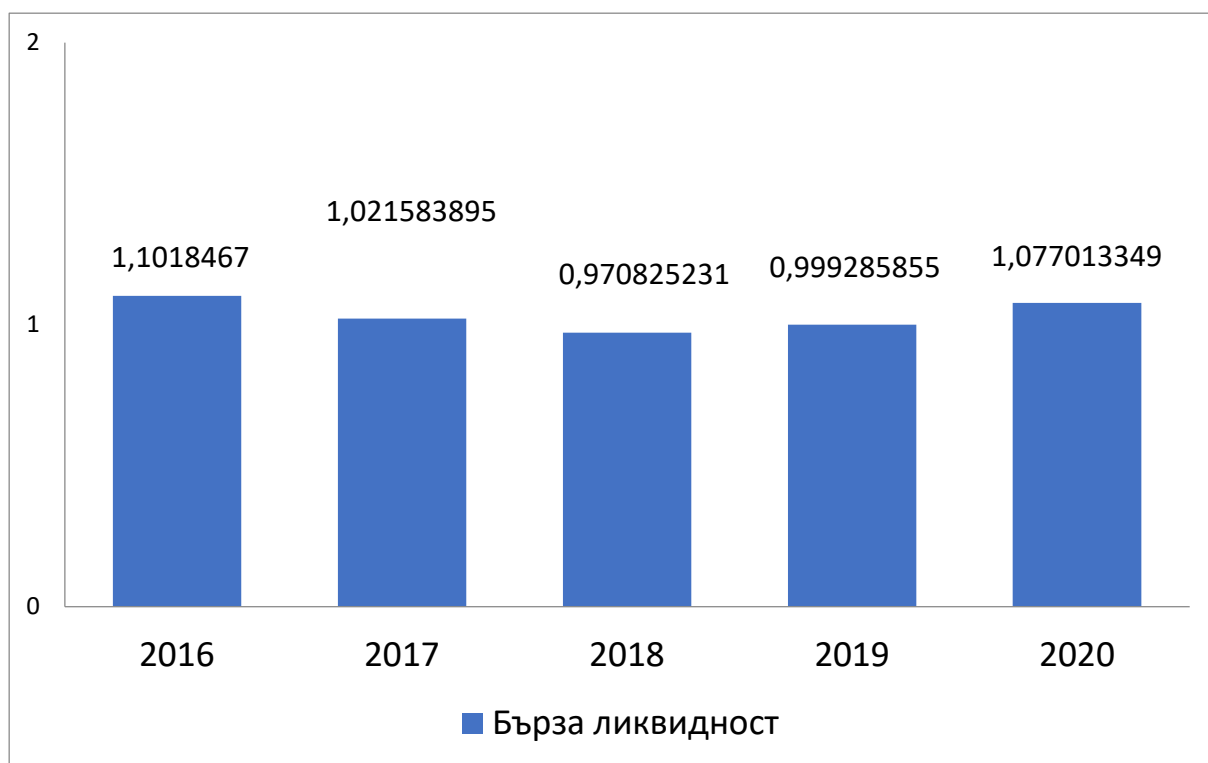


Fig. 4. Graphic visualization of the trend of the quick liquidity ratio for a period of 5 years. Source: own development.



Fig. 5. Graphic visualization of the trend of the immediate liquidity ratio for a period of 5 years. Source: own development.



Fig.5. Graphic visualization of the trend of the absolute liquidity ratio for a period of 5 years. Source: own development.

As a result of all the calculations, it can be summarized that the inter-company indebtedness of agricultural holdings in Bulgaria increased in 2019 compared to other years. Companies maintain their solvency despite the fact that absolute liquidity is extremely low, as cash is kept at low levels due to the specifics of crop production. The efficiency is increased and the making of faster and adequate decisions is supported in case of changes in the external environment.

III. MAIN RECOMMENDATIONS AND CONCLUSIONS IN THE DISSERTATION PAPER

As a result of the realization of the set goals of the dissertation, the following conclusions can be formed:

1. The concept of "financial resource" as a term from the theory of Financial Management is defined through the prism of the accounting theory in its dual essence, through two accounting terms "financial asset" and "financial liability". This led to the consideration of resources, both in their current state and through their source.
2. The first sub-hypothesis of the existence of accounting problems in the management of financial resources of agricultural producers, which refer to the four used elements of the accounting reporting method - normative basis, documentation, accounting interpretation and disclosure of GFO, was confirmed. The expectation of the most serious problems in the accounting interpretation was also confirmed.
3. The accounting problems in the management of internal (own) and external (attracted) sources of financial resources have been identified. To the greatest extent, these problems are due to the synthetic reporting and the lack of obligation of analytical reporting.
4. The subjective assessments of the management-accounting problems of the agricultural producers confirm the presence of difficulties for a significant part of the respondents and in a large part of the activities. Problems in accounting reporting are found equally for almost all types of accounting activities performed.

5. There are objective factors that determine these subjective assessments: the size of the holding, preferences for financing the activity, urgency of the preference for financing; level of administrative training.

6. The second sub-hypothesis was confirmed, that existing accounting models can be optimized and new models developed to overcome the identified problems.

7. Optimized accounting models for accounting of financial resources have been developed, using the technology of bilateral accounting, tailored to the individual needs of the "agriculture" sector. A method has been derived for the primary registration of financial resources in the accounting information system and their secondary disclosure in the various components of the Annual Financial Report.

8. Regarding the holdings that are reported by the one-way accounting method, an author's accounting model was developed, with a claim to eliminate the disadvantages experienced by agricultural holdings when using the model that is standard for all enterprises. It has been proposed different systematization of reporting, with exact correspondence of the activities of agricultural producers. Guidelines for the use of the developed author's model have also been created, which makes it useful for accounting practice.

9. The information assurance of the accounting activity has been increased, through an analysis of the accounting standards, isolating their application only to the financial resources of agricultural holdings.

10. Through a meaningful consideration of financial resources at the synthetic level and at the first and second analytical levels - both as internal and external, and as subtypes (including some inherent only and only to the "agriculture" sector), a synthesis is achieved that helps for the presentation of additional data in the appendices to the reports. The introduction of integrated financial statements is the next step in the direction of standardization of reporting.

To overcome the problem, the following recommendations can be proposed:

1. In order to achieve information assurance of the financial and accounting decisions of agricultural producers, regarding the management of financial resources, it is recommended to use the developed author's model for making a management decision related to the investment of financial resources within the farm. IN the current development is set in principle for practical use.

2. To optimize financial and accounting reporting and avoid some basic accounting problems in the management of financial resources in agricultural holdings, it is recommended to use the proposed models for accounting reporting both in one-sided method of accounting reporting and in two-sided accounting. Their practical use is recommended, and their usefulness is further confirmed by their application in a real environment by several farmers.

3. To improve the system of accounting of financial resources in agricultural holdings, it is useful to study the opinion of management and accounting personnel involved in its implementation.

IV. CONTRIBUTIONS

Scientific and theoretical-methodological contributions:

1. A concept has been developed and proposed for the definition of the term "financial resource" through the lens of accounting theory. The theory in the part with the accounting treatment of the financial resources of agricultural producers was further developed, through a content analysis by types.

2. The problems in accounting of the financial resources of agricultural producers are defined and corresponding improvements and solutions are proposed.

3. A methodology has been developed for the analysis of financial resource reporting models using the "system analysis" method.

4. The information security of the accounting activity, related to the peculiarities of accounting for the financial resources of agricultural producers, has been increased, through an analysis of the applicable accounting standards, according to the national and international basis.

Contributions of a practical nature:

1. A model has been developed and proposed for comprehensive accounting reporting and disclosure of the financial resources of agricultural producers under bilateral accounting.
2. A model has been developed and proposed for comprehensive accounting of agricultural producers using the technology of one-way accounting.
3. An adapted model has been developed, based on the budgeting model, for making a managerial decision regarding the investment of financial resources within the farm.

V. DISSERTATION RELATED PUBLICATIONS

1. Dimitrova, M., Financial liquidity of agricultural holdings, Trakia Journal of Sciences 18 (1), p. 634-639
2. Dimitrova M., ANALYSIS OF THE TYPOLOGY OF AGRICULTURAL HOLDINGS, Trakia Journal of Sciences 19 (1), p. 305-313
3. Dimitrova, M., DYNAMIC METHOD FOR MANAGEMENT OF INVESTMENT FINANCIAL RESOURCES IN AGRICULTURE, Trakia Journal of Sciences 19 (1), p. 314-320

Noted citations:

Dimitrova, M., Financial liquidity of agricultural holdings, Trakia Journal of Sciences 18 (1), p. 634-639

Quoted by:

1. *J Vrbka, E Kalinová, Z Dvořáková*, Optimization of the capital structure of an agricultural company in the Czech Republic, SHS Web of Conferences, 2022, https://www.shs-conferences.org/articles/shsconf/pdf/2022/02/shsconf_ies2021_01008.pdf
2. *NF Mondalgo Trejo, JK Quispe Huillca*, Análisis del endeudamiento y liquidez, en empresas agrícolas registradas en la Superintendencia del Mercado De Valores, Períodos: 2016 al 2020, Universidad Cesar Vallejo, RDI, <https://www.repositorio.ucv.edu.pe/handle/20.500.12692/76780>